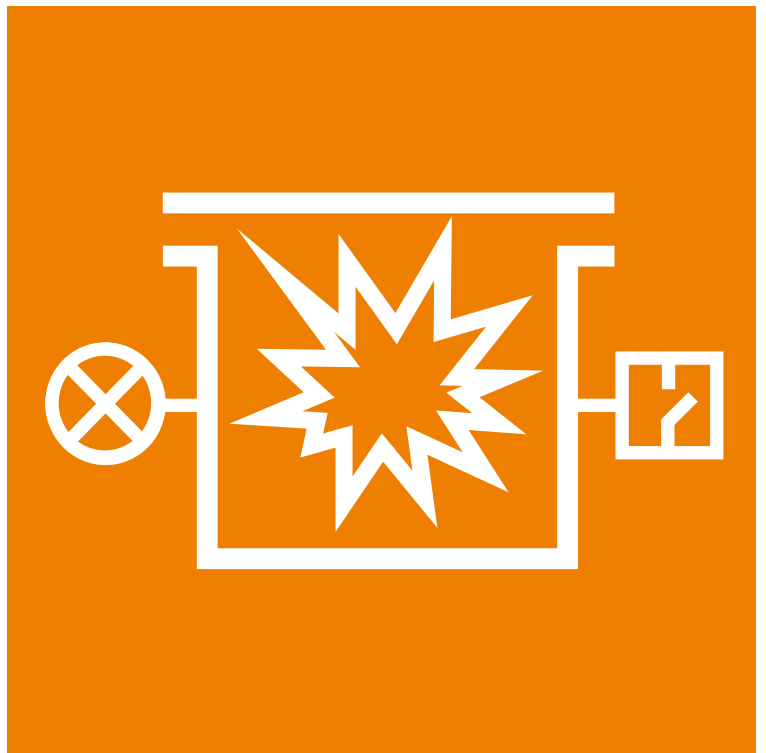


ELECTRICAL SAFETY SOLUTIONS



ELECTRICAL SAFETY SOLUTIONS



EX LIGHTING

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EX ENCLOSURES

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ELECTRICAL SAFETY SOLUTIONS















EX LIGHTING

1

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EX LIGHTING

| | | |
|---|---|-----|
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|  | WFLJ LED Weatherproof floodlights for LED lamps | 84 |
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EX ENCLOSURES

| | | |
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|  | ESA Junction boxes | 148 |
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|  | HANDLES DE Operators for Ex de enclosures (pilot light - push button - ammeter - selector switch) | 156 |
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EX CABLE GLANDS

3



PAPD
Cable glands for armoured, lead sheathed cables

166



PAP-PAPDL
Cable glands for armoured cables

168



PA
Cable glands for armoured cables

170



PNA
Cable glands for armoured cables

172



PNAF
Cable glands for armoured cables

174



DL-NW-PTD-ET
Cable glands accesorie

176

EX CONDUIT FITTINGS

4



LBH-LBHF-LBHS-EKC
Open bends and pulling boxes

180



EYS-EZS-BMM-BMF-BFF
Sealing fittings and three pieces union

182



RE-REB-REM-REN
Explosion proof reducers and adaptors

184



PLG - NP - EM...
Conduit fittings, locknuts, bushings, drain/breather valves

186



TFII
Explosion proof stainless steel flexible conduits

190




C-L-T-X-TR
Vapour tight condulets rigid steel conduit and uni 7683

192






EX CONTROL STATIONS

5

| | | |
|---|--|-----|
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EX EARTHING CLAMPS

6

| | | |
|---|---|-----|
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EX LIGHTING




Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ☉ Ex db eb IIC T6 Gb ☉ Ex db op is IIC T6 Gb (for PCB LED type only) ☉ Ex db eb op is IIC T6 Gb (for PCB LED type only) ☉ Ex tb IIIC T85°C Db ☉ Ex op is tb IIIC T85°C Db (for PCB LED type only) |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31; EN/IEC 60079-28 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0027X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 13.0056X INMETRO: CEPEL 13.2292X EAC: TC RU C-IT,BH02.B.00254/19 (-45°C ÷ +60°C) CCOE-PESO: P405708/4 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|--|
| Body | marine grade copper free aluminium |
| Tubes | high-temperature resistant borosilicate glass tube |
| Painting | external epoxy powders grey ral-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber O-Ring |
| Reflectors | white stove enamelled sheet steel |
| Cable entry | 3/4" NPT size threaded (Ex-d) ISO-M25 size threaded (Ex-de) |

Electrical characteristics for fluorescent lamps

| | |
|-----------------|---|
| Power Supply | dual channel electronic ballast: - 110÷240Vac - 50/60 Hz (cos ρ ≥ 0,98) - 110÷240Vdc |
| Lampholders | Bi-Pin G13 Cap |
| Internal Wiring | 105° C resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Emergency Unit | emergency unit composed of inverter charger and Ni-Cd battery pack 4A/h 4.8v. autonomy 120min. LED power-on indicating lamp provided - (inverter) 220÷240V 50/60Hz |

Electrical characteristics for LED strips lamp

| | |
|-----------------|--|
| Power Supply | 100÷240V 50/60Hz (cos ρ ≥ 0,98) - AT version 220÷240V 50/60Hz (cos ρ ≥ 0,98) - TR version |
| Internal Wiring | 105° C resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Emergency Unit | emergency unit composed of inverter charger and Ni-Cd battery pack 4A/h 6.0V autonomy 180min. LED power-on indicating lamp provided - (inverter) 220÷240V 50/60Hz |


On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- External painting colour on request
- Electronic ballast with voltage supply different than standard
- Protection guard

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | EMERGENCY UNIT | AUTONOMY |
|--|---------|-------------------------|---------------------------|------------|----------------|----------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110÷240Vac - 50/60 Hz) - (110÷240Vdc) | | | | | | |
| EVFG*18 | 1 x 8W | T6 | T 85°C | G5 | - | - |
| EVFG*28 | 2 x 8W | T6 | T 85°C | G5 | - | - |
| EVFG*118 | 1 x 18W | T6 | T 85°C | G13 | - | - |
| EVFG*218 | 2 x 18W | T6 | T 85°C | G13 | - | - |
| EVFG*136 | 1 x 36W | T6 | T 85°C | G13 | - | - |
| EVFG*236 | 2 x 36W | T6 | T 85°C | G13 | - | - |
| EVFG*158 | 1 x 58W | T6 | T 85°C | G13 | - | - |
| EVFG*258 | 2 x 58W | T6 | T 85°C | G13 | - | - |

*D: for Exd version (Ex. EVFGd120LED) - Without "D" for Exde version (Ex. EVFG120LED)

| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220÷240V 50/60Hz | | | | | | |
|---|---------|----|--------|-----|-------------|----------|
| EVFG*E18 | 1 x 8W | T6 | T 85°C | G5 | 4.8 V - 4Ah | 120 min. |
| EVFG*E28 | 2 x 8W | T6 | T 85°C | G5 | 4.8 V - 4Ah | 120 min. |
| EVFG*E118 | 1 x 18W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |
| EVFG*E218 | 2 x 18W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |
| EVFG*E136 | 1 x 36W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |
| EVFG*E236 | 2 x 36W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |
| EVFG*E158 | 1 x 58W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |
| EVFG*E258 | 2 x 58W | T6 | T 85°C | G13 | 4.8 V - 4Ah | 120 min. |

*D: for Exd version (Ex. EVFGdE236) - Without "D" for Exde version (Ex. EVFGE236)

EMERGENCY OPERATING WITH ONE TUBE LAMP ONLY AS STANDARD

| LIGHTING FIXTURES FOR LED STRIPES LAMP ("TR" VERSION) - CCT: 5000K / CRI: 80 - POWER SUPPLY 220÷240Vac | | | | | | |
|---|---------------|-------------------------|---------------------------|-------------|----------------------------------|-----------------------------|
| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT (lm) | EMERGENCY UNIT | DIMENSIONALLY EQUIVALENT TO |
| EVFG*66LED_T | 66 LED / 22W | T6 | T 85°C | 3180 | - | 18W FLUO. L=745 mm |
| EVFG*132LED_T | 132 LED / 44W | T6 | T 85°C | 6340 | - | 36W FLUO. L=1345 mm |
| EVFGE*66LED_T | 66 LED / 22W | T6 | T 85°C | 3180 | 6.0 V - 4Ah AUTONOMY 180 min. | 18W FLUO. L=745 mm |
| EVFGE*132LED_T | 132 LED / 44W | T6 | T 85°C | 6340 | 6.0 V - 4Ah AUTONOMY 180 min. | 36W FLUO. L=1345 mm |

*D: for Exd version (Ex. EVFGd132LED_T) - Without "D" for Exde version (Ex. EVFG132LED_T)

Note: LED stripes lamps included along with lighting fixtures

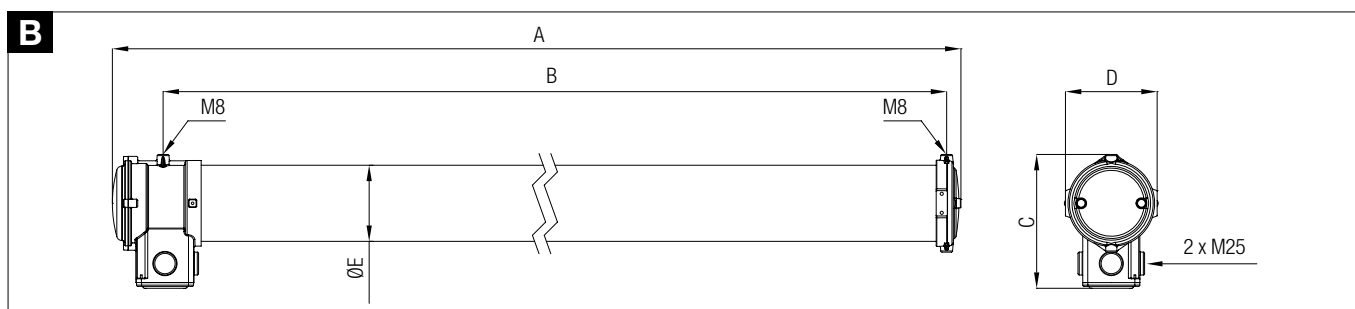
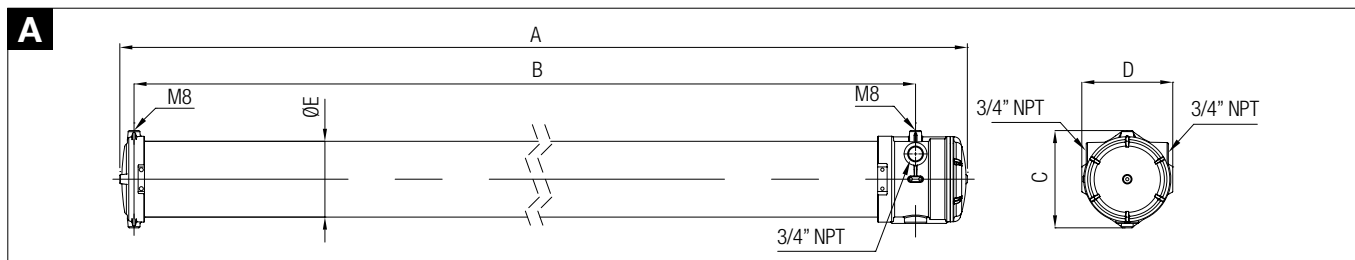
EMERGENCY OPERATING WITH 66 LED UNITS ONLY AS STANDARD

| LIGHTING FIXTURES FOR LED STRIPES LAMP („AT“ VERSION) - CCT : 4000K / CRI : 70 - POWER SUPPLY 200÷240Vac | | | | | | |
|---|--------------|-------------------------|---------------------------|-------------|------------------------------------|-----------------------------|
| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT (lm) | EMERGENCY UNIT SUPPLY = 220÷240Vac | DIMENSIONALLY EQUIVALENT TO |
| EVFG*40LED_A | 40 LED / 31W | T6 | T 85°C | 3200 | - | 18W FLUO. L=745 mm |
| EVFG*48LED_A | 48 LED / 38W | T6 | T 85°C | 4700 | - | 18W FLUO. L=745 mm |
| EVFG*80LED_A | 80 LED / 62W | T6 | T 85°C | 6100 | - | 18W FLUO. L=745 mm |
| EVFGE*40LED_A | 40 LED / 31W | T6 | T 85°C | 3200 | 6.0 V - 4Ah AUTONOMY 180 min. | 18W FLUO. L=745 mm |

*D: for Exd version (Ex. EVFGd40LED_A) - Without "D" for Exde version (Ex. EVFG40LED_A)

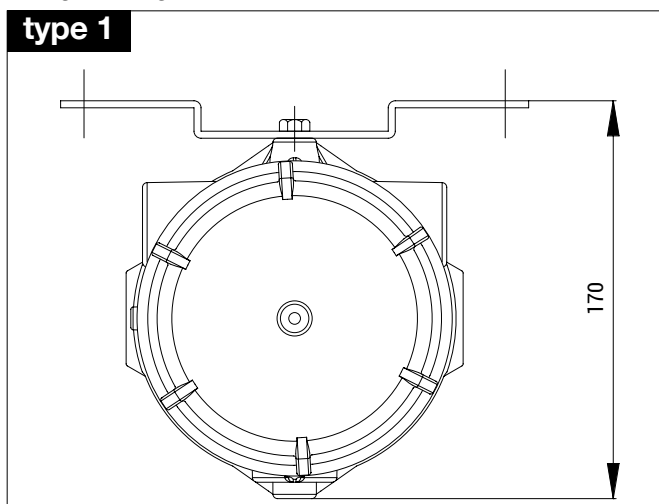
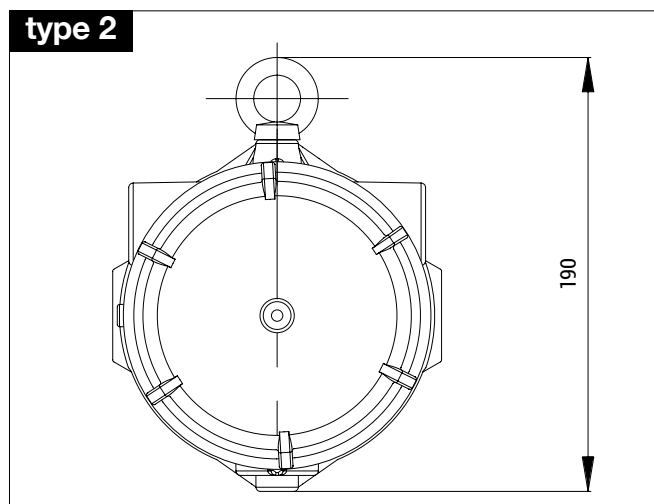
Note: LED stripes lamps included along with lighting fixtures

EMERGENCY OPERATING WITH 40 LED UNITS ONLY AS STANDARD

Reference details

Technical features

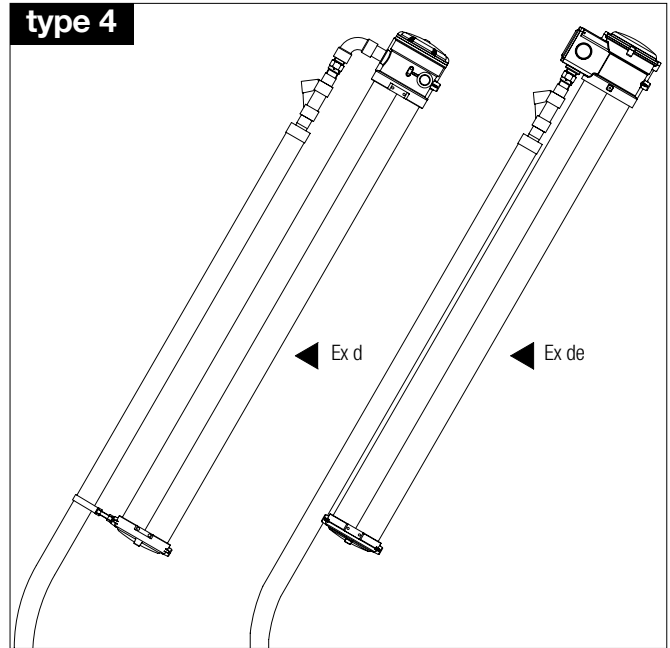
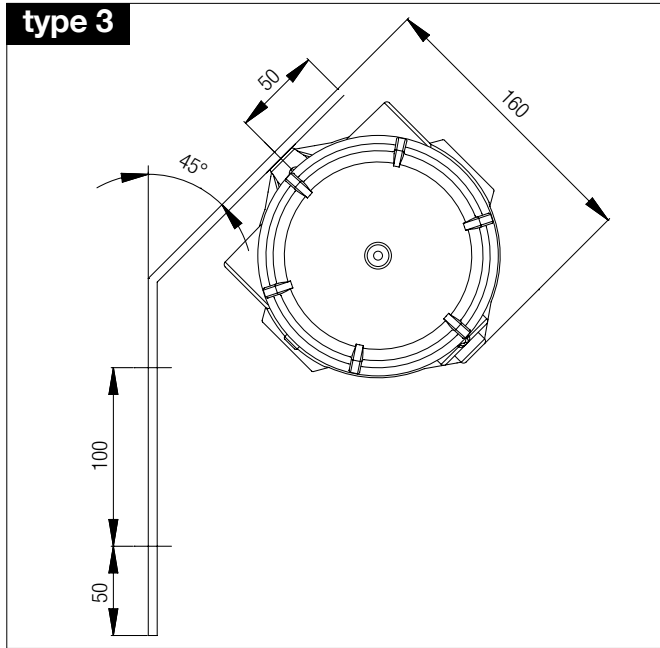
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | ØE [mm] | WEIGHT [kg] ** | CABLE ENTRY | DETAIL |
|-------------------------------|--------|--------|--------|--------|---------|----------------|-------------|--------|
| EVFGD*8 | 495 | 390 | 154 | 145 | 120 | 3,50 | 2 x 3/4" | A |
| EVFGDE*8 | | | | | | 4,50 | | |
| EVFGD*18 / **LED_A / 66LED_T | 745 | 640 | 154 | 145 | 120 | 5,50 | 2 x 3/4" | A |
| EVFGDE*18 / 40LED_A / 66LED_T | | | | | | 5,50 | | |
| EVFGD*36 / 132LED_T | 1345 | 1240 | 154 | 145 | 120 | 9,00 | 2 x 3/4" | A |
| EVFGDE*36 / 132LED_T | | | | | | 9,00 | | |
| EVFGD*58 | 1645 | 1540 | 154 | 145 | 120 | 10,00 | 2 x 3/4" | A |
| EVFGDE*58 | | | | | | 11,40 | | |
| EVFG*8 | 495 | 390 | 218 | 145 | 120 | 4,00 | 2 x M25 | B |
| EVFGE*8 | | | | | | 5,00 | | |
| EVFG*18 / **LED_A / 66LED_T | 745 | 640 | 218 | 145 | 120 | 6,50 | 2 x M25 | B |
| EVFGE*18 / 40LED_A / 66LED_T | | | | | | 6,50 | | |
| EVFG*36 / 132LED_T | 1345 | 1240 | 218 | 145 | 120 | 10,00 | 2 x M25 | B |
| EVFGE*36 / 132LED_T | | | | | | 10,00 | | |
| EVFG*58 | 1645 | 1540 | 218 | 145 | 120 | 10,80 | 2 x M25 | B |
| EVFGE*58 | | | | | | 12,20 | | |

* = 1 or 2: 1= single lamp - 2= twin lamp / ** = 40LED_A or 48LED_A or 80LED_A

EVFG Installation and mounting details
Ceiling mounting

Pendant mounting


Wall/structure mounting

Pole mounting
Assemblig detail with pole (typical)

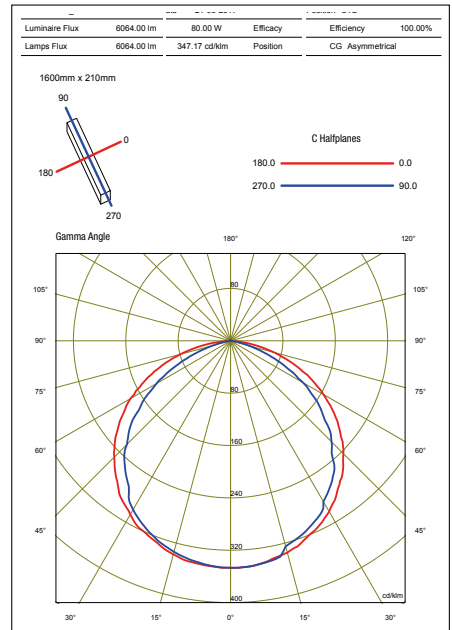
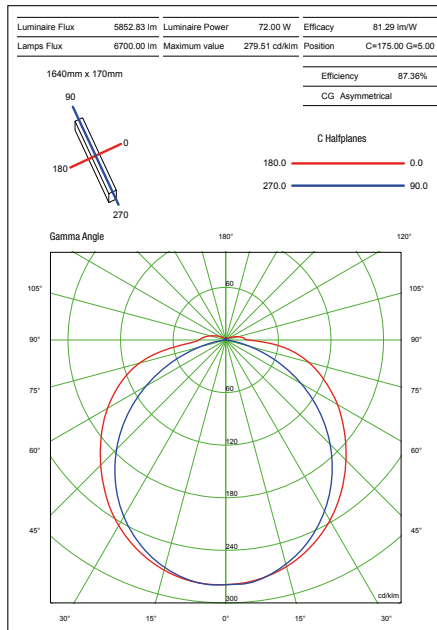
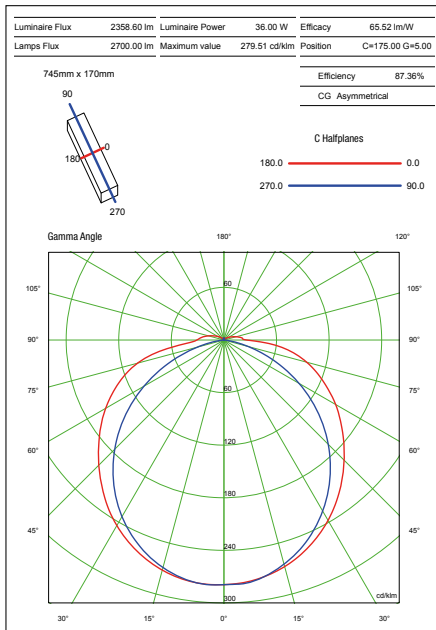


EVFG Polar diagrams – photometric data

EVFG218

EVFG236

EVFG80LED_A



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|---|--------------|-----------------------|
| G18AZ | PROTECTION GUARD FOR 18W FL and LED LIGHTING FIXTURES SIZE 40, 48, 66, 80 | - | H.D. GALVANIZED STEEL |
| G36AZ | PROTECTION GUARD FOR 36W FL and LED LIGHTING FIXTURES SIZE 132 | - | H.D. GALVANIZED STEEL |
| G58AZ | PROTECTION GUARD FOR 58W FL | - | H.D. GALVANIZED STEEL |
| G18X | PROTECTION GUARD FOR 18W FL and LED LIGHTING FIXTURES SIZE 40, 48, 66, 80 | - | STAINLESS STEEL |
| G36X | PROTECTION GUARD FOR 36W FL and LED LIGHTING FIXTURES SIZE 132 | - | STAINLESS STEEL |
| G58X | PROTECTION GUARD FOR 58W FL | - | STAINLESS STEEL |
| KITEVFTYPE5 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | GALVANIZED STEEL |
| KITEVFTYPE1 | PENDANT MOUNTING KIT C/W HARDWARE | TYPE 2 | GALVANIZED STEEL |
| KITEVFTYPE6 | WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITEVFTYPE7 | POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |
| KITEVFTYPE8 | POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.


Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓢ II 2 G Ex db IIC T6÷T2 Gb Ⓢ II 2 D Ex tb IIIC T85°C-T225°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 01 ATEX 0056X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 13.0074X INMETRO: CEPTEL 14.1023X EAC: TC RU C-IT.BH02.B.00254/19 RINA: ELE18111CS_006 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-----------------------------|---|
| Body | marine grade copper free aluminium (control gear & lamp body) |
| Globe | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 3/4" NPT size threaded |
| Installation swivel bracket | stainless steel |

Electrical characteristics

| | |
|-----------------------------|--|
| Power supply (Control Gear) | conventional ballast 230V - 50Hz (p.f. corrected - cos ρ ≥ 0,95) |
| Lampholders | porcelain E27/E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables (on lighting fixtures with PRC) |

On Request Accessories:

- Ceiling mounting AISI 316L stainless steel kit complete with stainless steel hardware
- Pendant mounting AISI 316L stainless steel kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Pole mounting kit 1" – 1 1/2" – 2" dia. complete with stainless steel hardware
- White stove enamelled aluminium reflectors
- Stainless steel reflectors
- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard



Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY SIZE | DETAIL |
|--|-------|---------------------------|-----------------------------|-----------------|------------------|--------|
| LIGHTING FIXTURE FOR INCANDESCENT LAMPS* - POWER SUPPLY 230V-50Hz | | | | | | |
| EVAC101-100I | 100 W | T4 | T 135°C | E-27 | 1 x 3/4" | A |
| EVAC100-100I | 100 W | T4 | T 135°C | E-27 | 2 x 3/4" | B |
| EVAC201-200I | 200 W | T4 / T3 | T 135°C / T 160°C | E-27 | 1 x 3/4" | A |
| EVAC200-200I | 200 W | T4 / T3 | T 135°C / T 160°C | E-27 | 2 x 3/4" | B |
| EVAC301-300I | 300 W | T4 / T3 | T 135°C / T 160°C | E-40 | 1 x 3/4" | A |
| EVAC300-300I | 300 W | T4 / T3 | T 135°C / T 160°C | E-40 | 2 x 3/4" | B |
| EVAC501-500I | 500 W | T3 | T 160°C / T 190°C | E-40 | 1 x 3/4" | A |
| EVAC500-500I | 500 W | T3 | T 160°C / T 190°C | E-40 | 2 x 3/4" | B |

*lamp not included.

| LIGHTING FIXTURE FOR HALOGEN LAMP* - POWER SUPPLY 230V-50Hz | | | | | | |
|--|-------|---------|-------------------|------|----------|---|
| EVAC101-100H | 100 W | T4 | T 135°C | E-27 | 1 x 3/4" | A |
| EVAC100-100H | 100 W | T4 | T 135°C | E-27 | 2 x 3/4" | B |
| EVAC201-150H | 150 W | T4 / T3 | T 135°C / T 160°C | E-27 | 1 x 3/4" | A |
| EVAC200-150H | 150 W | T4 / T3 | T 135°C / T 160°C | E-27 | 2 x 3/4" | B |
| EVAC301-250H | 250 W | T4 / T3 | T 135°C / T 160°C | E-40 | 1 x 3/4" | A |
| EVAC300-250H | 250 W | T4 / T3 | T 135°C / T 160°C | E-40 | 2 x 3/4" | B |

*lamp not included.

| LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
|--|-------|---------|-------------------|------|----------|----|
| EVAC101-80HG | 80 W | T4 / T3 | T 135°C / T 160°C | E-27 | 2 x 3/4" | C2 |
| EVAC101-C80HG | | | | | 1 x 3/4" | C1 |
| EVAC201-125HG | 125 W | T4 / T3 | T 140°C / T 160°C | E-27 | 2 x 3/4" | C2 |
| EVAC201-C125HG | | | | | 1 x 3/4" | C1 |
| EVAC501-250HG | 250 W | T3 | T 160°C / T 190°C | E-40 | 2 x 3/4" | C2 |
| EVAC501-400HG | 400 W | T3 | T 190°C | E-40 | 2 x 3/4" | C2 |

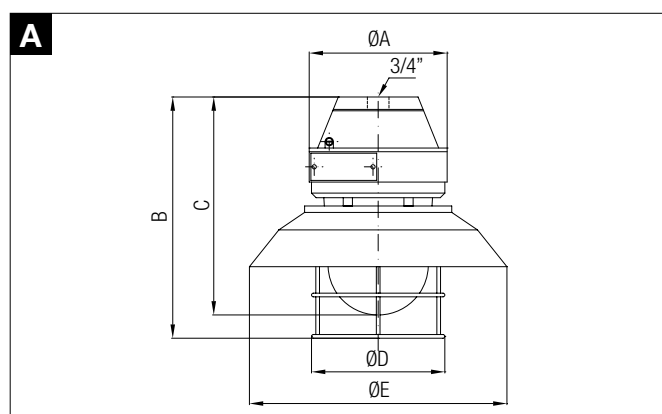
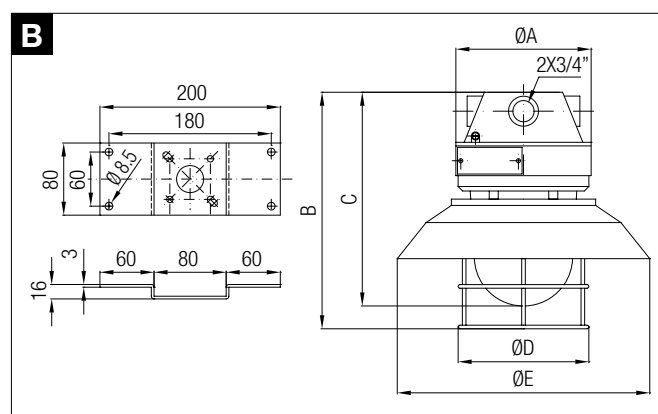
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
|--|-------|----|-------------------|------|----------|----|
| EVAC101-70NA | 70 W | T4 | T 135°C | E-27 | 2 x 3/4" | C2 |
| EVAC101-C70NA | | | | | 1 x 3/4" | C1 |
| EVAC301-100NA | 100 W | T3 | T 140°C / T 160°C | E-40 | 2 x 3/4" | C2 |
| EVAC301-C100NA | | | | | 1 x 3/4" | C1 |
| EVAC301-150NA | 150 W | T4 | T 135°C | E-40 | 2 x 3/4" | C2 |
| EVAC301-C150NA | | | | | 1 x 3/4" | C1 |
| EVAC301-250NA | 250 W | T3 | T 160°C / T 190°C | E-40 | 2 x 3/4" | C2 |
| EVAC301-C250NA | | | | | 1 x 3/4" | C1 |
| EVAC501-400NA | 400 W | T3 | T 190°C | E-40 | 2 x 3/4" | C2 |

| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
|--|-------|---------|-------------------|------|----------|----|
| EVAC101-100MH | 100 W | T3 | T 140°C / T 160°C | E-27 | 2 x 3/4" | C2 |
| EVAC101-C100MH | | | | | 1 x 3/4" | C1 |
| EVAC301-150MH | 150 W | T4 / T3 | T 135°C / T 160°C | E-40 | 2 x 3/4" | C2 |
| EVAC301-C150MH | | | | | 1 x 3/4" | C1 |
| EVAC301-250MH | 250 W | T3 | T 140°C / T 160°C | E-40 | 2 x 3/4" | C2 |
| EVAC301-C250MH | | | | | 1 x 3/4" | C1 |
| EVAC501-400MH | 400 W | T3 | T 160°C / T 190°C | E-40 | 2 x 3/4" | C2 |

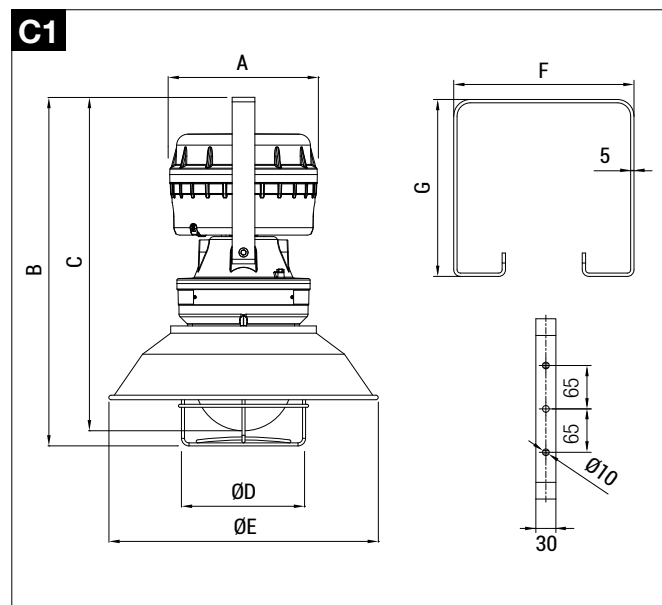
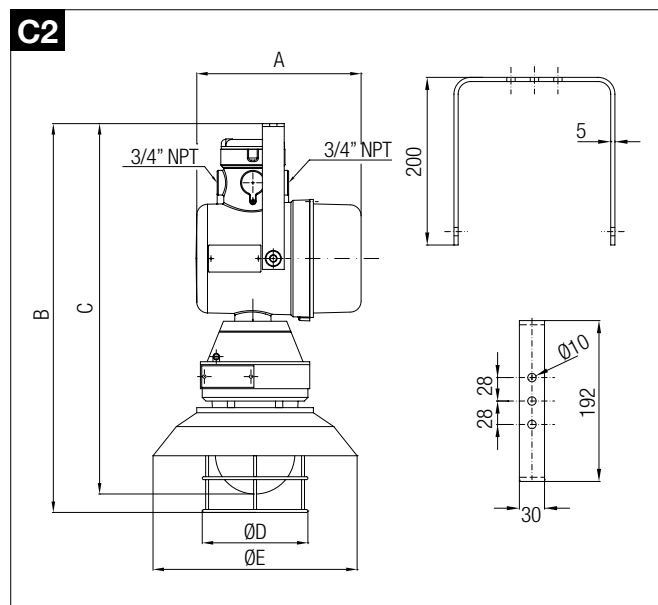
| LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
|---|-------|----|-------------------|------|----------|---|
| EVAC201-160MLL | 160 W | T3 | T 140°C / T 160°C | E-27 | 1 x 3/4" | A |
| EVAC200-160MLL | 160 W | T3 | T 140°C / T 160°C | E-27 | 2 x 3/4" | B |
| EVAC301-250MLL | 250 W | T3 | T 160°C / T 190°C | E-40 | 1 x 3/4" | A |
| EVAC300-250MLL | 250 W | T3 | T 160°C / T 190°C | E-40 | 2 x 3/4" | B |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | Ø D [mm] | Ø E [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------|--------|--------|--------|----------|----------|------------|-------------|--------|
| EVAC101 | 150 | 270 | 236 | 145 | 280 | 2,00 | 1 x 3/4" | A |
| EVAC100 | 150 | 270 | 236 | 145 | 280 | 2,00 | 2 x 3/4" | B |
| EVAC201 | 176 | 280 | 256 | 170 | 345 | 2,80 | 1 x 3/4" | A |
| EVAC200 | 176 | 280 | 256 | 170 | 345 | 2,80 | 2 x 3/4" | B |
| EVAC301 | 197 | 390 | 325 | 190 | 402 | 4,50 | 1 x 3/4" | A |
| EVAC300 | 197 | 390 | 325 | 190 | 402 | 4,50 | 2 x 3/4" | B |
| EVAC501 | 261 | 420 | 389 | 255 | 515 | 7,50 | 1 x 3/4" | A |
| EVAC500 | 261 | 420 | 389 | 255 | 515 | 7,50 | 2 x 3/4" | B |

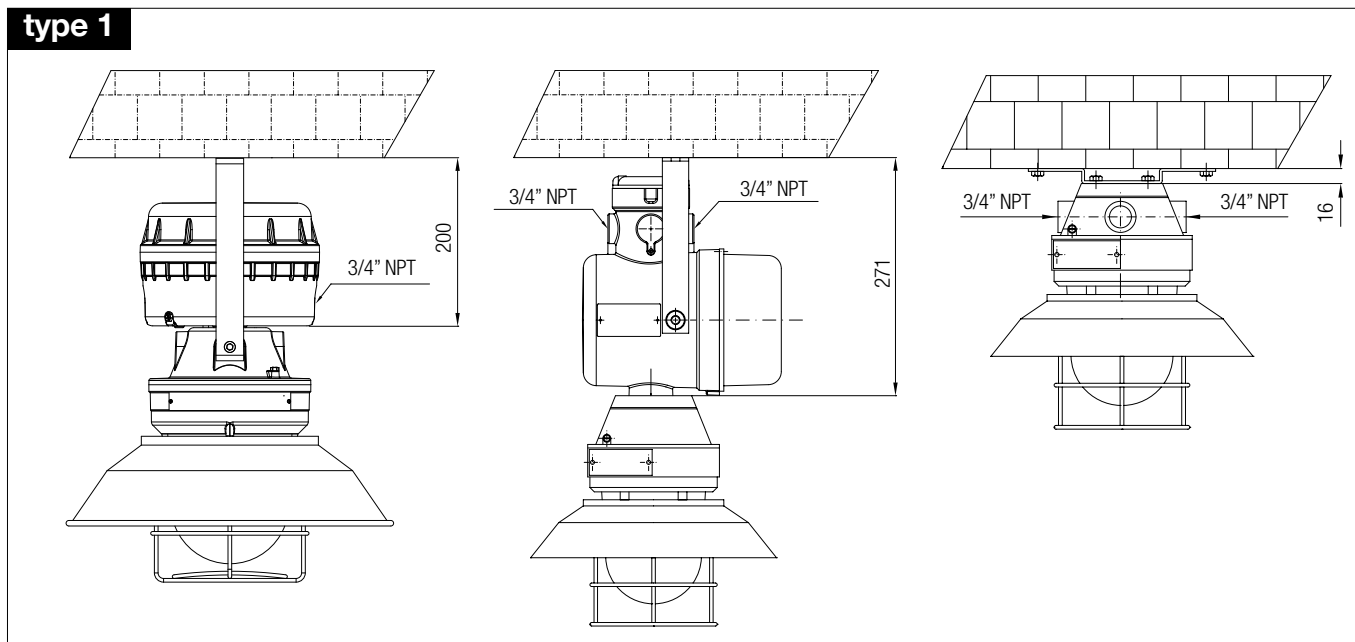
Reference details

Reference details

Technical features

| CODE | A [mm] | B [mm] | C [mm] | Ø D [mm] | Ø E [mm] | F [mm] | G [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|---|--------|--------|--------|----------|----------|--------|--------|-------------|-------------|--------|
| EVAC101-..HG; EVAC101-..NA; EVAC101-..MH | 227 | 545 | 515 | 145 | 280 | 210 | 220 | 7,00 | 2 x 3/4" | C2 |
| EVAC101-C-..HG; EVAC101-C-..NA; EVAC101-C-..MH | 195 | 440 | 420 | 145 | 280 | 210 | 220 | 7,00 | 1 x 3/4" | C1 |
| EVAC201-..HG | 227 | 565 | 545 | 170 | 345 | 210 | 220 | 9,50 | 2 x 3/4" | C2 |
| EVAC201-C-..HG | 195 | 461 | 440 | 170 | 345 | 210 | 220 | 9,50 | 1 x 3/4" | C1 |
| EVAC301-..NA; EVAC301-..MH | 227 | 635 | 610 | 290 | 402 | 270 | 265 | 12,00 | 2 x 3/4" | C2 |
| EVAC301C-..NA; EVAC301-C-..MH | 250 | 590 | 555 | 290 | 402 | 270 | 265 | 12,00 | 1 x 3/4" | C1 |
| EVAC501-..HG; EVAC501-..NA; EVAC501-..MH | 227 | 695 | 670 | 255 | 515 | / | / | 15,50 | 2 x 3/4" | C2 |

Reference details

Reference details


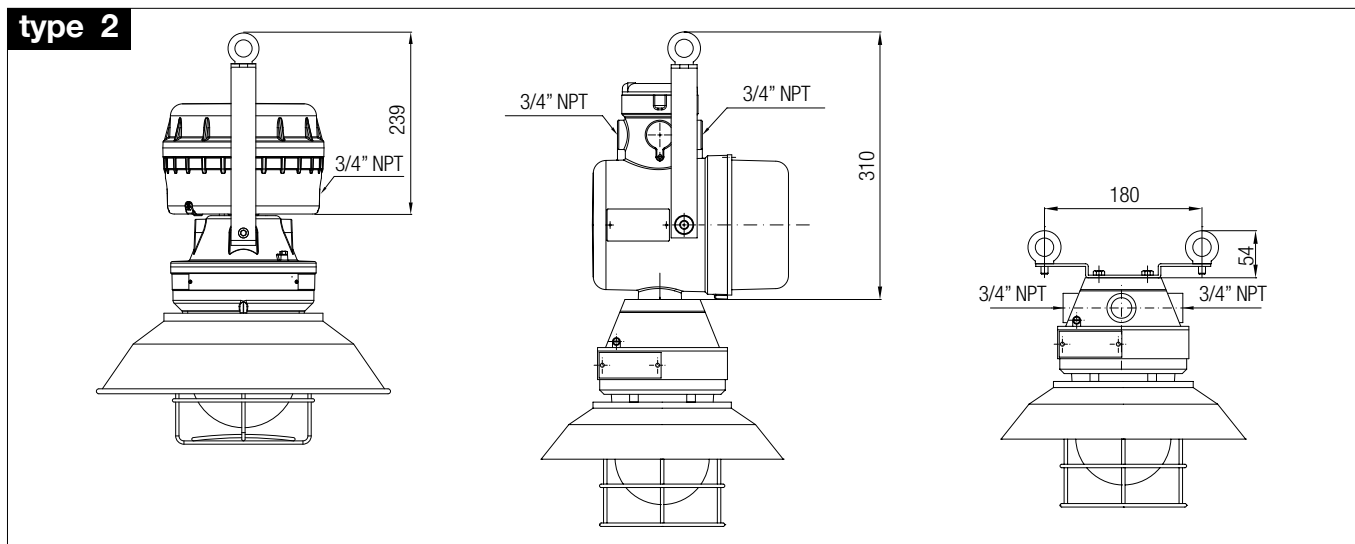
Ceiling mounting

type 1



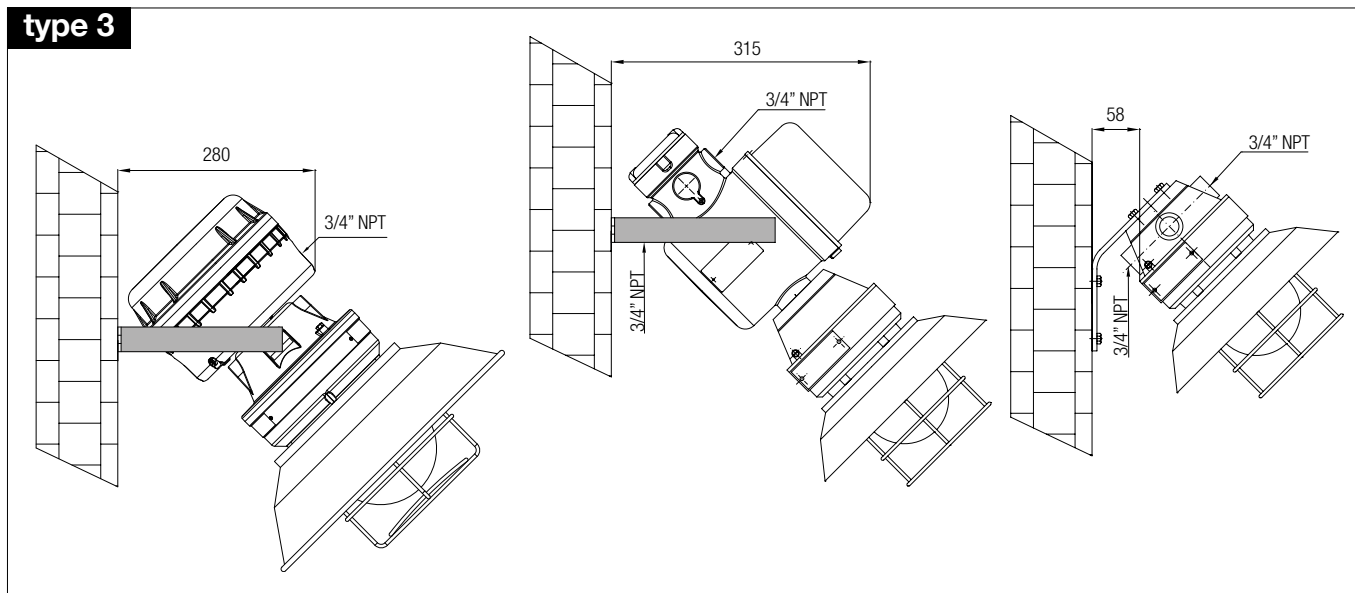
Pendant mounting

type 2



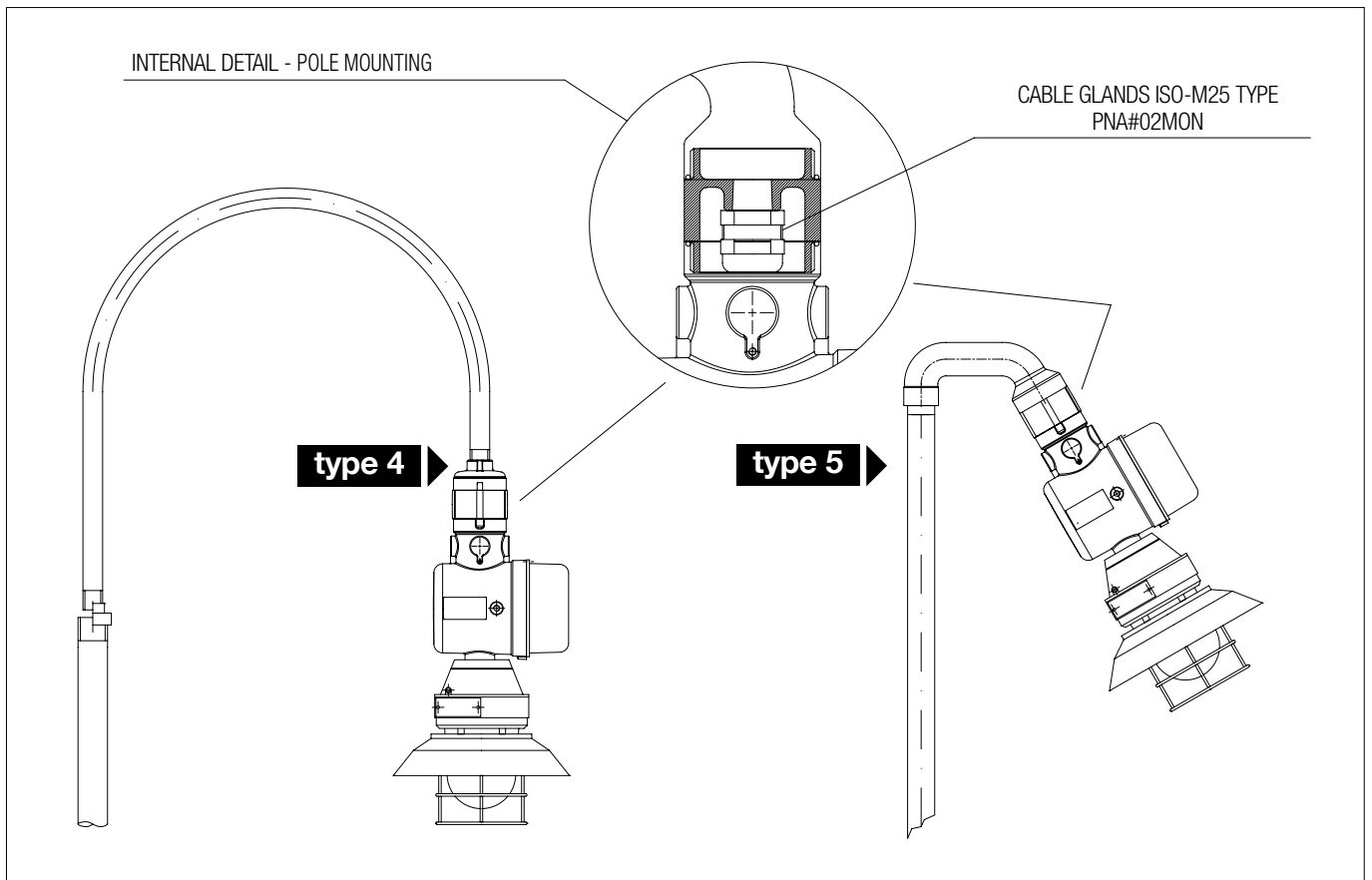
Wall/structure mounting

type 3

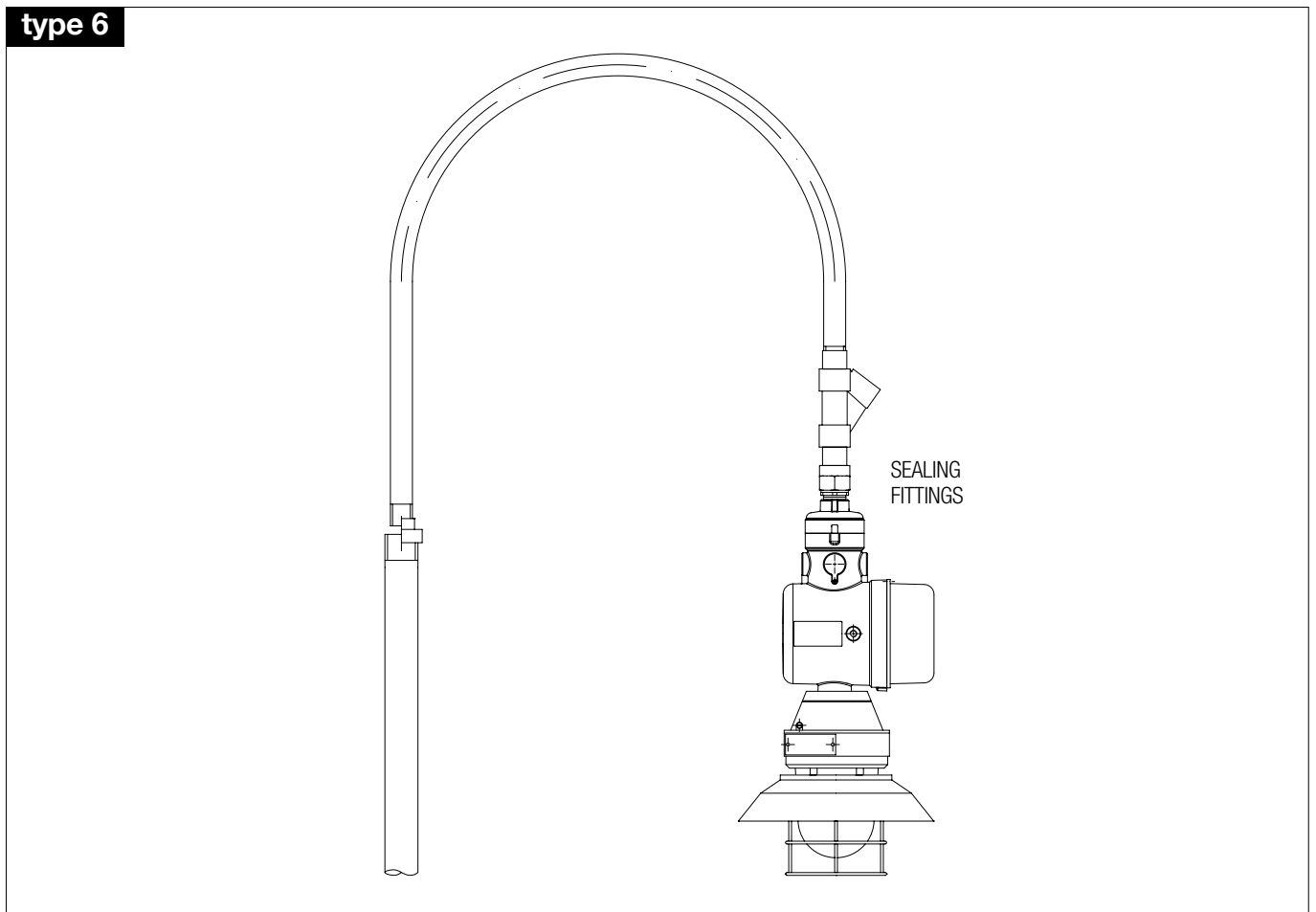




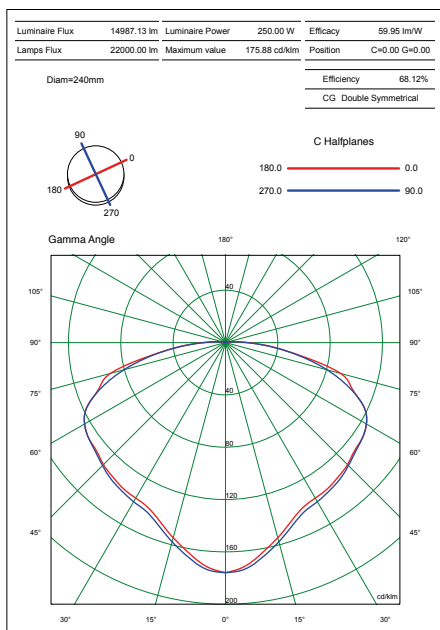
Pole Mounting – Without add sealing fitting



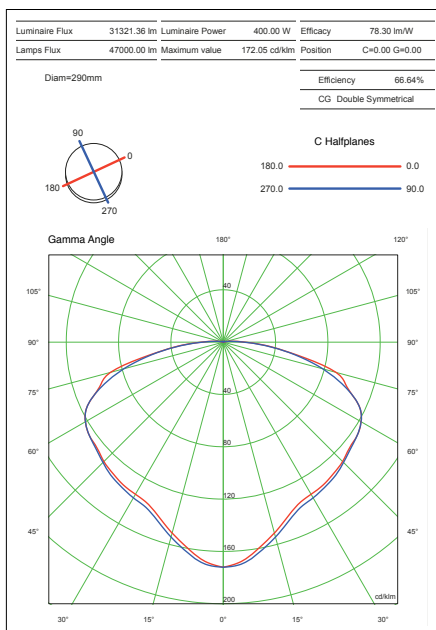
Pole Mounting – With add sealing fitting



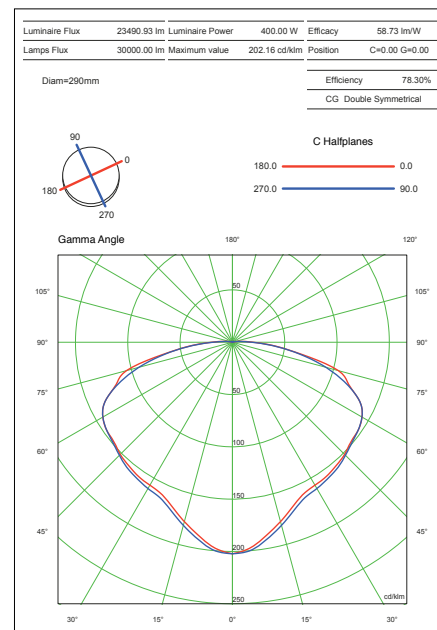
EVAC301-250NA



EVAC501-400NA



EVAC501-400MH



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|--------------------------------|---|--------------|---------------------------------|
| D100 | EVAC 100 / 101 SIZE STANDARD REFLECTOR | - | WHITE STOVE ENAMELLED ALUMINIUM |
| D200 | EVAC 200 / 201 SIZE STANDARD REFLECTOR | - | WHITE STOVE ENAMELLED ALUMINIUM |
| D300 | EVAC 300 / 301 SIZE STANDARD REFLECTOR | - | WHITE STOVE ENAMELLED ALUMINIUM |
| D500 | EVAC 500 / 501 SIZE STANDARD REFLECTOR | - | WHITE STOVE ENAMELLED ALUMINIUM |
| D100X | EVAC 100 / 101 SIZE STAINLESS STEEL REFLECTOR | - | STAINLESS STEEL |
| D200X | EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR | - | STAINLESS STEEL |
| D300X | EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR | - | STAINLESS STEEL |
| D500X | EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR | - | STAINLESS STEEL |
| G100G | EVAC 100 / 101 SIZE STANDARD PROTECTION GUARD | - | GALVANIZED STEEL |
| G200G | EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD | - | GALVANIZED STEEL |
| G300G | EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD | - | GALVANIZED STEEL |
| G500G | EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD | - | GALVANIZED STEEL |
| G100X | EVAC 100 / 101 SIZE STAINLESS STEEL PROTECTION GUARD | - | STAINLESS STEEL |
| G200X | EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD | - | STAINLESS STEEL |
| G300X | EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD | - | STAINLESS STEEL |
| G500X | EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD | - | STAINLESS STEEL |
| KITEVACTYPE1* KITEVACTYPE3* | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | STAINLESS STEEL |
| KITEVACTYPE9 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | GALVANIZED STEEL |
| KITEVACTYPE2* | 45° WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITEVACTYPE5/8 | POLE MOUNTING KIT - WITHOUT SEALING FITTINGS | TYPE 4 | ALUMINIUM |
| KITEVACTYPE5/8 | 25° POLE MOUNTING KIT WITH BRACKET - WITHOUT SEALING FITTINGS | TYPE 5 | ALUMINIUM |
| KITEVACTYPE4/7 | POLE MOUNTING KIT - WITH SEALING FITTINGS (EYS2 + NP2 + RMF2) | TYPE 6 | ALUMINIUM |

* only for lighting fixtures shown on reference details A - B

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.


Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | Ⓢ Ex db op is IIC T6/T5/T4 Gb Ⓢ Ex op is tb IIIC T85/100/135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 01 ATEX 0056X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 130074X INMETRO: CEPEL 14.1023X EAC: TC RU C-IT.BH02.B.00254/19 RINA: ELE18111CS_006 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium (control gear & lamp body) |
| Globe | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 2 threaded holes dia. 3/4" NPT (EVAC...L-...) 1 threaded hole dia. 1" NPT (EVAC...-...LED) |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 120-277 Vac electronic driver 50/60 Hz - c/w surge protection 6KV and NTC thermal sensor |
| Lamp type | MK-R / CREE CRI 70, CCT 5700K. Lifetime: 80.000 hours L80 B10 @ta25 |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | with symmetrical lens vertex at 65deg |
| Emergency unit | emergency unit composed of inverter charger and Ni-Cd battery pack 4A/h 3,6V autonomy 180min. LED power-on indicating lamp provided - (inverter) 220-240V 50/60Hz |


On Request Accessories:

- External painting colour on request
- Threaded cable entry different than standard

Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | NUMBER OF LED | NOMINAL OUTPUT (lm) | POWER [W] | CABLE ENTRY SIZE |
|--|-----------|-------------------------|---------------------------|---------------|---------------------|-----------|--------------------|
| LED LIGHTING FIXTURES - POWER SUPPLY 120 ÷ 277 VAC 50/60 HZ | | | | | | | |
| EVAC200-04LED EVAC201L-004 | POWER LED | T5 / T4 | T 85°C / T 105°C | 4 | 2120 | 32W | 1 x 1" 2 x 3/4" |
| EVAC200-06LED EVAC201L-006 | POWER LED | T5 / T4 | T 85°C / T 105°C | 6 | 3918 | 48W | 1 x 1" 2 x 3/4" |
| LED LIGHTING FIXTURES - POWER SUPPLY 120 ÷ 277 VAC 50/60 HZ | | | | | | | |
| EVAC500-08LED EVAC501L-008 | POWER LED | T6 / T5 | T 95°C | 8 | 4265 | 64W | 1 x 1" 2 x 3/4" |
| EVAC501L-012 | POWER LED | T6 / T5 | T 95°C | 12 | 7392 | 96W | 2 x 3/4" |

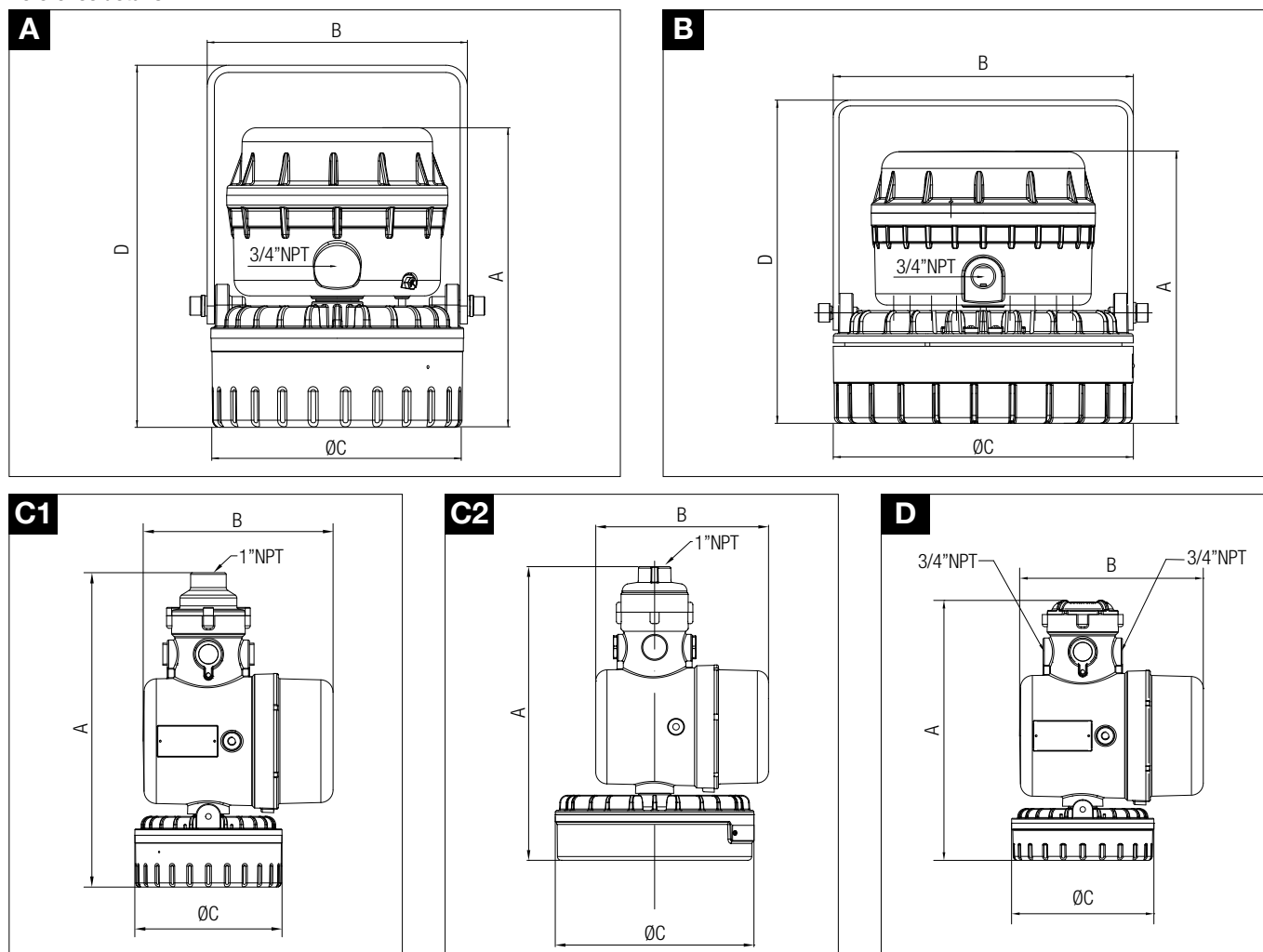
Note: LED lens lamp included along with lighting fixtures

| EMERGENCY LED LIGHTING FIXTURES - POWER SUPPLY 220-240 VAC 50/60 HZ | | | | | | | |
|--|-----------|-------------------------|---------------------------|---------------|---------------------|-----------|------------------|
| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | NUMBER OF LED | NOMINAL OUTPUT (lm) | POWER [W] | EMERGENCY UNIT |
| EVAC201LPE#00400 | POWER LED | T5 / T4 | T85°C / T105°C | 4 | 2120 | 32W | autonomy: 180min |

Technical features

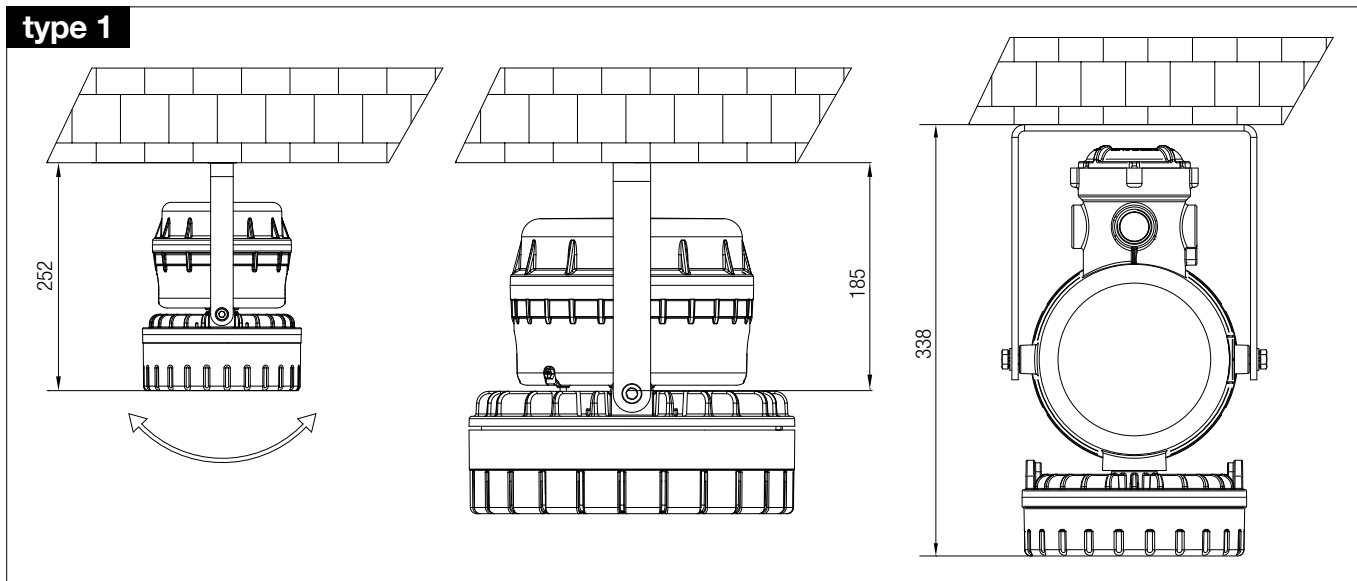
| CODE | A [mm] | B [mm] | ØC [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------------|--------|--------|---------|--------|-------------|-------------|--------|
| EVAC200-04LED | 376 | 227 | 176 | 252 | 4,50 | 1 x 1" | C1 |
| EVAC201L-004 | 210 | 181 | | | | 2 x 3/4" | A |
| EVAC200-06LED | 376 | 227 | 176 | 252 | 4,50 | 1 x 1" | C1 |
| EVAC201L-006 | 210 | 181 | | | | 2 x 3/4" | A |
| EVAC201LPE#00400 | 322 | 227 | 176 | 338 | 6,50 | 2 x 3/4" | D |
| EVAC500-08LED | 385 | 227 | 261 | 281 | 7,80 | 1 x 1" | C2 |
| EVAC501L-008 | 237 | 261 | | | | 2 x 3/4" | B |
| EVAC501L-012 | 237 | 261 | 261 | 281 | 7,80 | 2 x 3/4" | B |

Reference details



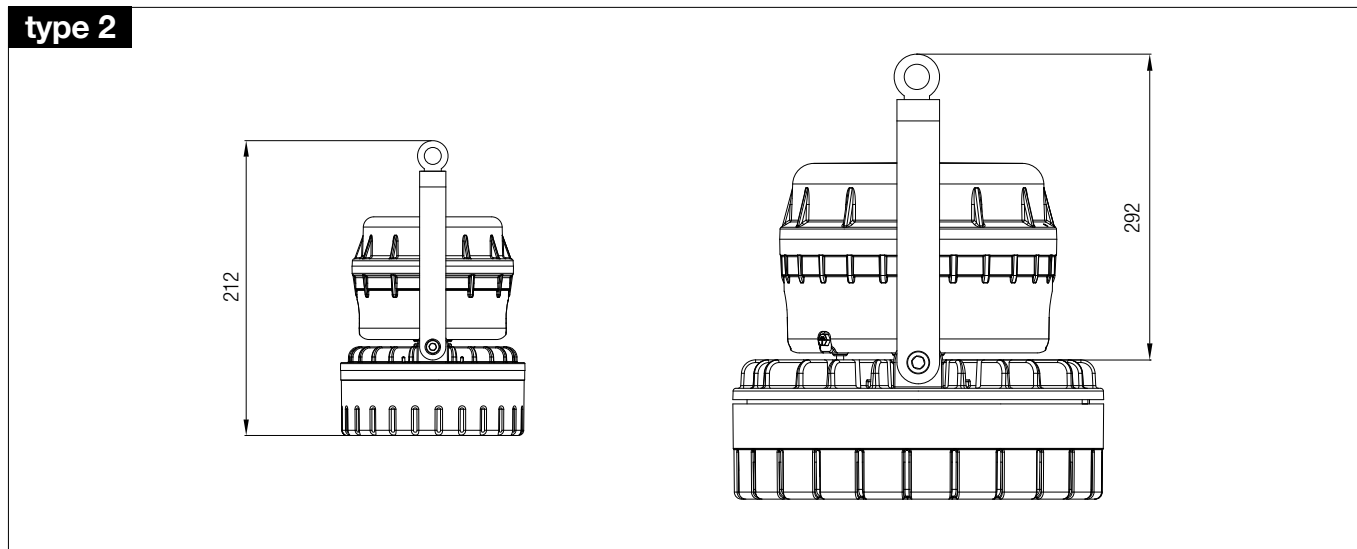
Ceiling mounting

type 1



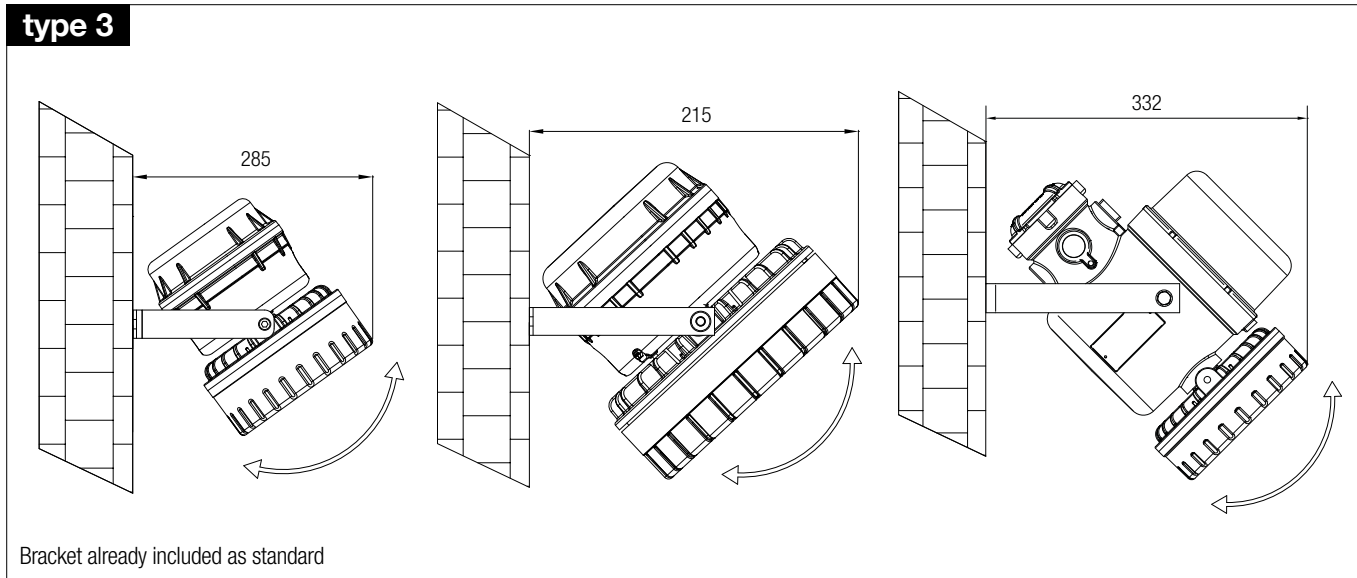
Pendant mounting

type 2



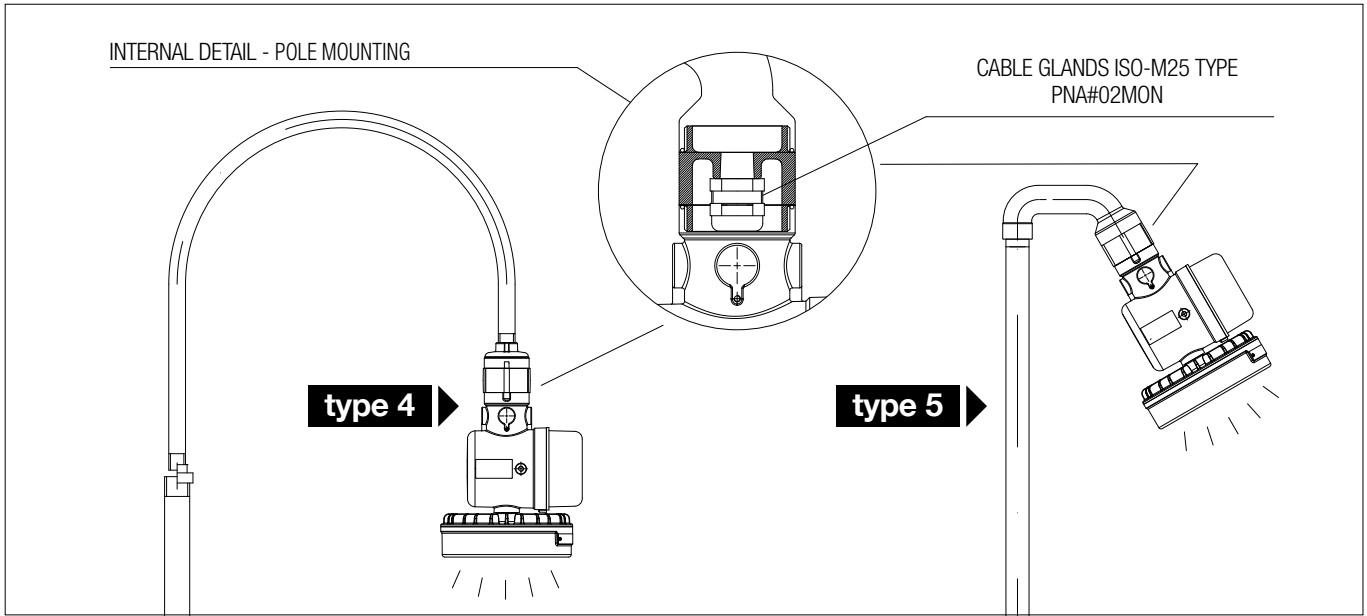
Wall/structure mounting

type 3

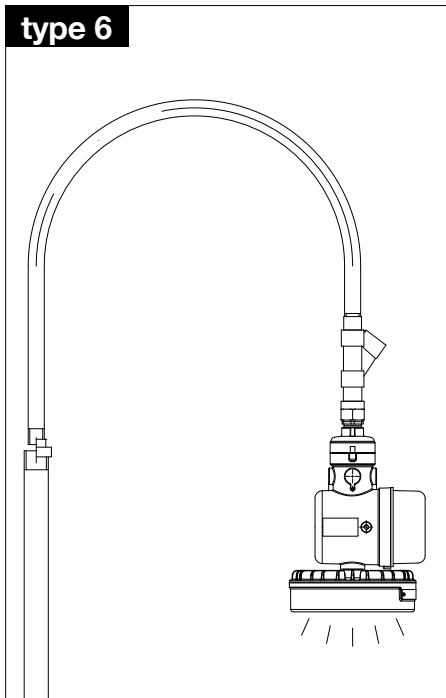


Bracket already included as standard

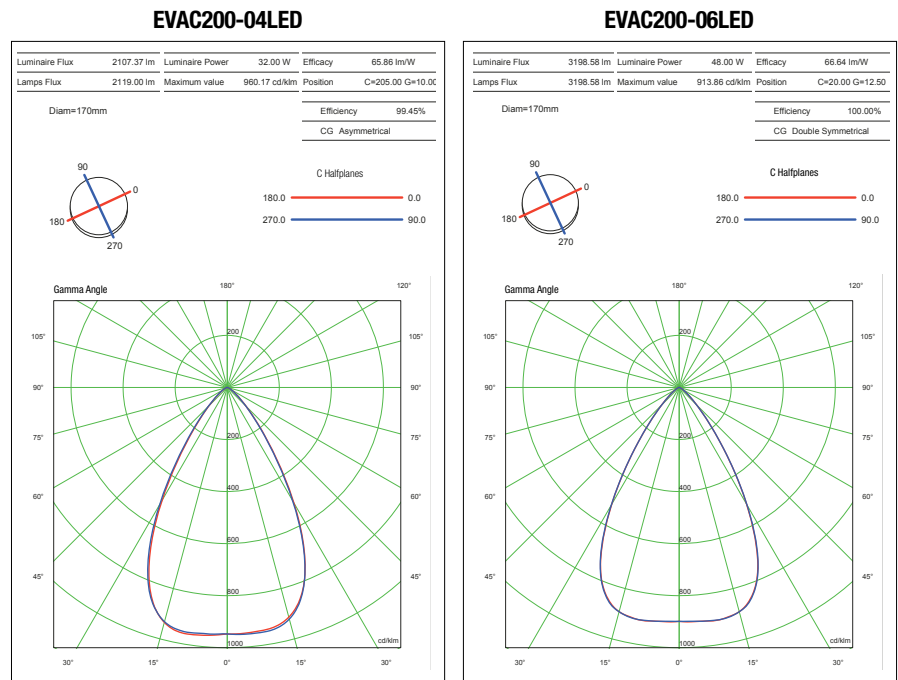
Pole Mounting – Without add sealing fitting



Pole Mounting – With add sealing fitting



EVAC-LED Polar diagrams – photometric data



EVAC-LED On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|--------------------------------|---|--------------|------------------|
| KITEVACTYPE1* KITEVACTYPE3* | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | STAINLESS STEEL |
| KITEVACTYPE9 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | GALVANIZED STEEL |
| KITEVACTYPE2* | 45° WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITEVACTYPE5/8 | POLE MOUNTING KIT - WITHOUT SEALING FITTINGS | TYPE 4 | ALUMINIUM |
| KITEVACTYPE5/8 | 25° POLE MOUNTING KIT WITH BRACKET - WITHOUT SEALING FITTINGS | TYPE 5 | ALUMINIUM |
| KITEVACTYPE4/7 | POLE MOUNTING KIT - WITH SEALING FITTINGS (EYS2 + NP2 + RMF2) | TYPE 6 | ALUMINIUM |

* only for lighting fixtures shown on reference details A - B

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.


Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓜ II 2 G Ex d IIC T4 Gb Ⓜ II 2 D Ex tb IIIC T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31; |
| EC Type-Examination Certificate | INERIS 01 ATEX 0056X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 130074X INMETRO: CEPTEL 14.1023X EAC: TC RU C-IT.BH02.B.00254/19 RINA: ELE18111CS_006 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|------------|---|
| Body | marine grade copper free aluminium (control gear & lamp body) |
| Globe | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Protection | galvanized steel safe guard |
| Gaskets | silicon rubber |

Electrical characteristics

| | |
|--------------|-----------------|
| Power supply | 12 ÷ 230V AC/DC |
| Lampholders | porcelain E27 |


On Request Accessories:

- External painting colour on request

Technical data

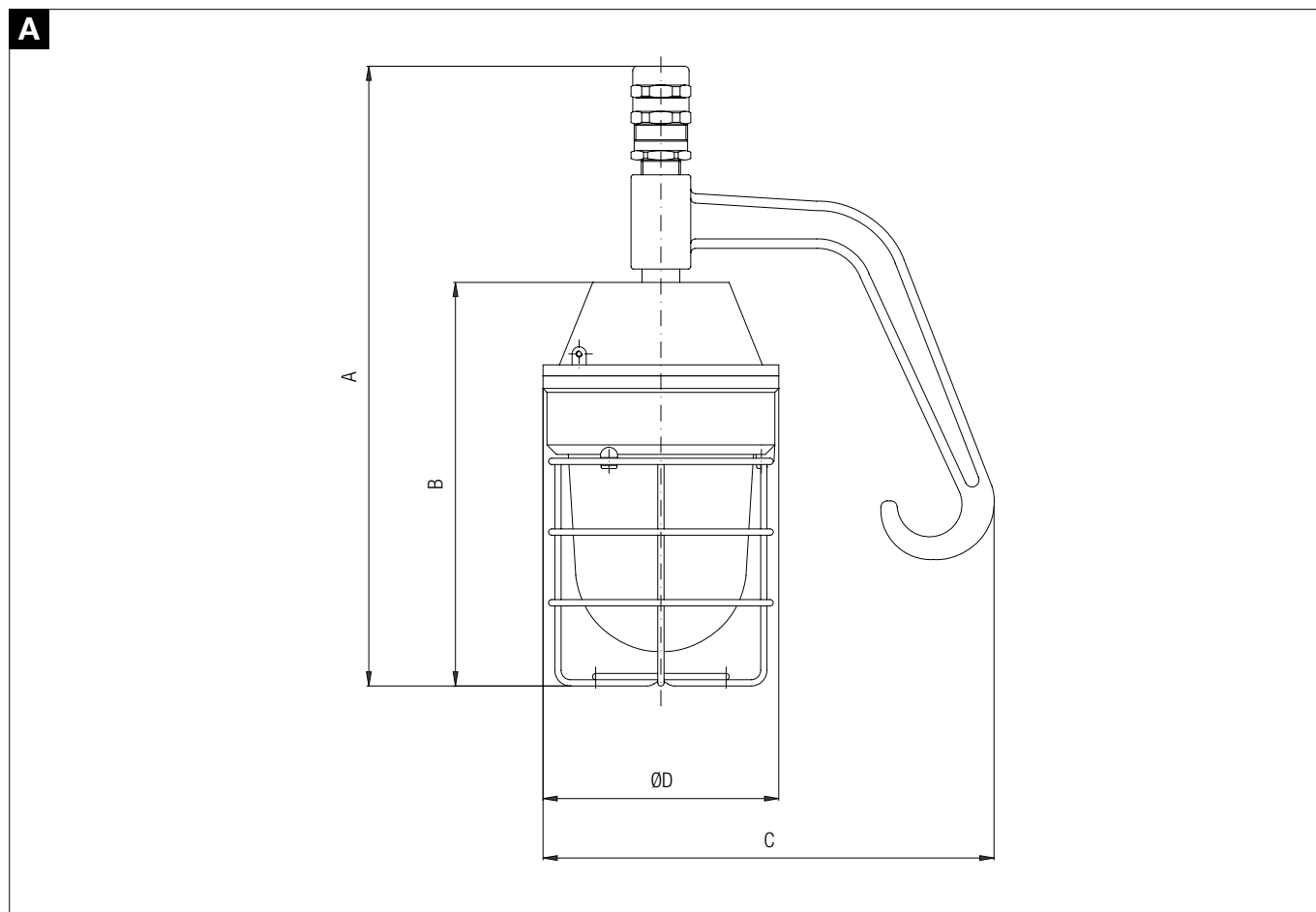
| CODE | LAMP POWER | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY SIZE | DETAIL |
|--|------------|---------------------------|-----------------------------|-----------------|----------------------|--------|
| LIGHTING FIXTURE FOR INCANDESCENT* / LED / HALOGEN* / FLUORESCENT LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
| EVP100 | 100 W | T4 | T 135°C | E-27 | CABLE GLAND 1/2" NPT | A |

*lamp not included.

Technical features

| CODE | A [mm] | B [mm] | C [mm] | Ø D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|--------|--------|--------|--------|----------|------------|----------------------|--------|
| EVP100 | 395 | 257 | 287 | 150 | 4,00 | CABLE GLAND 1/2" NPT | A |

Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex d IIC T6/T4 Gb ⊗ II 2 D Ex tb IIIC T185°C/T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31; |
| EC Type-Examination Certificate | INERIS 01 ATEX 0056X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 13.0074X INMETRO: CEPPEL 14.1023X EAC: TC RU C-IT.BH02.B.00254/19 RINA: ELE18111CS_006 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Globe | high-temperature resistant borosilicate glass |
| Fresnel len | shock proof acrylic material suitable for high temperatures |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |

Electrical characteristics

| | |
|------------------|--|
| Lampholders | porcelain E27 size |
| internal wiring | high-temperature resistant silicon rubber insulation cables |
| terminals | suitable up to 4mm/sq cables |
| medium intensity | flashing obstruction light 1450 / 2000 cd intensity (over than 45mt distance) |
| low intensity | steady obstruction light 30 cd intensity (less than 45mt distance) |
| construction | single awl - twin awl (1 main + 1 spare) in according to ICAO directive |



On Request Accessories:

- Galvanized steel wire protection guard
- Stainless steel wire protection guard
- Aircraft Warning Lights and control panel support manufactured in according to customer specification
- External painting colour on request
- Threaded cable entry different than standard
- Xenoflash 6J lamp
- Electronic with voltage supply different than standard

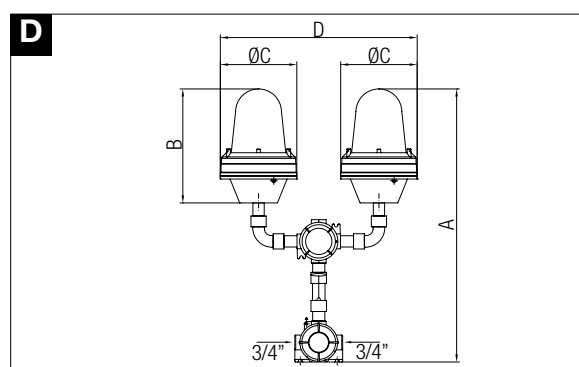
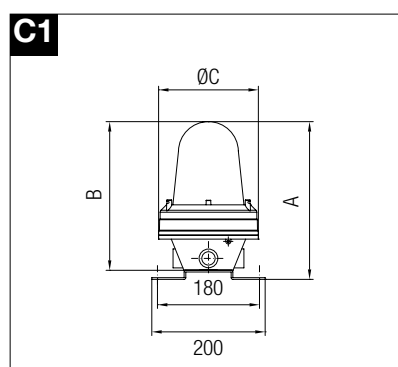
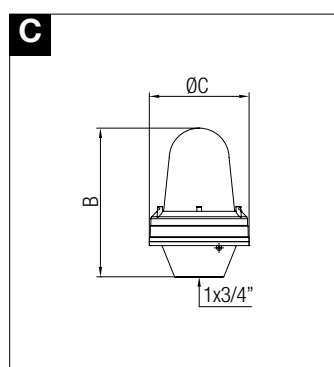
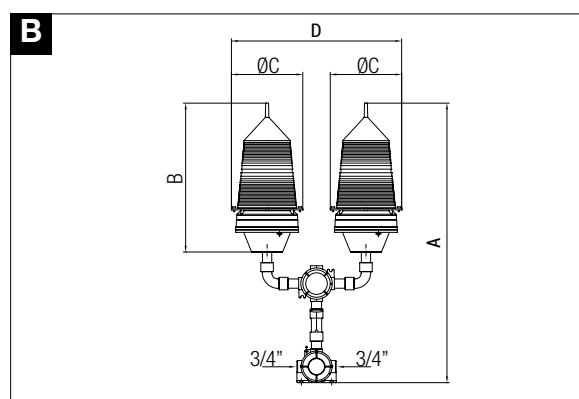
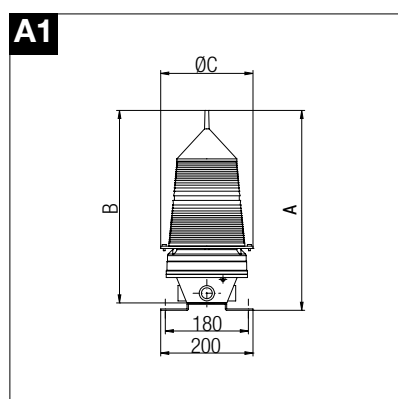
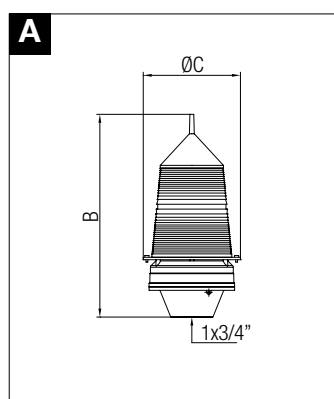
Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | FLASHING [x/min.] | LAMPHOLDER | CABLE ENTRY SIZE | DETAIL |
|-----------------|------------------------|---------------------------|---------------------------|-------------------|------------|------------------|--------|
| WL201-F | 100W INCANDESCENT* | T4 | T 135°C | - | E-27 | 1 x 3/4" | A |
| WL200-F | 100W INCANDESCENT* | T4 | T 135°C | - | E-27 | 2 x 3/4" | A-1 |
| WL201-XF | 2J XENOFASH | T6 | T 85°C | 65 ±10 | E-27 | 1 x 3/4" | C |
| WL200-XF | 2J XENOFASH | T6 | T 85°C | 65 ±10 | E-27 | 2 x 3/4" | C-1 |
| WLS201-F/201F | 2 x 100W INCANDESCENT* | T4 | T 135°C | - | E-27 | 2 x 3/4" | B |
| WLS201-XF/201XF | 2 x 2J XENOFASH | T6 | T 85°C | 65 ±10 | E-27 | 2 x 3/4" | D |
| WL301-R | 40W INCANDESCENT* | T4 | T 135°C | - | E-27 | 1 x 3/4" | C |
| WL300-R | 40W INCANDESCENT* | T4 | T 135°C | - | E-27 | 2 x 3/4" | C-1 |

*lamp not included.

Technical features

| CODE | A [mm] | B [mm] | Ø C [mm] | D [mm] | WEIGHT [kg] | CABLE ENTRY | DETAIL |
|-----------------|--------|--------|----------|--------|-------------|-------------|--------|
| WL201-F | - | 415 | 200 | - | 4,50 | 1 x 3/4" | A |
| WL200-F | 430 | 415 | 200 | - | 4,50 | 2 x 3/4" | A-1 |
| WL201-XF | - | 260 | 176 | - | 4,50 | 1 x 3/4" | C |
| WL200-XF | 280 | 260 | 176 | - | 4,00 | 2 x 3/4" | C-1 |
| WLS201-F/201F | 790 | 415 | 200 | 475 | 9,00 | 2 x 3/4" | B |
| WLS201-XF/201XF | 630 | 260 | 176 | 453 | 8,00 | 2 x 3/4" | D |
| WL301-R | 345 | 322 | 197 | - | 7,00 | 1 x 3/4" | C |
| WL300-R | - | 322 | 197 | - | 7,00 | 2 x 3/4" | C-1 |



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|--------------|--|------------------|
| G200G | EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD | GALVANIZED STEEL |
| G300G | EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD | GALVANIZED STEEL |
| G200X | EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD | STAINLESS STEEL |
| G300X | EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD | STAINLESS STEEL |
| KITEVACTYPE1 | STRUCTURE MOUNTING KIT C/W HARDWARE | STAINLESS STEEL |
| CSRF | RED FRESNEL LEN Ø155mm CUPOLA EVOA 100 | ACRYLIC |
| CSOF | ORANGE FRESNEL LEN Ø155mm CUPOLA EVOA 100 | ACRYLIC |
| CSGF | GREEN FRESNEL LEN Ø155mm CUPOLA EVOA 100 | ACRYLIC |
| CSWF | WHITE FRESNEL LEN Ø155mm CUPOLA EVOA 100 | ACRYLIC |



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts) - Safe area

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | Ⓜ II 2 G Ex d IIC T6 / T5 Gb Ⓜ II 2 D Ex tb IIIC T85°C / T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 01 ATEX 0056X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 13.0074X |

INTERNATIONAL REGULATIONS COMPLIANCY FOR VISUAL AIDS

| |
|--|
| INMETRO: CEPEL 14.1023X |
| EAC: TC RU C-IT.BH02.B.00254/19 |
| RINA: ELE18111CS_006 |
| RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |
| ICAO International Standards and Recommended Practices: Aerodromes - Annex 14 - Volume 1 - 4th Edition (November 2004) |
| Charapter 6: Medium Intensity Type A-B-C Flashing - Steady burning obstacle light MIOL-A / MIOL-B / MIOL-C |
| Charapter 6: Low Intensity Type A-B Steady burning obstacle light LIOL-A / LIOL-B |
| FAA Advisor Circular AC150/5345-43F E.B.#67 - Lamp type MIOL-A / MIOL-B / MIOL-C / LIOL-A / LIOL-B |

Mechanical characteristics

| | |
|-------------|---|
| Body | Marine grade copper free aluminium |
| Globe | High-temperature resistant borosilicate glass (zone 1/2 - 21/22 version) Transparent polycarbonate u/v resistant (safe area version) |
| Painting | External epoxy powders grey RAL-9006 colour |
| Screws | External stainless steel |
| Gaskets | Silicon rubber |
| Cable entry | 3/4" NPT size threaded |

Electrical characteristics

| | |
|-------------------------|---|
| Leds | separate groups with individual led protection system - led technology stallized by constant current generator |
| Consumption | LIOL-B = 8W (single and dual) / miol-B = 35W (single) - 70W (dual) |
| Medium intensity (MIOL) | flashing light with intensity 2000 cd (+/-25%) flashing 40 flash/minute |
| Low intensity (LIOL) | steady burning with intensity 10/32 cd |
| Realization | single group leds system with own reflector dual groups leds system, each group with own reflector (1 main + 1 reserve) |

Optical characteristics

| | |
|---------------------------|---------------------------------------|
| Horizontal beam radiation | 360° (MIOL / LIOL) |
| Vertical beam radiation | LIOL = between 5° and 10° / MIOL = 3° |
| Efficiency | > 91% - pfc factor 0,99 |
| Expetyancy life | long life time - more than 10 years |



On Request Accessories:

- Stainless steel wire protection guard
- Aircraft Warning Lights and control panel support manufactured in according to customer specification
- External painting colour on request
- Threaded cable entry different than standard
- Control panel with simultaneous or catenary multilight flashing system

Technical data

| CODE | LED LAMP GROUP | VISUAL AIDS TYPES | EXECUTION | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | CABLE ENTRIES | DETAIL |
|---|----------------|-------------------|----------------------|-------------------------|---------------------------|---------------|--------|
| LOW INTENSITY OBSTRUCTION WARNING LIGHTS (LIOL)* | | | | | | | |
| AWL100-48LED LIOL-A/S | > 10 cd x 1 | RED STEADY | Ex-d | T6 | T85°C | 1 x 3/4" | A |
| | | | Ex-de / weatherproof | T6 / - | T85°C / - | 1 x 3/4" | A.1 |
| AWLG100-48LED LIOL-A/D | > 10 cd x 2 | RED STEADY | Ex-d | T6 | T85°C | 1 x 3/4" | B |
| AWL100-48LED LIOL-B/S | > 32 cd x 1 | RED STEADY | Ex-d | T6 | T85°C | 1 x 3/4" | A |
| | | | Ex-de / weatherproof | T6 / - | T85°C / - | 1 x 3/4" | A.1 |
| AWLG100-48LED LIOL-B/D | > 32 cd x 2 | RED STEADY | Ex-d | T6 | T85°C | 1 x 3/4" | B |

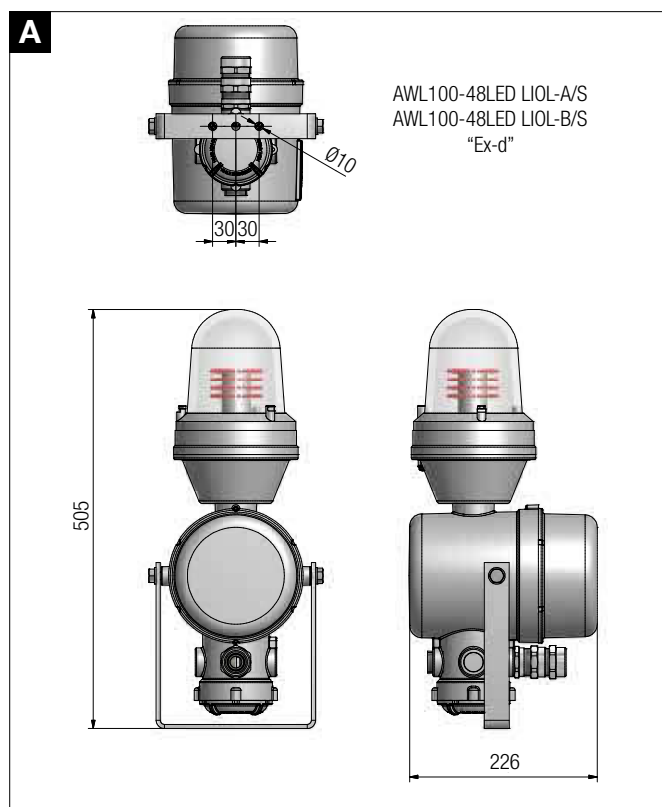
Note: S= single AWL - D= twin AWL
 *Incandescent/halogen lamp not included.

| | | | | | | | |
|--|-----------------|----------------|--------------|----|--------|----------|-----|
| MEDIUM INTENSITY OBSTRUCTION WARNING LIGHTS (MIOL)* | | | | | | | |
| AWL500-48LED MIOL-A/S | = 20.000 cd x 1 | WHITE FLASHING | Ex-d | T5 | T100°C | 1 x 3/4" | C |
| | | | Ex-de | T5 | T100°C | | C.1 |
| | | | weatherproof | - | - | | E |
| AWLG501-48LED MIOL-A/D | = 20.000 cd x 2 | WHITE FLASHING | Ex-d | T5 | T100°C | 1 x 3/4" | D |
| | | | weatherproof | - | - | E | |
| AWL500-48LED MIOL-B/S | = 2.000 cd x 1 | RED FLASHING | Ex-d | T5 | T100°C | 1 x 3/4" | C |
| | | | Ex-de | T5 | T100°C | | C.1 |
| | | | weatherproof | - | - | | E |
| AWLG501-48LED MIOL-B/D | = 2.000 cd x 2 | RED FLASHING | Ex-d | T5 | T100°C | 1 x 3/4" | D |
| | | | weatherproof | - | - | E | |
| AWL500-48LED MIOL-C/S | = 2.000 cd x 1 | RED STEADY | Ex-d | T5 | T100°C | 1 x 3/4" | C |
| | | | Ex-de | T5 | T100°C | | C.1 |
| | | | weatherproof | - | - | | E |
| AWLG501-48LED MIOL-C/D | = 2.000 cd x 2 | RED STEADY | Ex-d | T5 | T100°C | 1 x 3/4" | D |
| | | | weatherproof | - | - | E | |

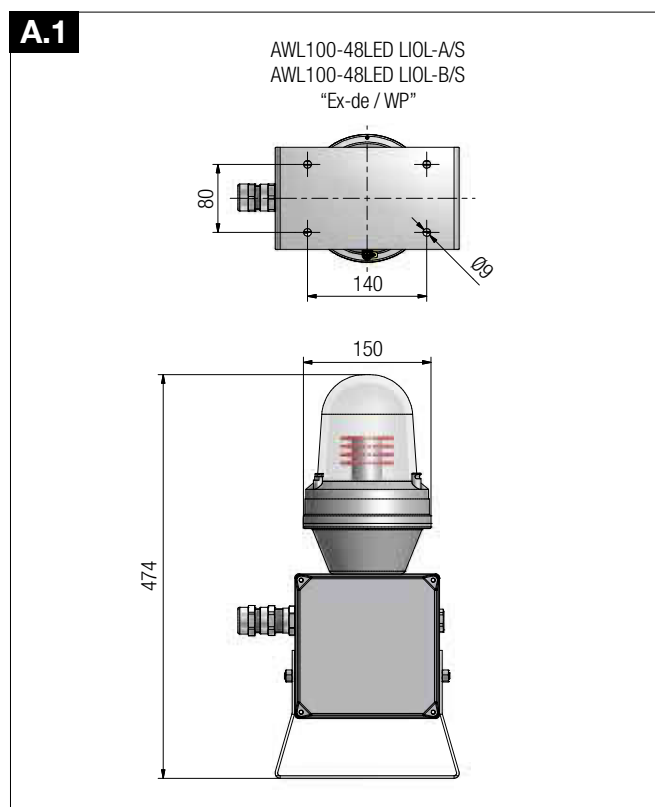
Note: S= single AWL - D= twin AWL
 *Incandescent/halogen lamp not included.

AWL Technical features

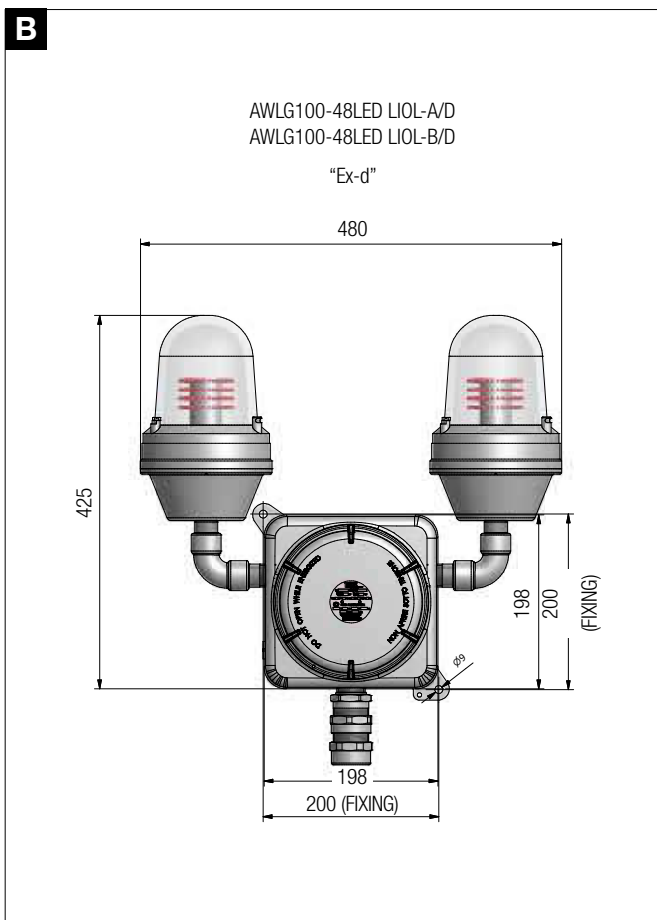
Reference details



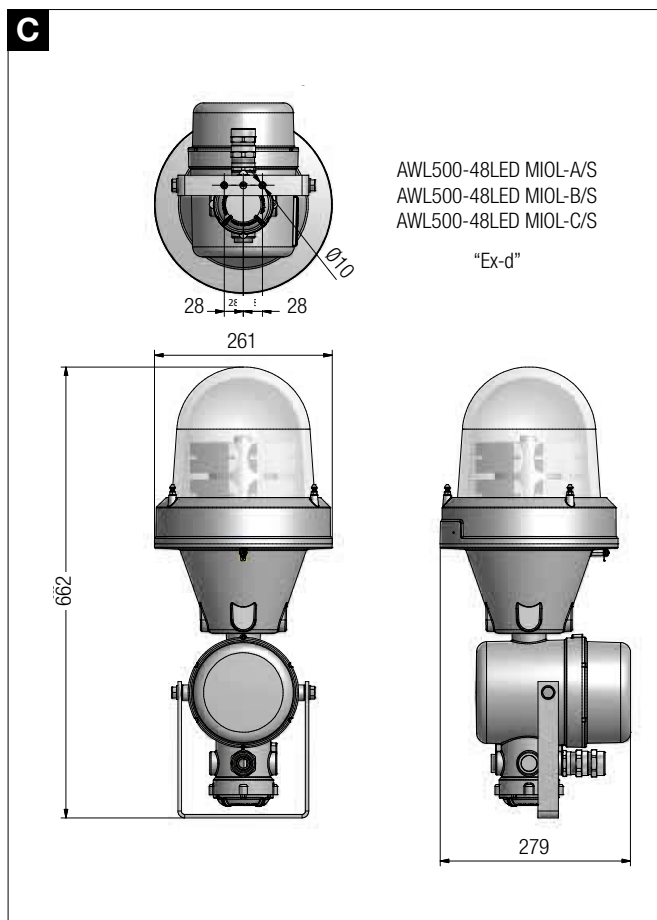
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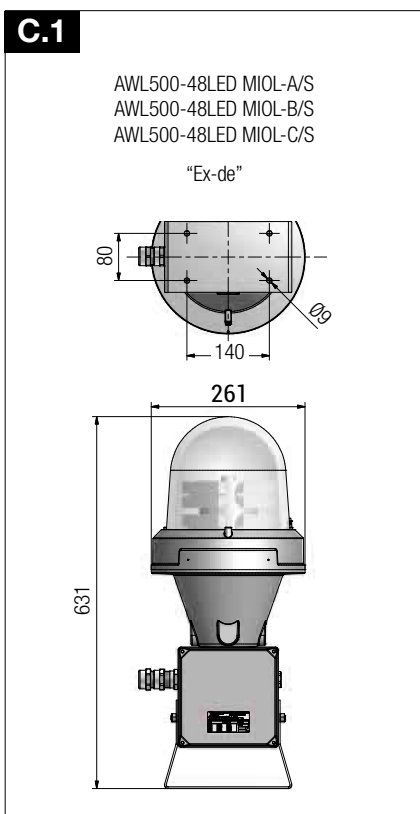
Reference details



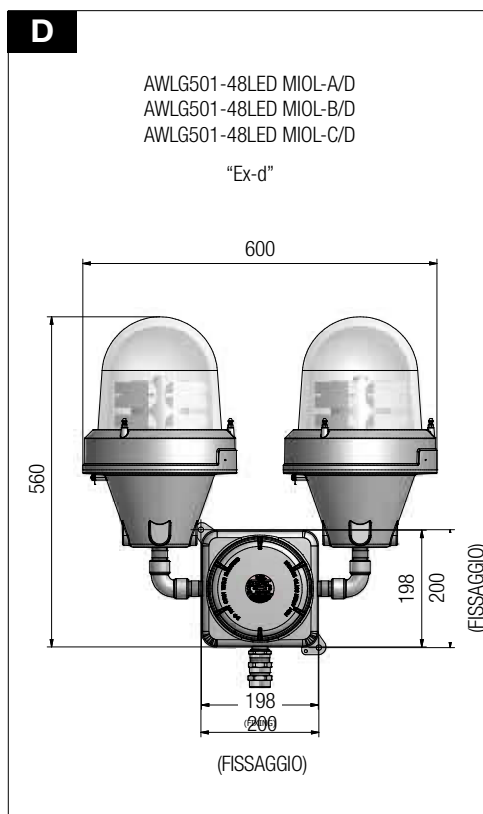
Reference details



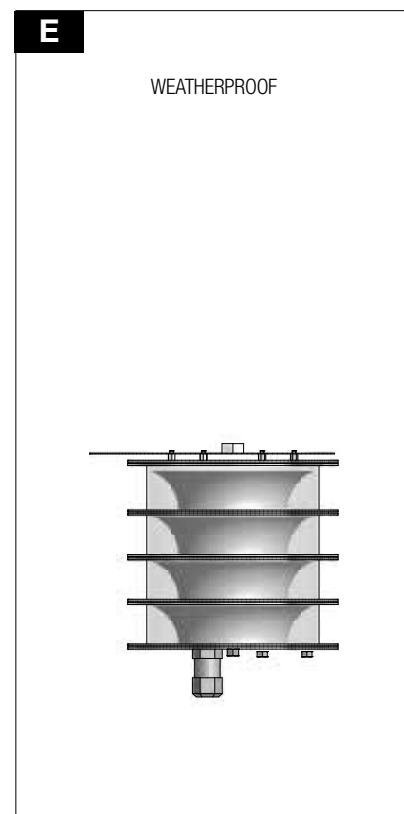
Reference details



Reference details



Reference details



MAIN RULES FOR VISUAL AIDS

ICAO Annex 14 - Aerodromes Vol. 1 - Chapter 6 / 10 (July 2004)

- The marking and/or lighting of obstacles is intended to reduce hazards to aircraft by indicating the presence of the obstacles (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.1)

- Marking (red-orange/white painting) is used for day time
- Marking may be omitted when the obstacle is lighted

- A fixed obstacle above a horizontal surface should be marked and, if the aerodrome is used at night, lighted.. (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.1.4)

- A system of preventive maintenance of visual aids shall be employed to ensure lighting and marking system reliability (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 10.4.2)

- The reliability of installed lighting equipments should not less than one year (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 10.4.6)

- The number and arrangement of Low, Medium or High Intensity Obstacle Lights , at each level to be marked, shall be such that the object is indicated from every angle in azimuth

- Where a light is shielded in any direction by another, additional light shall be provided (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.22)

- The number of lights needed for each level depends on the outside diameter of the obstacle
- The top lights should be placed sufficiently below the top, so as to minimize contamination by smoke, powders, and so on.. (ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.12)

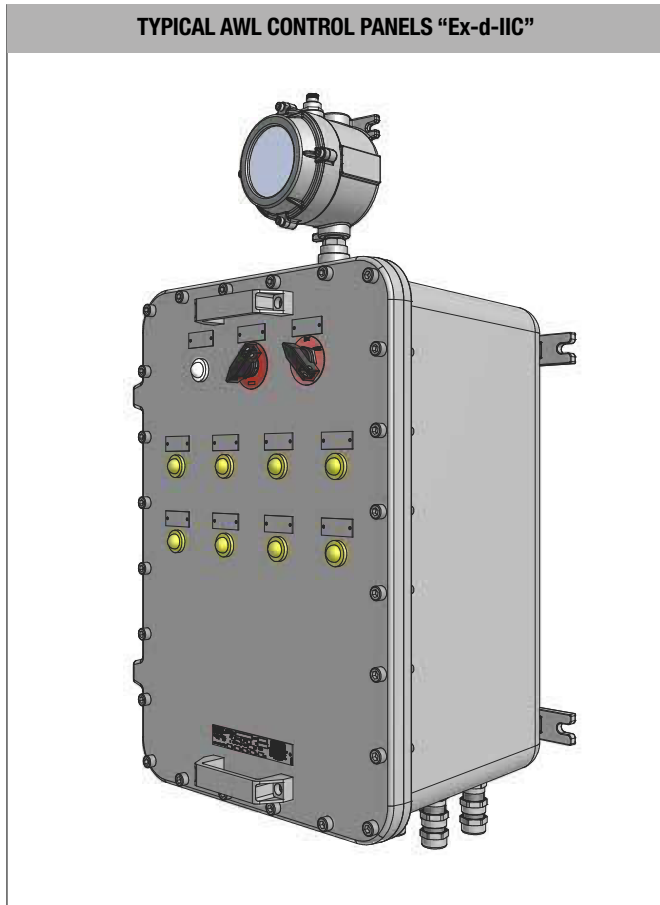
Reference details

TYPICAL AWL CONTROL PANELS “Ex-d-IIB”



Reference details

TYPICAL AWL CONTROL PANELS “Ex-d-IIC”



AWL TYPES (Aircraft Warning Lights)

LIOL-A / B Low Intensity Obstacle Lights on fixed objects, Type-A / Type-B, shall be steady burning RED lights
(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.23)

MIOL-A Medium Intensity Obstacle Lights on fixed objects, Type-A , shall be flashing WHITE lights

MIOL-B Medium Intensity Obstacle Lights on fixed objects, Type-B , shall be flashing RED lights

MIOL-C Medium Intensity Obstacle Lights on fixed objects, Type-C , shall be steady burning RED lights

(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.30)

MIOL-A / MIOL-B Medium Intensity Obstacle Lights Type-A / Type-B, located on an obstacle, shall be flash simultaneously

(ICA: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.32)

HIOL-A / B High Intensity Obstacle Lights on fixed objects, Type-A / Type-B, shall be flashing WHITE lights

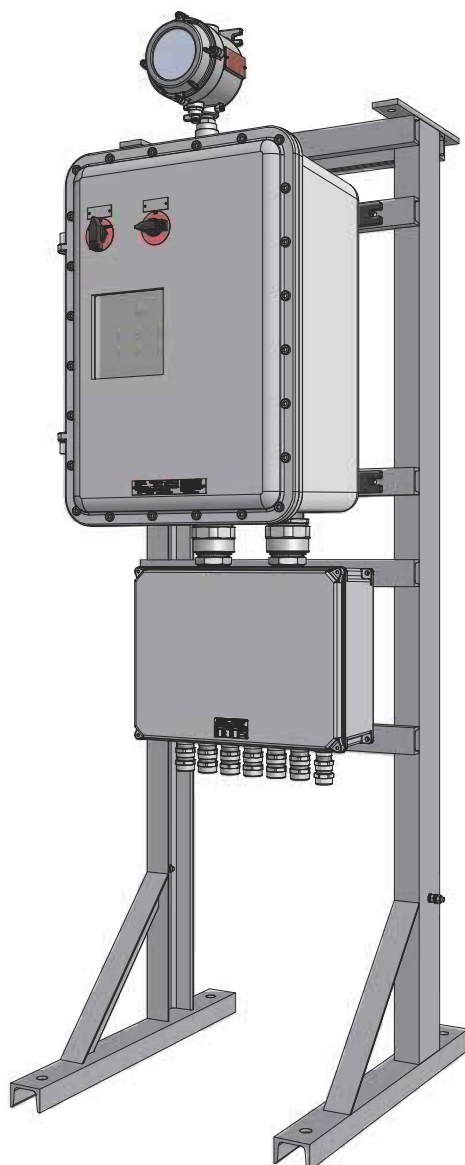
(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.33)

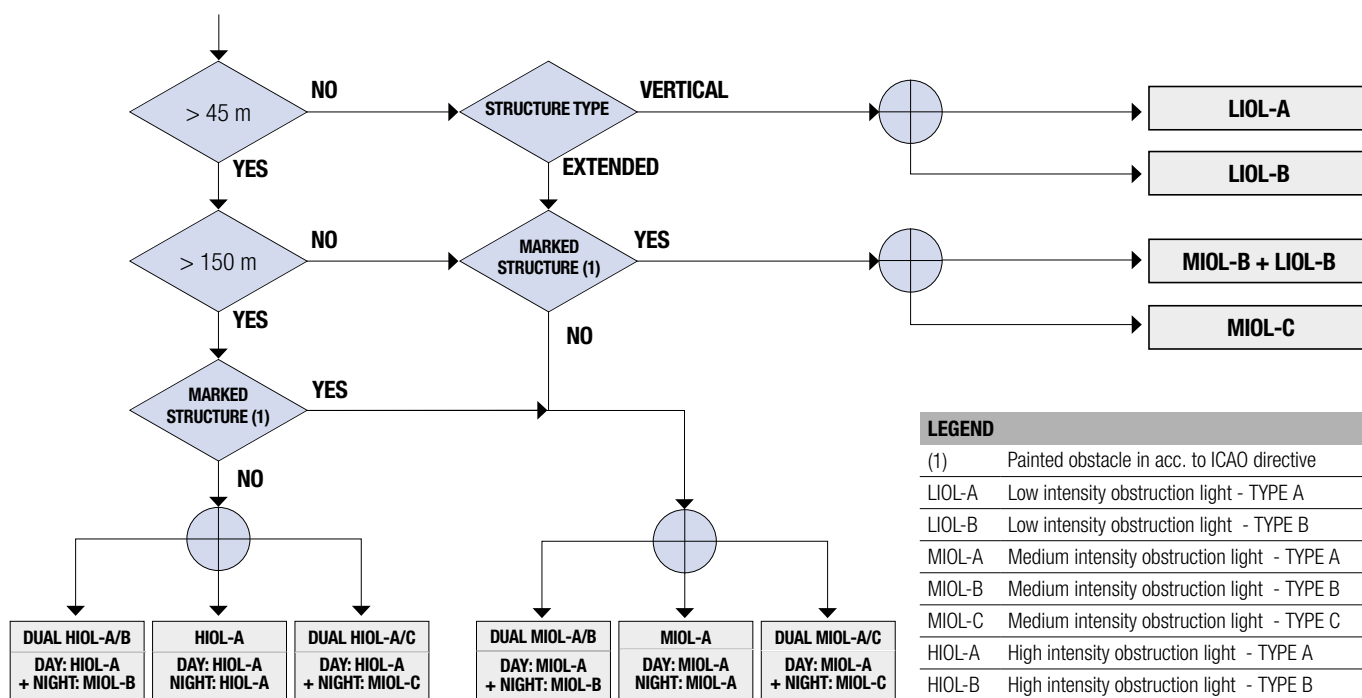
HIOL-A High Intensity Obstacle Lights Type-A, located on an obstacle, shall be flash simultaneously

(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.35)

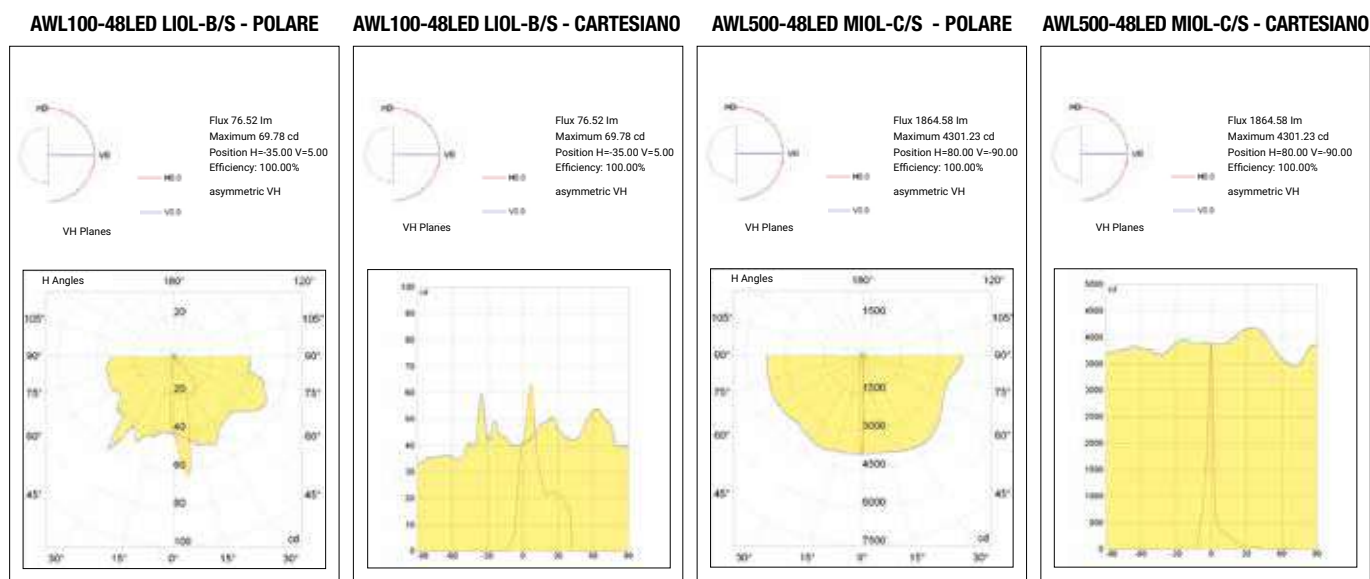
HIOL-B High Intensity Obstacle Lights Type-B, indicating the presence of tower supporting overhead wires, an others.. shall be flash sequentially

(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.36)

Reference details**TYPICAL AWL CONTROL PANELS "Ex-de"**



AWL Polar diagrams – photometric data



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓜ II 2 G Ex d IIB + H2 T3/T2 or Ⓜ II 2 G Ex de IIB + H2 T3/T2 Ⓜ II 2 D Ex tb IIIC T200°C...T240°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 01 ATEX 0020X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 15.0002X INMETRO: CEPEL 15.2364X EAC: TC RU C-IT.BH02.B.00254/19 (-60°C ÷ +60°C) RINA: ELE18111CS_005 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass |
| Support | adjustable type hot dip galvanized steel |
| Reflector | internal polished aluminium |
| Painting | external epoxy powders grey RAL-9006 COLOUR |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 3/4" NPT (Ex d version) / ISO-M25 (Ex de version) |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | conventional ballast 230V- 50Hz (p.f.corrected - cos $\rho \geq 0,95$) |
| Lamp holders | porcelain E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY SIZE | DETAIL |
|--|-------|-------------------------|-------------------------------|-----------------|------------------|--------|
| LIGHTING FIXTURE FOR HALOGEN LAMP* - POWER SUPPLY 230V-50Hz | | | | | | |
| SFD500IA | 500 W | T2 | T 217°C T 230°C T 240°C | R7s | 2 x 3/4" NPT | A |
| SFDE500IA | | | | | 2 x ISO-M25 | B |

*lamp not included.

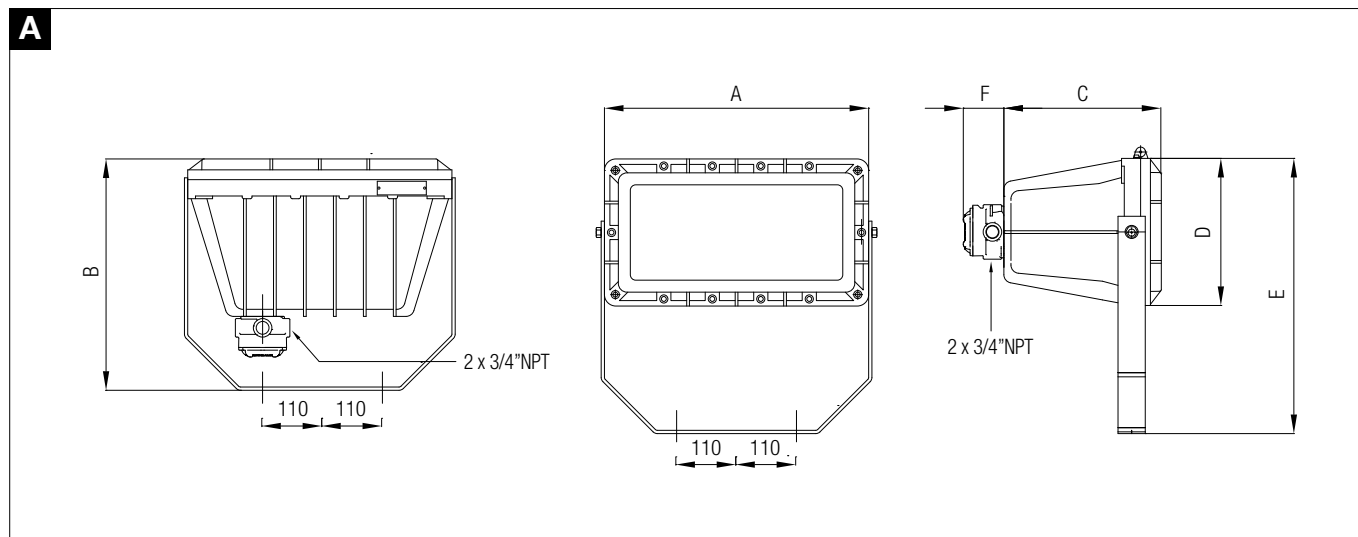
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
|--|-------|---------|-----------------------------|------|--------------|---|
| SFD150NA | 150 W | T3 | T 200°C | E-40 | 2 x 3/4" NPT | A |
| SFDE150NA | | | | | 2 x ISO-M25 | B |
| SFD250NA | 250 W | T3 / T2 | T 200°C / T 210°C | E-40 | 2 x 3/4" NPT | A |
| SFDE250NA | | | | | 2 x ISO-M25 | B |
| SFD400NA | 400 W | T3 / T2 | T 200°C / T 210°C / T 220°C | E-40 | 2 x 3/4" NPT | A |
| SFDE400NA | | | | | 2 x ISO-M25 | B |
| SFDDE600NA | 600 W | T3 | T 200°C | E-40 | 2 x 3/4" NPT | C |

| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
|--|-------|---------|-----------------------------|------|--------------|---|
| SFD250MH | 250 W | T3 | T 200°C | E-40 | 2 x 3/4" NPT | A |
| SFDE250MH | | | | | 2 x ISO-M25 | B |
| SFD400MH | 400 W | T3 / T2 | T 200°C / T 210°C / T 220°C | E-40 | 2 x 3/4" NPT | A |
| SFDE400MH | | | | | 2 x ISO-M25 | B |

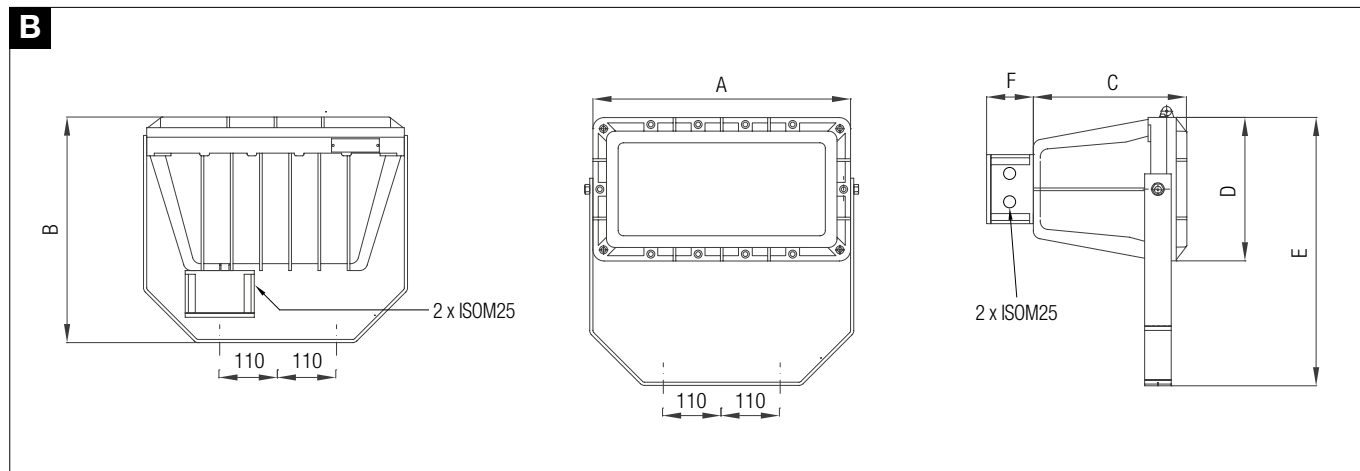
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|--------|------------|--------------|--------|
| SFD... | 485 | 435 | 290 | 270 | 500 | 75 | 25,00 | 2 x 3/4" NPT | A |
| SFDE... | 485 | 435 | 290 | 270 | 500 | 88 | 25,00 | 2 x ISO-M25 | B |
| SFDDE600NA | 485 | 590 | 290 | 270 | 420 | 240 | 30,00 | 2 x 3/4"NPT | C |

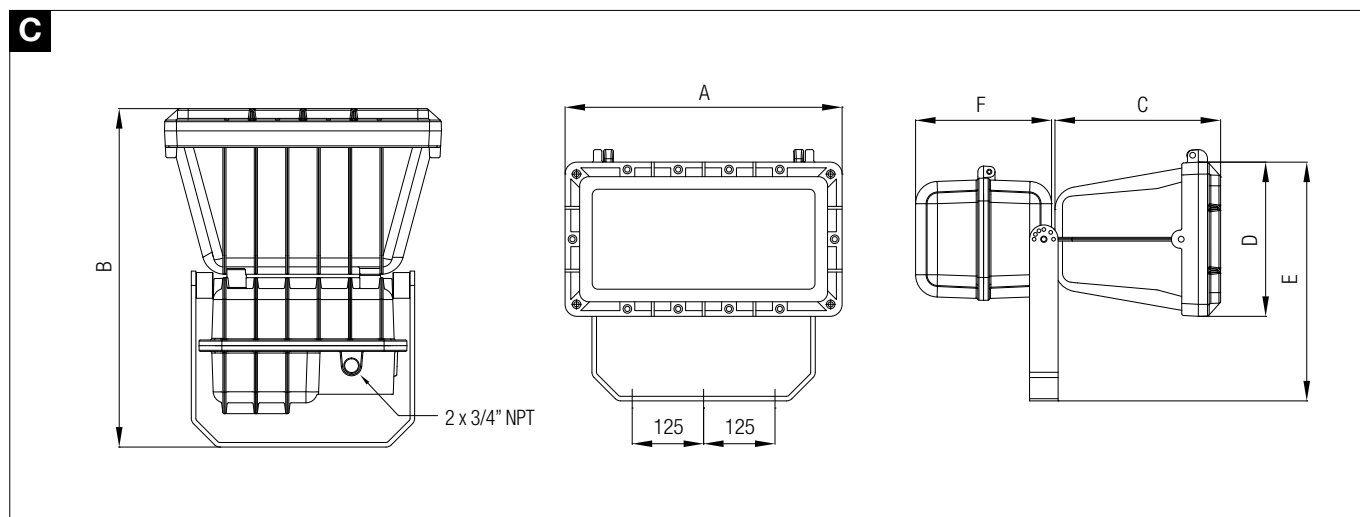
Reference details



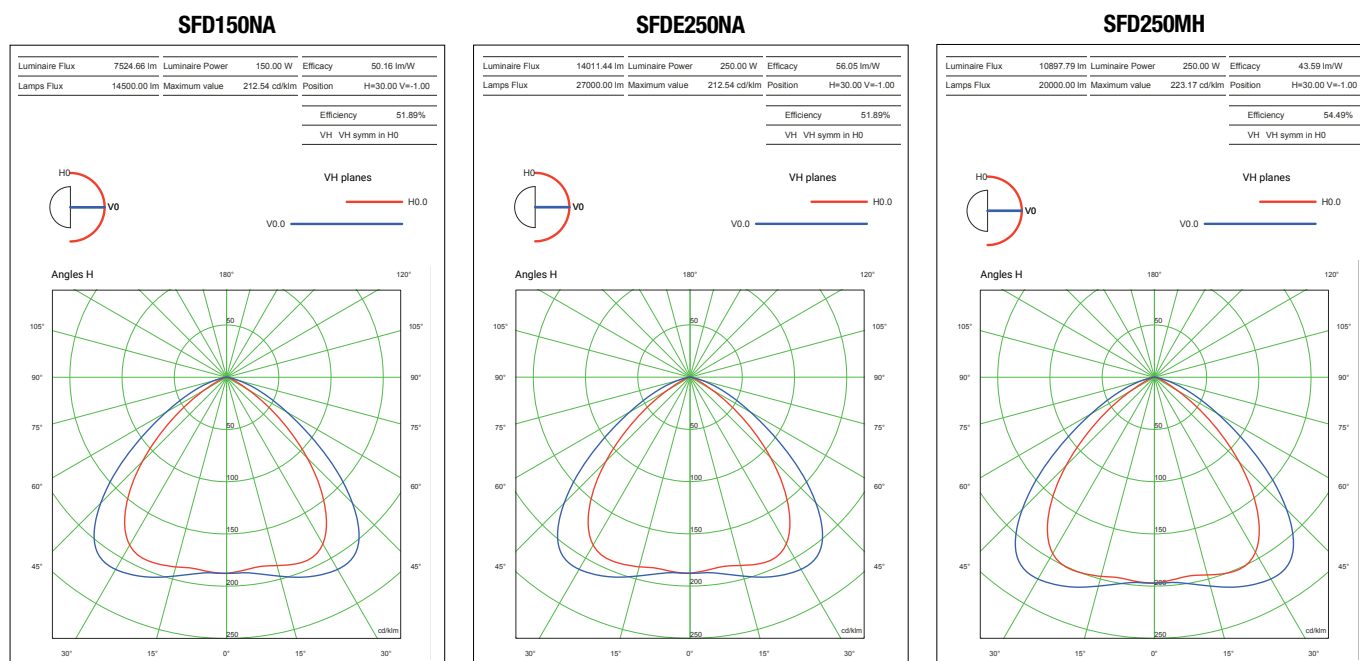
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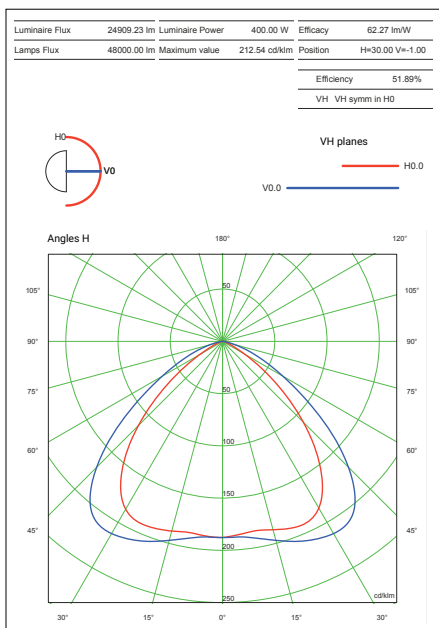
Reference details



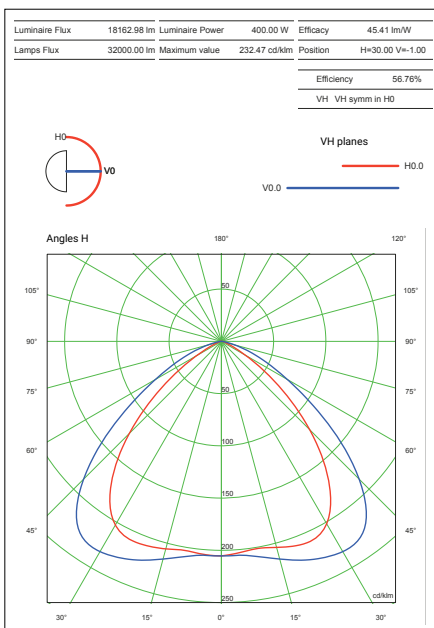
SFD-SFDE Polar diagrams – photometric data



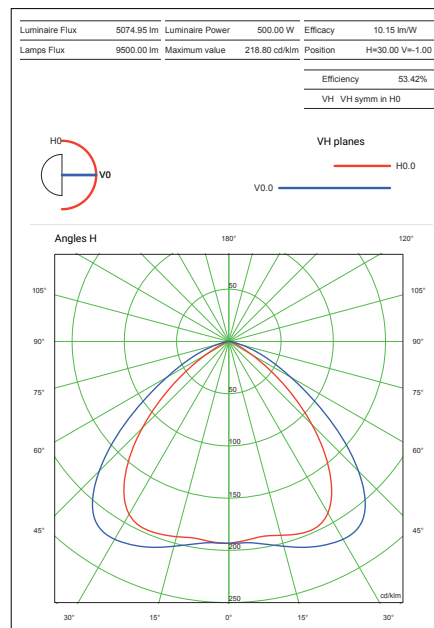
SFD400NA



SFD400MH



SFD500IA



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ☉ II 2 G Ex d IIB + H2 T6...T4 or ☉ II 2 G Ex de IIB + H2 T6...T4 ☉ II 2 D Ex tb IIIC T85°C...T135°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 00 ATEX 0020X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 15.0002X INMETRO: CEPEL 15.2364X EAC: TC RU C-IT.BH02.B.00254/19 (-60°C ÷ +60°C) RINA: ELE18111CS_005 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|--|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass |
| Support | adjustable type hot dip galvanized steel |
| Painting | external epoxy powders grey RAL-9006 COLOUR |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 3/4"NPT (Ex d version) / ISO-M25 (Ex de version) |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 120 - 277Vac electronic driver 50/60 Hz - c/w surge protection 6KV and NTC thermal sensor |
| Lamp type | MK-R / CREE CRI 70, CCT 5700K. Lifetime: 80.000 hours L80 B10 @ta25 |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Optic | with symmetrical lens vertex at 65deg |



On Request Accessories:

- External painting colour on request
- Threaded cable entry different than standard

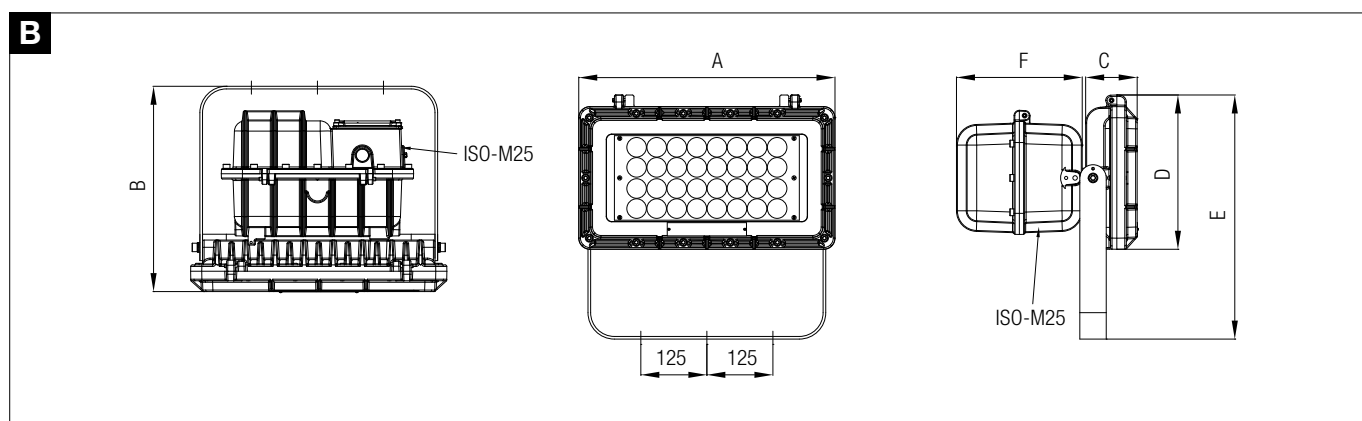
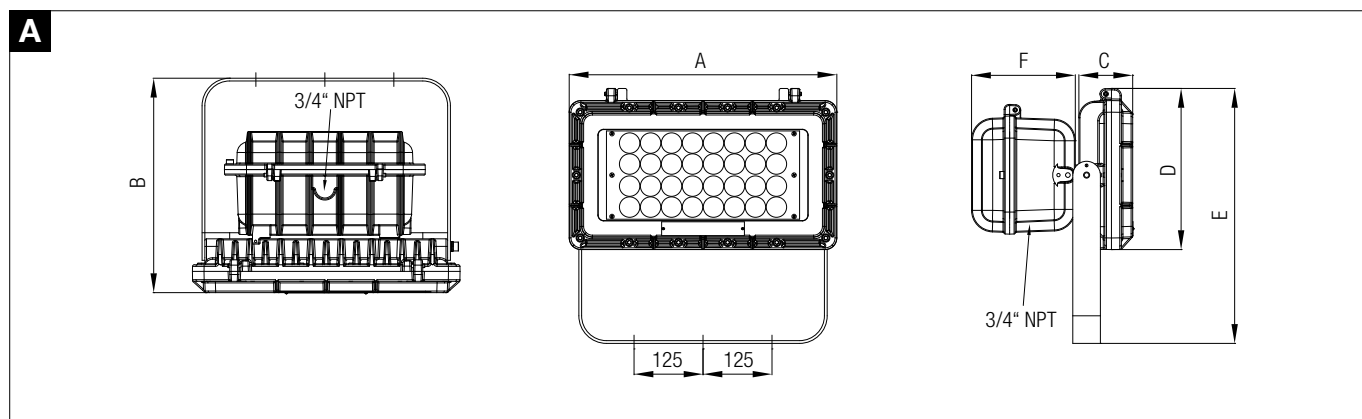
Technical data

| CODE | POWER LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | NOMINAL OUTPUT (lm) | LAMP TYPE | CABLE ENTRY SIZE | DETAIL |
|---|------------|-------------------------|---------------------------|---------------------|-----------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 120-277 Vac - 50/60 Hz | | | | | | | |
| SFD20-LED/65 | 160 W | T6 (Ta = -20°C / +40°C) | T 85°C | 12705 | POWER LED | 2 x 3/4" NPT | A |
| SFDE20-LED/65 | | T5 (Ta = -20°C / +50°C) | T 100°C | | | 2 x ISO-M25 | B |
| SFD24-LED/65 | 192W | T4 (Ta = -20°C / +60°C) | T135°C | 17680 | | 2 x 3/4" NPT | A |
| SFDE24-LED/65 | | T4 (Ta = -20°C / +60°C) | T135°C | | | 2 x ISO-M25 | B |
| SFD28-LED/65 | 224 W | T6 (Ta = -20°C / +40°C) | T 85°C | 19360 | | 2 x 3/4" NPT | A |
| SFDE28-LED/65 | | T5 (Ta = -20°C / +50°C) | T 100°C | | | 2 x ISO-M25 | B |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|---|--------|--------|--------|--------|--------|--------|-------------|--------------|--------|
| SFD20-LED/65 SFD24-LED/65 SFD28-LED/65 | 485 | 390 | 100 | 292 | 462 | 190 | 25,00 | 2 x 3/4" NPT | A |
| SFDE20-LED/65 SFDE24-LED/65 SFDE28-LED/65 | 485 | 390 | 100 | 292 | 462 | 240 | 26,00 | 2 x ISO-M25 | B |

Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊙ II 2 GD EEx d IIC T4 or T3 or T2 T135°C or T160°C or T200°C or T230°C |
| RULES OF COMPLIANCE | EN 50014 + A1 and A2 - EN 50018 EN 50281-1-1 + A1 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0025X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +52°C |
| OTHER AVAILABLE CERTIFICATES | EAC: TC RU C-IT.BH02.B.00254/19 (-60°C ÷ +60°C) IRUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass |
| Support | adjustable type hot dip galvanized steel |
| Reflector | internal polished aluminium |
| Painting | external epoxy powders grey RAL-9006 COLOUR |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 3/4" NPT size threaded |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | conventional ballast 230V - 50Hz (p.f.corrected - $\cos \rho \geq 0,95$) |
| Lampholders | porcelain E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

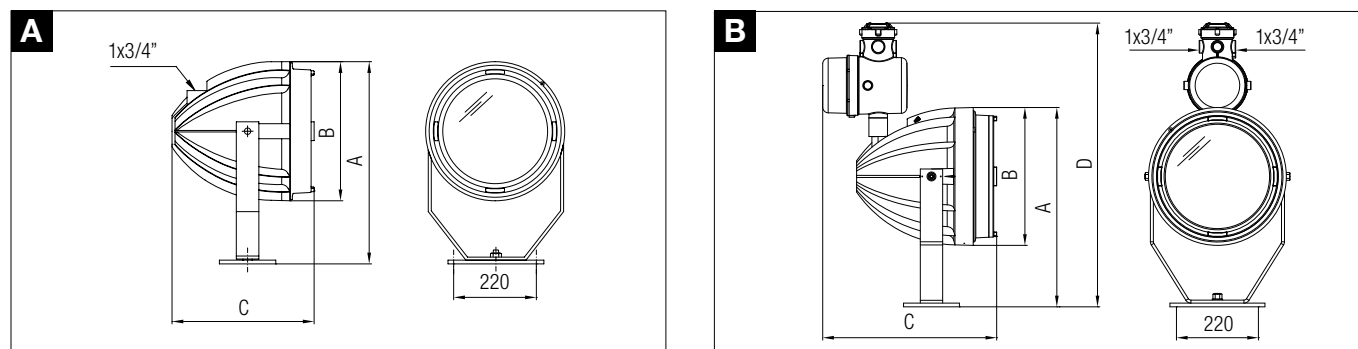
- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY SIZE | DETAIL |
|--|-------|---------------------------|-----------------------------|-----------------|------------------|--------|
| LIGHTING FIXTURE FOR INCANDESCENT LAMP* - POWER SUPPLY 230V-50Hz | | | | | | |
| RCDE500I | 500 W | T2 | T230°C | E-40 | 1x3/4" | A |
| RCDE500I | 300 W | T3 | T160°C | E-40 | 1x3/4" | A |
| *lamp not included. | | | | | | |
| LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
| RCDE500MLL | 500 W | T3 / T2 | T200°C / T230°C | E-40 | 1x3/4" | A |
| LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
| RCDE250HG | 250 W | T3 | T160°C | E-40 | 2x3/4" | B |
| RCDE400HG | 400 W | T3 | T200°C | E-40 | 2x3/4" | B |
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
| RCDE250NA | 250 W | T4 / T3 | T135°C / T160°C | E-40 | 2x3/4" | B |
| RCDE400NA | 400 W | T3 | T200°C | E-40 | 2x3/4" | B |
| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
| RCDE250MH | 250 W | T4 / T3 | T135°C / T160°C | E-40 | 2x3/4" | B |
| RCDE400MH | 400 W | T3 | T200°C | E-40 | 2x3/4" | B |

Technical features

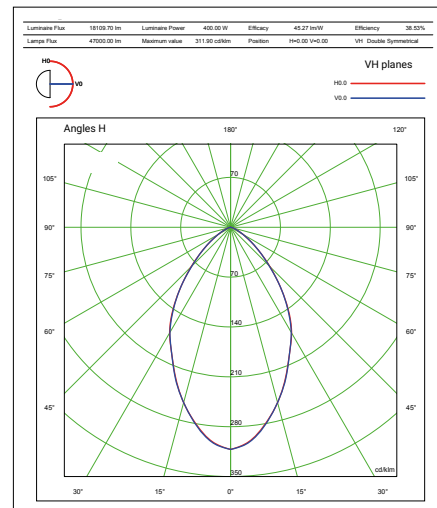
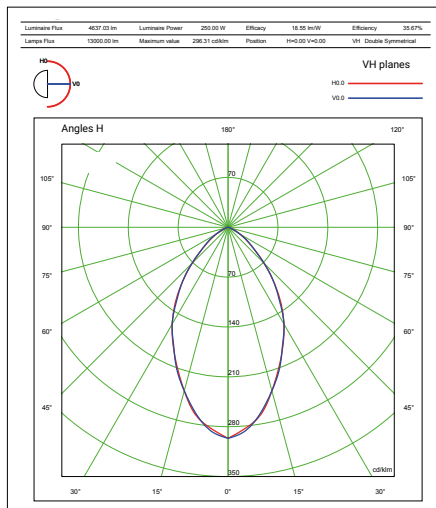
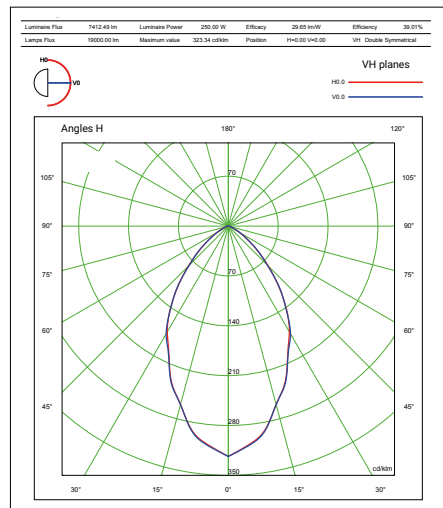
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|-----------|--------|--------|--------|--------|------------|-------------|--------|
| RCDE500I | 535 | 370 | 376 | - | 21,00 | 1 x 3/4" | A |
| RCDE250HG | 535 | 370 | 406 | 700 | 29,00 | 2 x 3/4" | B |
| RCDE400HG | 535 | 370 | 406 | 700 | 29,50 | 2 x 3/4" | B |
| RCDE250NA | 535 | 370 | 406 | 700 | 31,00 | 2 x 3/4" | B |
| RCDE400NA | 535 | 370 | 406 | 700 | 31,50 | 2 x 3/4" | B |
| RCDE250MH | 535 | 370 | 406 | 700 | 26,50 | 2 x 3/4" | B |
| RCDE400MH | 535 | 370 | 406 | 700 | 31,50 | 2 x 3/4" | B |



RCDE250MH

RCDE250HG

RCDE400NA



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.


Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | Ⓢ II 2 G Ex db op is IIC T5/T4 Gb Ⓢ II 2 D Ex op is tb IIIC T100°C/T135°C Db IP66 |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-28; EN/IEC 60079-31; |
| EC Type-Examination Certificate | INERIS 17 ATEX 0045X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 17.0037X EAC: TC RU C-IT.BH02.B.00254/19 |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass |
| Support | adjustable type hot dip galvanized steel |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 2 x 3/4" NPT (2 x ISO-M25 as option) |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | 100÷240Vac - 50/60 Hz 127÷250Vdc |
| Lamp type | Power LED Type "cold white" - CCT 5700K with symmetric 65deg secondary lens |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |


On Request Accessories:

- External painting colour on request
- Threaded cable entry different than standard

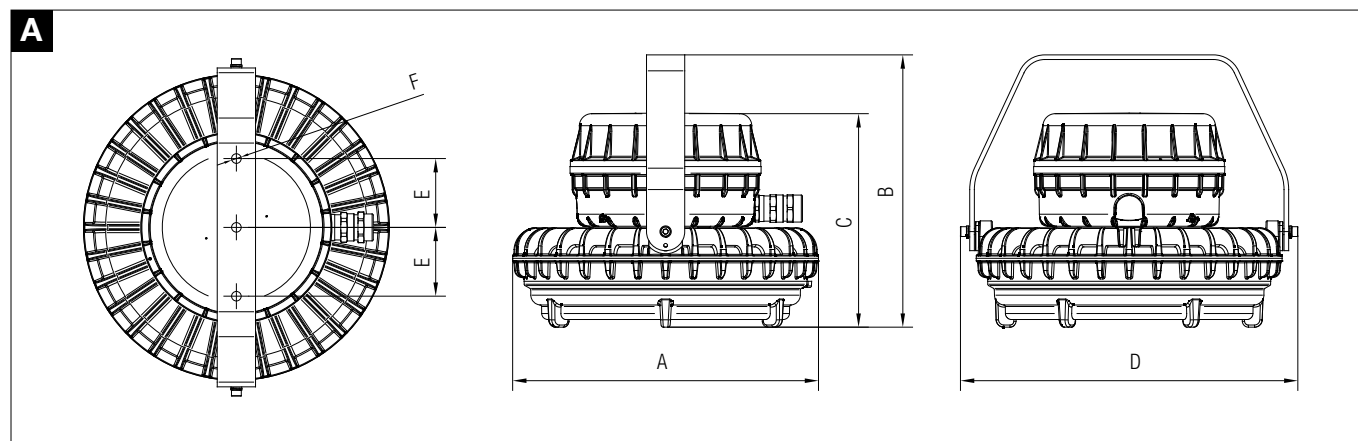
Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | NOMINAL OUTPUT (lm) | CABLE ENTRY SIZE | DETAIL |
|--|-------|-------------------------------|-----------------------------|---------------------|------------------|--------|
| LIGHTING FIXTURE FOR LED LAMP - POWER SUPPLY (100±240Vac - 50/60 Hz) - (127±250Vdc) | | | | | | |
| RCDE20-LED/65 | 160 W | T5 (Ta +40°C) / T4 (Ta +60°C) | T100°C / T135°C | 12135 lm | 2 x 3/4" NPT | A |
| RCDE24-LED/65 | 192 W | T5 (Ta +40°C) / T4 (Ta +60°C) | T100°C / T135°C | 14563 lm | 2 x 3/4" NPT | A |

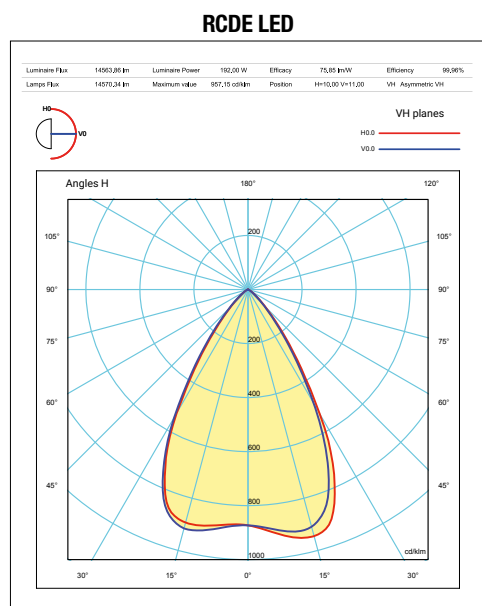
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------------|--------|--------|--------|--------|--------|--------|------------|--------------|--------|
| RCDE20-LED/65 | 400 | 356 | 279 | 441 | 90 | Ø12,5 | 21,00 | 2 x 3/4" NPT | A |
| RCDE24-LED/65 | | | | | | | 21,50 | | |

Reference details



RCDE LED Polar diagrams – photometric data



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | EVO ⊗ II 2 G Ex d IIC T6-T5-T3 Gb ⊗ II 2 D Ex tb IIIC T85°C-T100°C-T200°C Db |
| | EVT ⊗ II 2 G Ex d IIC T6-T4-T3 Gb ⊗ II 2 D Ex tb IIIC T85°C-T135°C-T150°C Db |
| | TLF ⊗ II 2 G Ex d / Ex de IIB T3 ⊗ II 2 D Ex tD A21 T200°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31; EN/IEC 61241-0; EN/IEC 61241-1 |
| EC Type-Examination Certificate | INERIS 01 ATEX 0041X (EVO) INERIS 01 AEX 0042X (EVT) INERIS 01 ATEX 0024 (TLF) |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C (EVO - EVT) -20°C ÷ +52°C (TLF) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 12.0005X (EVO) IECEX INE 12.0015X (EVT) |
| | INMETRO: CEPPEL 12.2156 (EVO) CEPEL 12.2154 (EVT) |
| | EAC: TC RU C-IT.BH02.B.00254/19 (-60°C ÷ +60°C) |
| | RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|------------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | borosilicate frontal glass (EVT) |
| Diffuser | tempered frontal glass (EVO - TLF) |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | 3/4" NPT size threaded |
| Protection guard | galvanized wire steel (EVT ONLY) |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | standard voltage 230V - 50Hz |
| Lampholders | porcelain E27 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

- External painting colour on request
- Threaded cable entry different than standard

Technical data

| CODE | LAMP TYPE and POWER | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY SIZE | DETAIL |
|--|--------------------------|---------------------------|-----------------------------|-----------------|------------------|--------|
| LIGHTING FIXTURE DIRECTLY SUPPLIED - POWER SUPPLY 220/230V-50Hz | | | | | | |
| EVO100I | 100W INCANDESCENT* | T3 | T 200°C | E-27 | 1x3/4" | A |
| | 105W HALOGEN* | T3 | T 200°C | E-27 | 1x3/4" | A |
| | 12W LED | T6 / T5 | T 85°C / T 100°C | E-27 | 1x3/4" | A |
| EVT100A | 100W INCANDESCENT* | T4 / T3 | T135°C / T150°C | E-27 | 2x3/4" | B |
| | 105W HALOGEN* | T4 / T3 | T135°C / T150°C | E-27 | 2x3/4" | B |
| | 6W LED | T6 | T 85°C | E-27 | 2x3/4" | B |
| TLF100I | 75W o 100W INCANDESCENT* | T3 | T 200°C | E-27 | 2x3/4" | C |

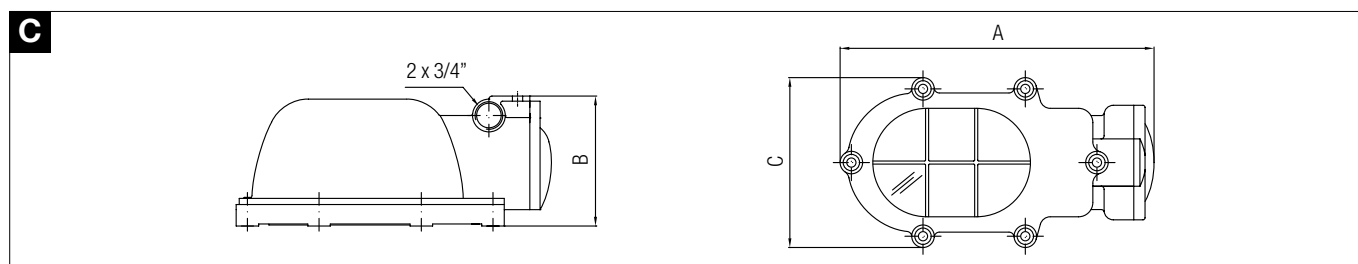
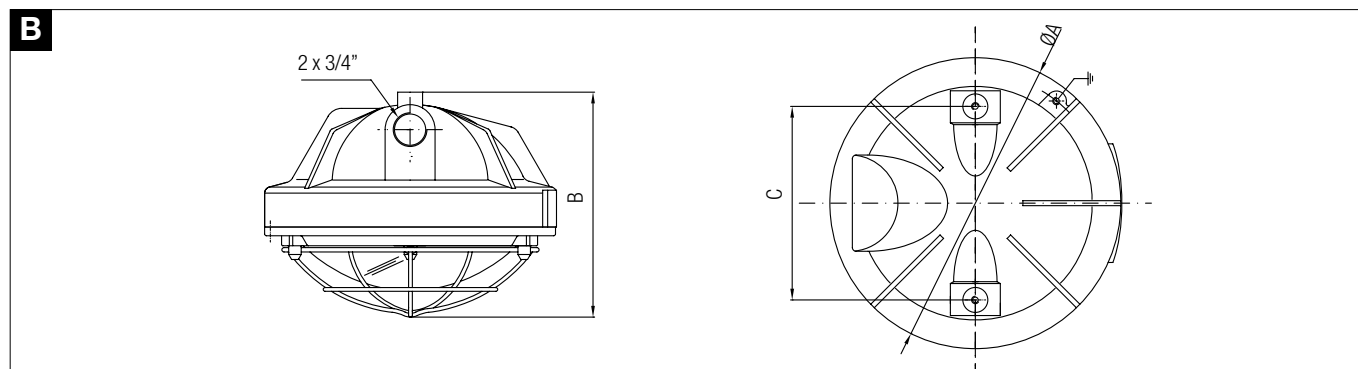
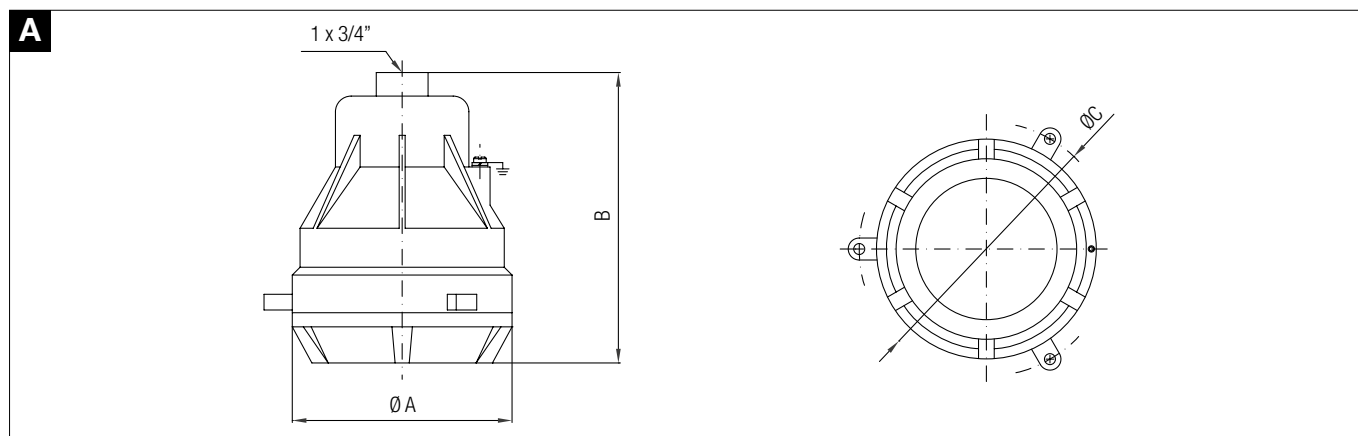
*lamp not included.

| LIGHTING FIXTURE FOR H.P.MERCURY VAPOUR LAMP - WITH SEPARATE CONTROL GEAR - POWER SUPPLY 230V-50Hz | | | | | | |
|---|------|----|---------|------|--------|---|
| TLF-80HG | 80 W | T3 | T 200°C | E-27 | 2x3/4" | C |

Technical featurese

| CODE | A [mm] | B [mm] | C [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------|--------|--------|--------|------------|-------------|--------|
| EVO100I | Ø140 | 185 | Ø162 | 2,00 | 1 x 3/4" | A |
| EVT100A | Ø233 | 180 | 155 | 4,00 | 2 x 3/4" | B |
| TLF100I | 309 | 127 | 165 | 3,00 | 2 x 3/4" | C |

Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | | |
|---|---|---|
| EXECUTION | (fluo) | ⊗ Ex db IIB + H2 T6... T5 Gb ⊗ Ex tb IIIC T85°C... T100°C Db |
| | (led) | ⊗ Ex db op is IIB + H2 T6... T4 Gb ⊗ Ex op is tb IIIC T85°C... T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31; EN/IEC 60079-28 | |
| EC Type-Examination Certificate | INERIS 15 ATEX 0023X | |
| PROTECTION DEGREE | IP66 | |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C | |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 15_0029X | |
| | INMETRO: CEPEL 15.2386X | |
| | EAC: TC RU C-IT.ГБ08.B.01343 (-60°C÷+60°C) | |
| RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 | | |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Reflectors | white stove enamelled sheet steel |
| Cable entry | 3/4" NPT size threaded c/w cable gland |

Electrical characteristics

| | |
|---------------------|--|
| Power supply (fluo) | electronic ballast 230V/240V 50/60Hz (cos ρ ≥ 0,98) |
| | electronic ballast 100V/240V 50/60Hz (always on – maintained) |
| Power supply (led) | electronic ballast 120V/240V 50/60Hz (network only – not maintained) |
| | electronic ballast 230V/240V 50/60Hz (only in emergency) |
| Lampholders | bi-in g5 cap (fluorescent lamp only) |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Emergency unit | emergency unit for maintained and not maintained (see technical data table) |

Functional characteristics

EXL08 (Network only): 8W fluorescent lamp and electronic ballast 230V/240V 50/60Hz

EXL08ESA (Always On - Maintained): 8W fluorescent lamp and electronic ballast 230V/240V AC

EXL08E (Emergency only - Not Maintained): 8W fluorescent lamp and electronic ballast 230V/240V AC

EXL08L / EXL208L (Network only): with high brightness LEDs (350mA – 4W) supply from 120V up to 240V AC/DC

EXL08LESA (Always On - Maintained): with high brightness LEDs (350mA – 4W) supply from 100V up to 240V AC with charge status monitor LED system (RED; battery under charging – GREEN: battery loaded)

EXL08LE (Emergency only - Not maintained): with high brightness LEDs (350mA – 4W) supply from 100V up to 240V AC with charge status monitor LED system (RED; battery under charging – GREEN: battery loaded)



On Request Accessories:

- External painting colour on request
- Electronic ballast with voltage supply different than standard
- Threaded cable entry different than standard
- Self-adhesive green label with EXIT sign (language on request)

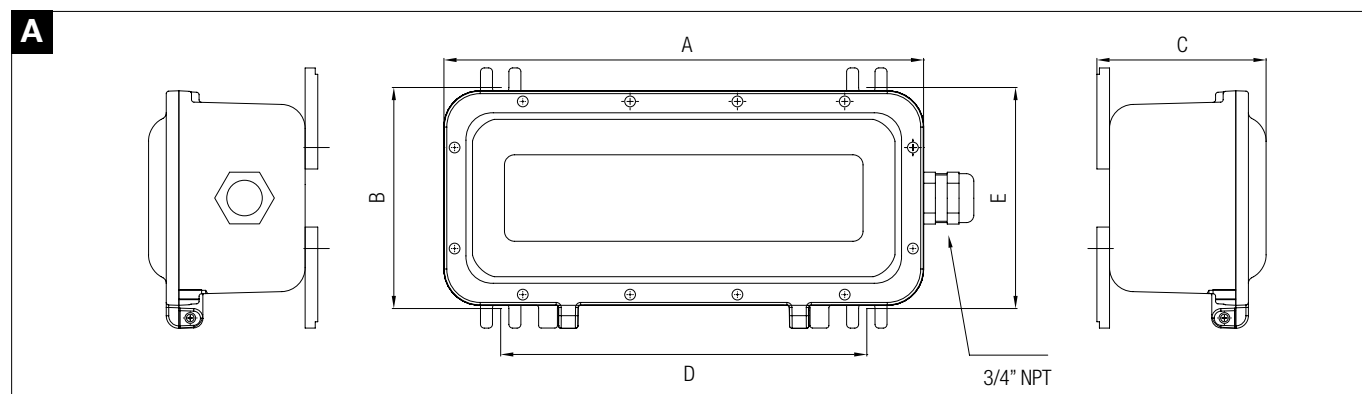
Technical data

| CODE | POWER SUPPLY | LAMP | mA (LED) | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | EMERGENCY UNIT | AUTONOMY |
|--|---------------|--------------|----------|-------------------------|---------------------------|----------------|----------|
| LIGHTING FIXTURES FOR FLUORESCENT TUBE LAMPS | | | | | | | |
| EXL08 | 230 ÷ 240V AC | 8 W | - | T6 - T5 | T 85°C / T100°C | no | - |
| EXL08E | 230 ÷ 240V AC | 8 W | - | T6 - T5 | T 85°C / T100°C | 3,6V - 4A/h | 3h |
| EXL08ESA | 230 ÷ 240V AC | 8 W | - | T6 - T5 | T 85°C / T100°C | 3,6V - 4A/h | 3h |
| LIGHTING FIXTURES FOR HIGH EFFICIENCY LED LAMPS | | | | | | | |
| EXL08L | 120 ÷ 240V AC | 1W x 4 | 350 | T6 - T5 | T 85°C / T100°C | no | - |
| EXL08E | 100 ÷ 240V AC | 1W x 4 | 350 | T6 - T5 | T 85°C / T100°C | 6V - 4A/h | 3h |
| EXL08ESA | 120 ÷ 240V AC | (1W x 4) x 2 | 350 | T6 - T5 | T 85°C / T100°C | no | - |
| EXL08LESA | 100 ÷ 240V AC | 1W x 4 | 350 | T6 - T5 | T 85°C / T100°C | 6V - 4A/h | 3h |

Technical features

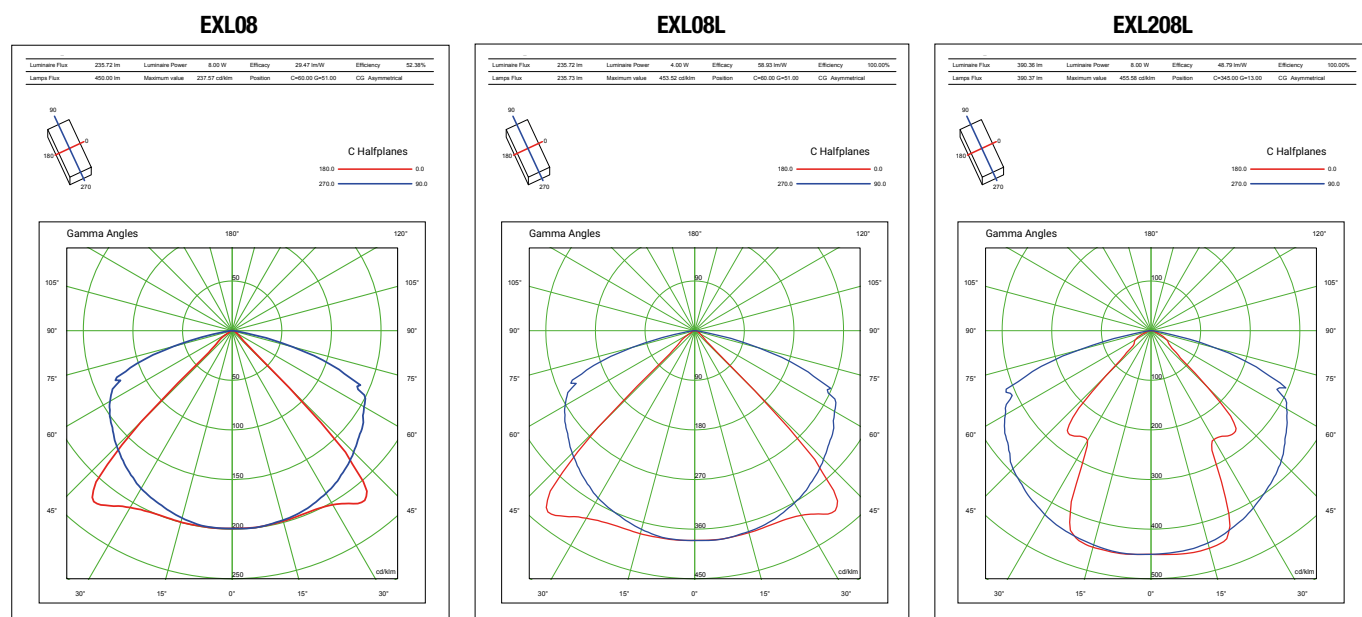
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | WIGHT [kg] | CABLE ENTRY | DETAIL |
|----------|--------|--------|--------|--------|--------|------------|-------------|--------|
| EXL08... | 380 | 170 | 125 | 270 | 156 | 8,00 | 1 x 3/4" | A |

Reference details



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|----------------------|----------------------------------|-----------|
| TA288X80VA-V/BI-EXIT | SELF-ADHESIVE GREEN "EXIT" LABEL | POLYESTER |



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ Ex db eb IIC T6 Gb ⊗ Ex db op is IIC T6 Gb (for PCB LED type only) ⊗ Ex db eb op is IIC T6 Gb (for PCB LED type only) ⊗ Ex tb IIIC T85°C Db ⊗ Ex op is tb IIIC T85°C Db (for PCB LED type only) |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31; |
| EC Type-Examination Certificate | INERIS 12 ATEX 023X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 13.0055X INMETRO: CEPTEL 13.2291X EAC: TC RU C-IT.BH02.B.00254/19 (-45°C ÷ +60°C) CCOE-PESO: P405708/4 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Electrical characteristics

| | |
|---------------------|---|
| Power supply (fluo) | electronic ballast: 220V÷240Vac 50/60Hz (cos ρ ≥ 0,98) 220V÷240Vdc |
| Power supply (led) | electronic ballast 100V/240V 50/60Hz (always on - maintained) electronic ballast 110V/240V 50/60Hz (network only - not maintained) electronic ballast 110V/240V 50/60Hz (only in emergency) |
| Lampholders | bi-in g5 cap (fluorescent lamp only) |
| Internal Wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Emergency Unit | emergency unit for maintained and not maintained (see technical data table) |

Mechanical characteristics

| | |
|-------------|--|
| Body | marine grade copper free aluminium |
| Diffuser | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey ral-9006 colour |
| Screws | external stainless steel |
| Reflectors | white stove enamelled sheet steel |
| Cable entry | 3/4" NPT size threaded (Ex-d) ISO-M25 size threaded (Ex-de) |

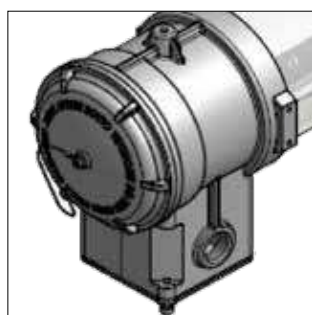
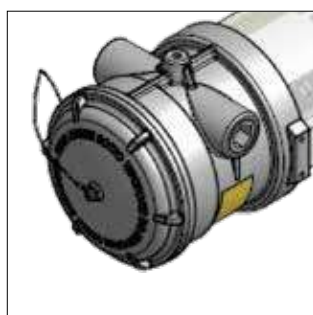
Functional characteristics

| | |
|--|--|
| EVFG** *8 (Network only) | 8W fluorescent lamp and electronic ballast 220V÷240Vac 50/60Hz 220V÷240Vdc |
| EVFG** *8ESA-3 (Always On - Maintained) | 8W fluorescent lamp and electronic ballast 220V/240V AC |
| EVFG** *8E-3 (Emergency only - Not Maintained) | 8W fluorescent lamp and electronic ballast 220V/240V AC |
| EVFG** *8L (Network only) | with high brightness LEDs (350mA - 4W) supply from 100V up to 240V AC |
| EVFG** *8LE-SA (Always On - Maintained) | with high brightness LEDs (350mA - 4W) supply from 110V up to 240V AC with charge status monitor LED system (GREEN: battery under charging) |
| EVFG** *8LE (Emergency only - Not maintained) | with high brightness LEDs (350mA - 4W) supply from 110V up to 240V AC with charge status monitor LED system (GREEN: battery under charging) |

** : with "d" for Exd version (Ex. EVFGd *8) - without "d" for Exde version (Ex. EVFG *8) - * = 1 or 2 : with "1" = single lamp - with "2" = two lamps

On Request Accessories:

- External painting colour on request
- Electronic ballast with voltage supply different than standard
- Threaded cable entry different than standard
- Self-adhesive green label with EXIT sign (language on request)



Technical data

| CODE | POWER SUPPLY | LAMP | mA (LED) | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | EMERGENCY UNIT | AUTONOMY |
|---|------------------|---------|----------|-------------------------|---------------------------|----------------|----------|
| LIGHTING FIXTURES FOR FLUORESCENT TUBE LAMPS | | | | | | | |
| EVFG**18 | 220 ÷ 240V AC/DC | 8 W x 1 | - | T6 | T 85°C | no | - |
| EVFG**18E-3 | 220 ÷ 240V AC | 8 W x 1 | - | T6 | T 85°C | 3,6V - 4A/h | 3h |
| EVFG**18ESA-3 | 220 ÷ 240V AC | 8 W x 1 | - | T6 | T 85°C | 3,6V - 4A/h | 3h |
| EVFG**28 | 220 ÷ 240V AC/DC | 8 W x 2 | - | T6 | T 85°C | no | - |
| EVFG**28ESA-3 | 220 ÷ 240V AC | 8 W x 2 | - | T6 | T 85°C | 3,6V - 4A/h | 3h |

** : with "d" for Exd version (Ex. EVFGd18) - without "d" for Exde version (Ex. EVFG28)

| LIGHTING FIXTURES FOR HIGH EFFICIENCY LED LAMPS | | | | | | | |
|--|---------------|--------------|-----|----|--------|-------------|----|
| EVFG**18L | 100 ÷ 240V AC | 1W x 4 | 350 | T6 | T 85°C | no | - |
| EVFG**18LE | 110 ÷ 240V AC | 1W x 4 | 350 | T6 | T 85°C | 6V - 2,6A/h | 3h |
| EVFG**18LE-SA | 110 ÷ 240V AC | 1W x 4 | 350 | T6 | T 85°C | 6V - 2,6A/h | 3h |
| EVFG**28L | 100 ÷ 240V AC | (1W x 4) x 2 | 350 | T6 | T 85°C | no | - |
| EVFG**28LE-SA | 110 ÷ 240V AC | (1W x 4) x 2 | 350 | T6 | T 85°C | 6V - 2,6A/h | 3h |

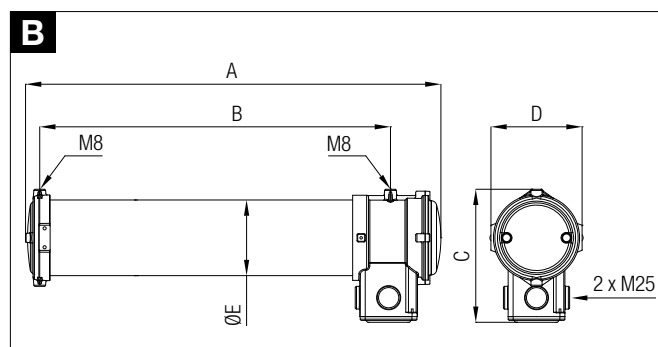
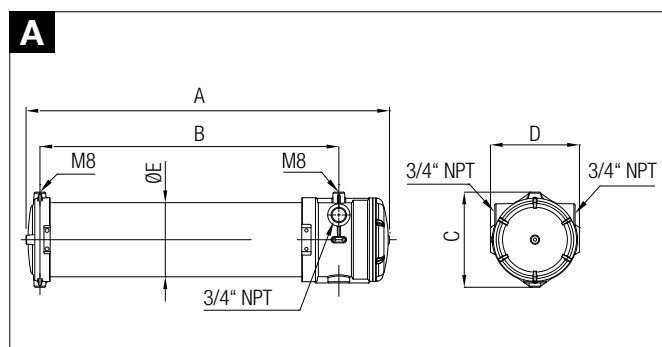
** : with "d" for Exd version (Ex. EVFGd18) - without "d" for Exde version (Ex. EVFG28)

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | ØE [mm] | WEIGHT [kg] ** | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|---------|----------------|-------------|--------|
| EVFGd*8 | 495 | 390 | 154 | 145 | 120 | 3,50 | 2 x 3/4" | A |
| EVFGd*8E-3 | | | | | | 4,50 | | |
| EVFG*8 | 495 | 390 | 218 | 145 | 120 | 4,00 | 2 x M25 | B |
| EVFG*8E-3 | | | | | | 5,00 | | |

*= 1 or 2: with "1"= single lamp - with "2"= two lamps

Reference details



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|------------|----------------------------------|-----------|
| 2070.00088 | SELF-ADHESIVE GREEN "EXIT" LABEL | POLYESTER |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex d e q IIC T4 Gb ⊗ II 2 D Ex tb IIIC T80°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-5; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | LCIE 11 ATEX 3004X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx LCIE 12.0018X INMETRO: CEPEL 15.2404X EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 CCOE-PESO: P405708/1 |

Mechanical characteristics

| | |
|--------------------|--|
| Body | glass fibre reinforced polyester resin self-extinguishing acc. to UL94 |
| Diffuser | U/V resistant polycarbonate - hinged to body |
| Safety closing | operated by hexagonal key |
| Gaskets | EPDM 60 rubber suitable for high temperatures and resistant to environments conditions |
| Internal reflector | white stove enamelled sheet aluminum |
| Cable entry | 1 PCE M25 cable gland and 3 M25 plugs |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | electronic ballast 96...254V AC 50/60Hz (cos ρ ≥ 0,95) / 96 130V DC |
| Lampholders | bi-pin G13 cap |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | with protections against over charge and over discharge |



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Voltage different than standard

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | ENTRY | EMERGENCY UNIT | AUTONOMY | DETAIL |
|--|---------|-------------------------|---------------------------|------------|-------------|----------------|----------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 96...254V AC 50/60Hz | | | | | | | | |
| AVC218 | 2 x 18W | T4 | T 80°C | G13 | 4 x ISO-M25 | - | - | A |
| AVC236 | 2 x 36W | T4 | T 80°C | G13 | 4 x ISO-M25 | - | - | A |

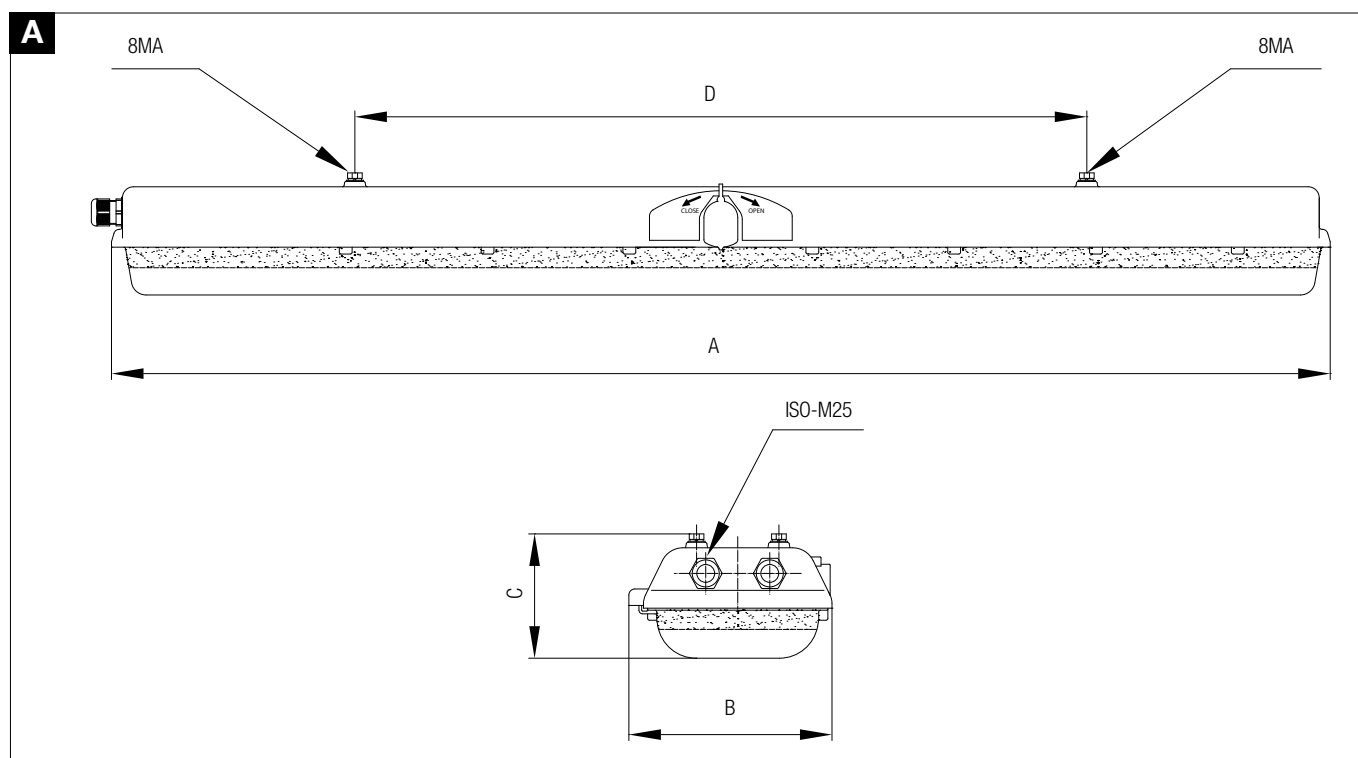
| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 230/240V AC 50/60Hz | | | | | | | | |
|---|---------|----|--------|-----|-------------|-------------|---------|---|
| AVCE218 | 2 x 18W | T4 | T 80°C | G13 | 4 x ISO-M25 | 7.2 V - 6Ah | 120 min | A |
| AVCE236 | 2 x 36W | T4 | T 80°C | G13 | 4 x ISO-M25 | 7.2 V - 6Ah | 120 min | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|--------|--------|--------|--------|--------|------------|-------------|--------|
| AVC218 | 705 | 222 | 134 | 450 | 8 | 4 x ISO-M25 | A |
| AVC236 | 1335 | 222 | 134 | 800 | 12 | 4 x ISO-M25 | A |

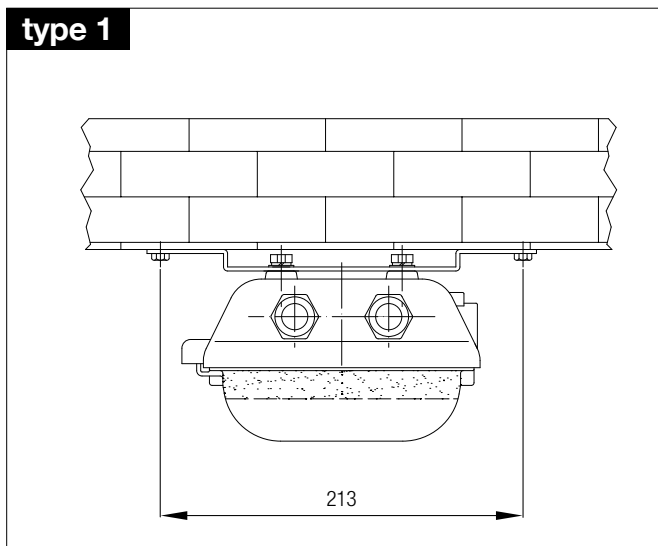
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------|--------|--------|--------|--------|------------|-------------|--------|
| AVCE218 | 705 | 222 | 134 | 450 | 9,5 | 4 x ISO-M25 | A |
| AVCE236 | 1335 | 222 | 134 | 800 | 13,5 | 4 x ISO-M25 | A |

Reference details



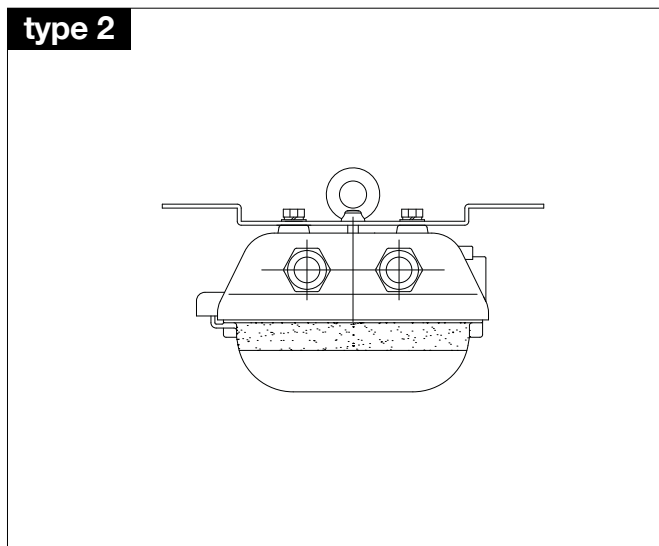
Ceiling mounting

type 1



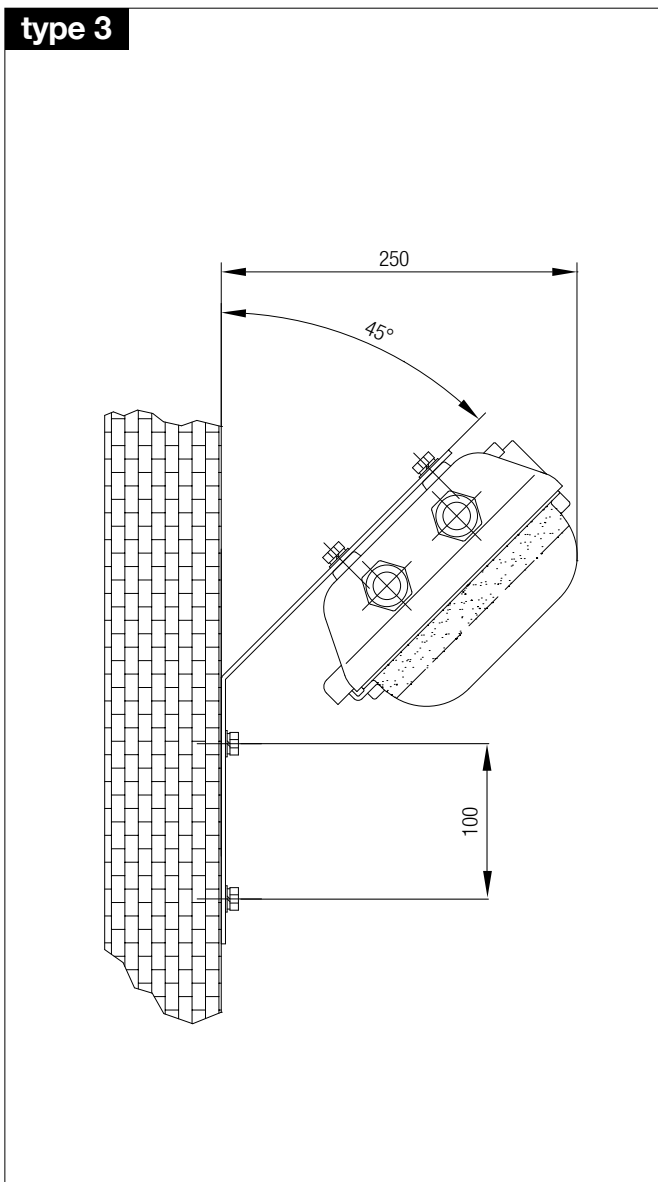
Pendant mounting

type 2



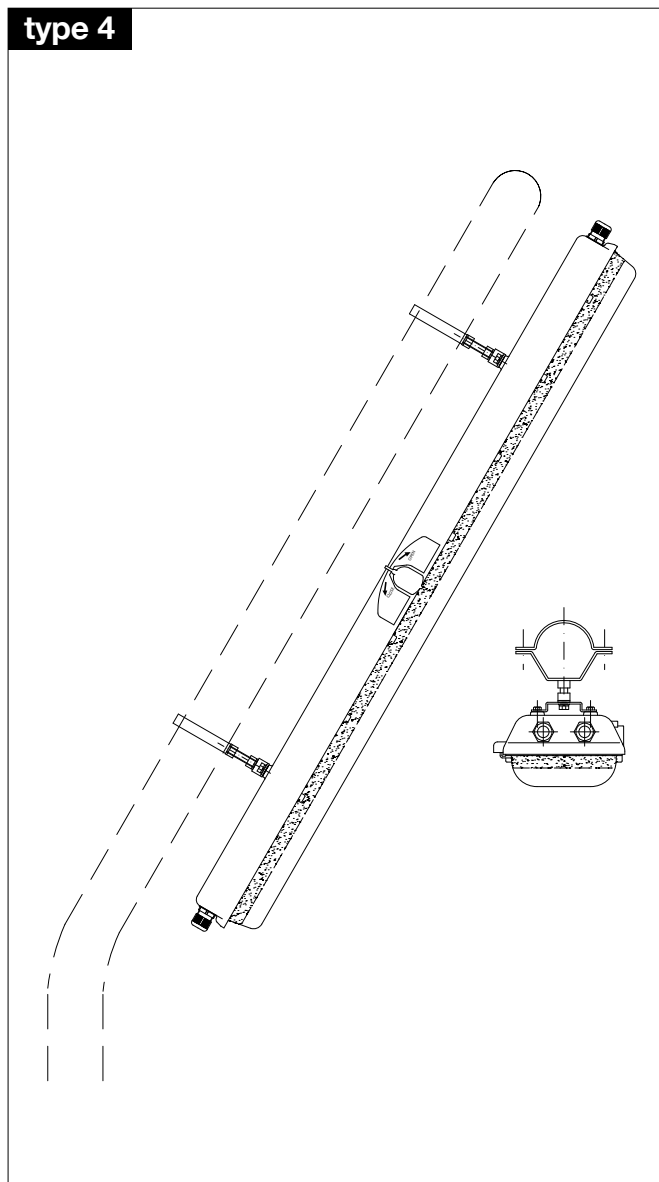
Wall/structure mounting

type 3

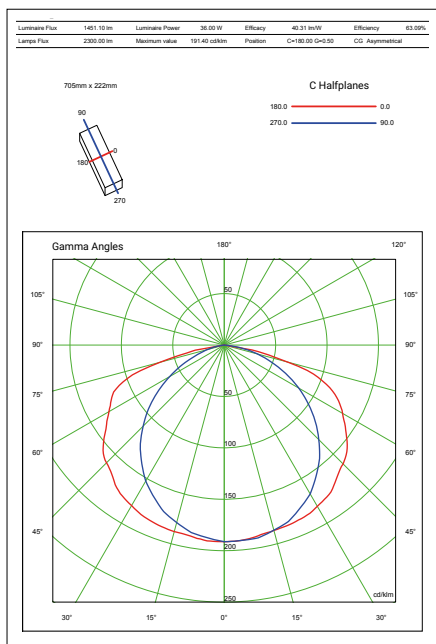


Pole mounting
Assemblig detail with pole (typical)

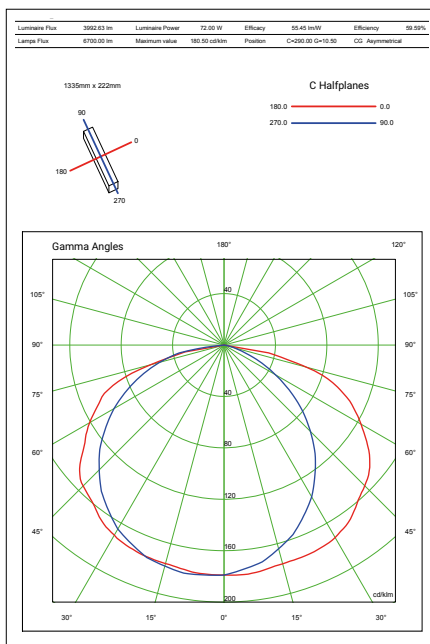
type 4



AVC218



AVC236



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|--|--------------|------------------|
| KITAVCTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | STAINLESS STEEL |
| KITAVCTYPE1 | EYE-BOLTS MOUNTING KIT C/W HARDWARE | TYPE 2 | GALVANIZED STEEL |
| KITAVCTYPE4 | WALL MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVCTYPE5 | POLE MOUNTING KIT Ø2" C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |
| KITAVCTYPE5 | POLE MOUNTING KIT Ø1-1/2" C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)
Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

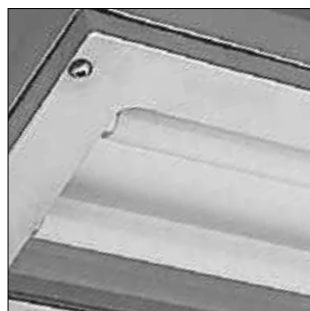
| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex e q IIC T4 Gb ⊗ II 2 D Ex tb IIIC T80°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-5; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | LCIE 13 ATEX 3051 |
| PROTECTION DEGREE | IP65 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX LCIE 130034 EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) |

Mechanical characteristics

| | |
|--------------------|--|
| Body | stainless steel AISI-316L - thickness 1,5mm |
| Diffuser | high-temperature resistant borosilicate glass |
| Safety closing | by screw stainless steel AISI-316L |
| Gaskets | silicon rubber |
| Internal reflector | white stove enamelled aluminium |
| Cable entry | 2 x Ø20,5mm clearance hole (2 x Ø25,5mm clearance hole - on demand) |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | electronic ballast 96...254V AC 50/60Hz (cos p ≥ 0,95) / 96...130V DC |
| Lampholders | bi-pin G13 cap |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Safety feature | with protections against over charge and over discharge |



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Voltage different than standard

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | ENTRY | EMERGENCY UNIT | AUTONOMY | DETAIL |
|--|---------|-------------------------|---------------------------|------------|-----------|----------------|----------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 96...254V AC 50/60Hz | | | | | | | | |
| AVCX118 | 1 x 18W | T4 | T 80°C | G13 | 2 x Ø20,5 | - | - | A |
| AVCX136 | 1 x 36W | T4 | T 80°C | G13 | 2 x Ø20,5 | - | - | A |
| AVCX218 | 2 x 18W | T4 | T 80°C | G13 | 2 x Ø20,5 | - | - | A |
| AVCX236 | 2 x 36W | T4 | T 80°C | G13 | 2 x Ø20,5 | - | - | A |

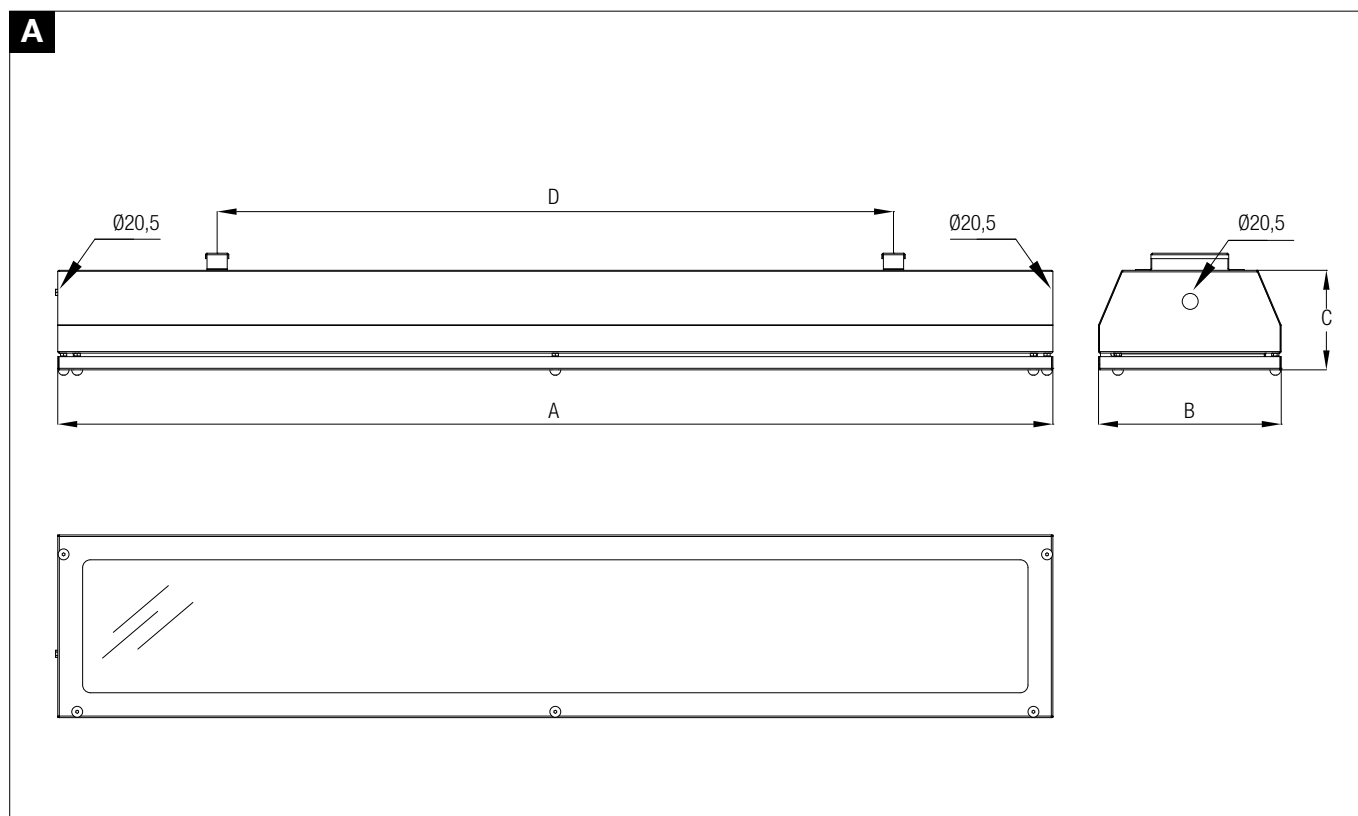
| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 230/240V AC 50/60Hz | | | | | | | | |
|---|---------|----|--------|-----|-----------|-------------|---------|---|
| AVCEX118 | 1 x 18W | T4 | T 80°C | G13 | 2 x Ø20,5 | 7.2 V - 6Ah | 120 min | A |
| AVCEX136 | 1 x 36W | T4 | T 80°C | G13 | 2 x Ø20,5 | 7.2 V - 6Ah | 120 min | A |
| AVCEX218 | 2 x 18W | T4 | T 80°C | G13 | 2 x Ø20,5 | 7.2 V - 6Ah | 120 min | A |
| AVCEX236 | 2 x 36W | T4 | T 80°C | G13 | 2 x Ø20,5 | 7.2 V - 6Ah | 120 min | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | WIGHT [Kg] WITH EMERG. | CABLE ENTRY | DETAIL |
|----------|--------|--------|--------|--------|------------|------------------------|-------------|--------|
| AVCX*118 | 670 | 235 | 128 | 400 | 8 | 9 | 2 x Ø20,5 | A |
| AVCX*136 | 1280 | 235 | 128 | 870 | 15 | 16 | 2 x Ø20,5 | A |
| AVCX*218 | 705 | 235 | 128 | 400 | 8 | 9 | 2 x Ø20,5 | A |
| AVCX*236 | 1280 | 235 | 128 | 870 | 15 | 16 | 2 x Ø20,5 | A |

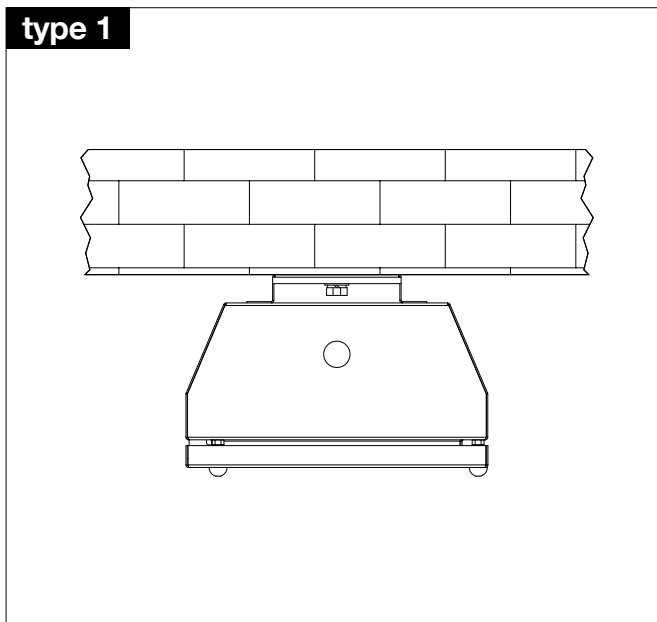
*E: with emergency battery pack

Reference details



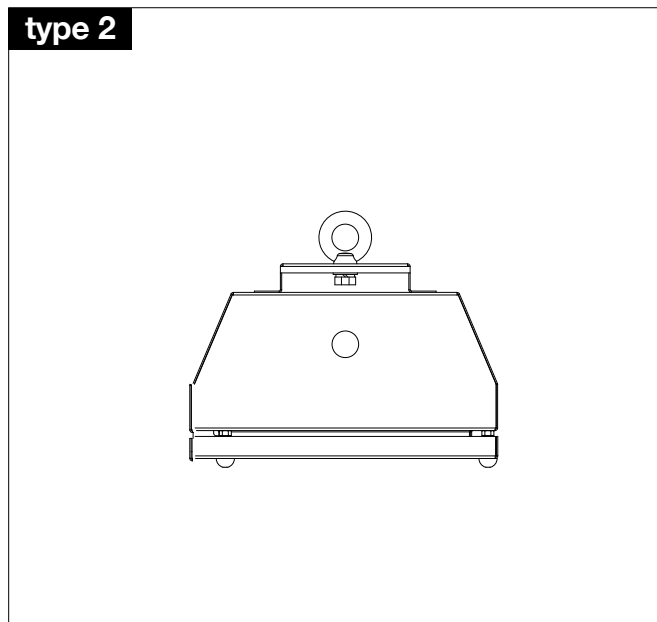
Ceiling mounting

type 1



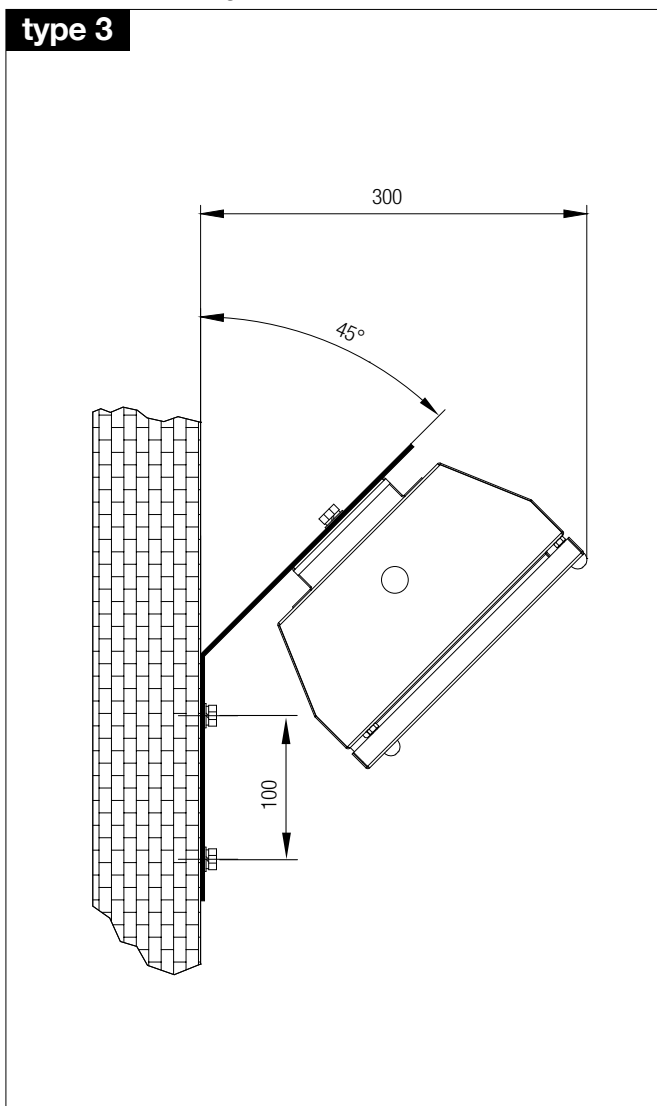
Pendant mounting

type 2



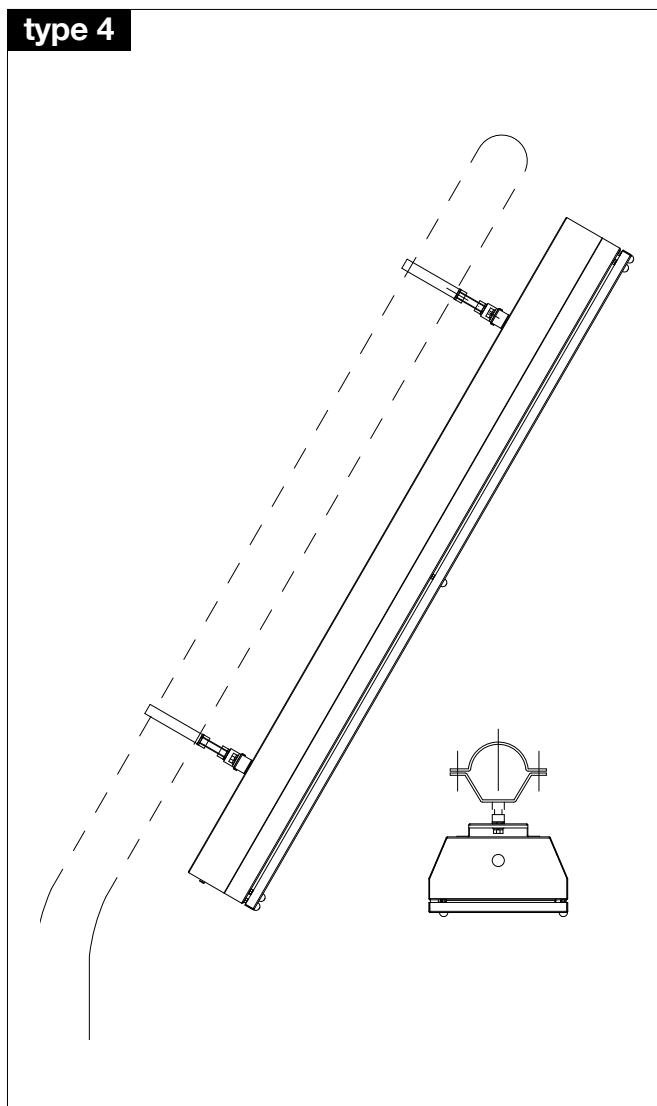
Wall/structure mounting

type 3

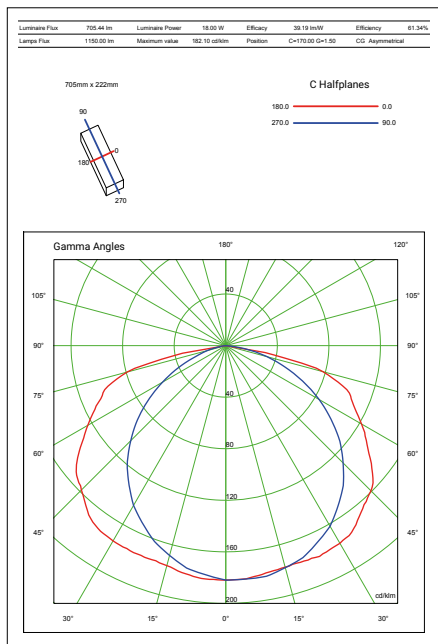


**Pole mounting
Assemblg detail with pole (typical)**

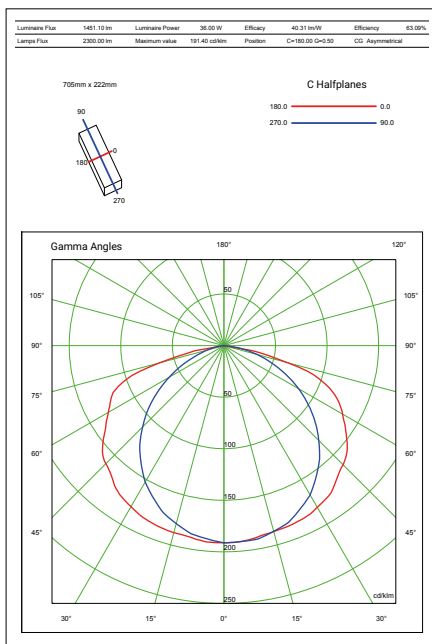
type 4



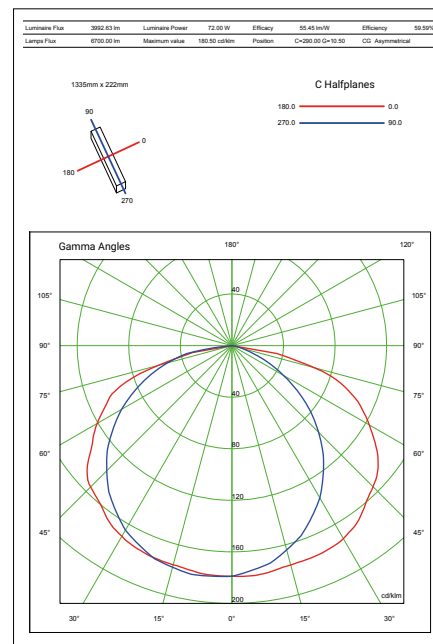
AVCX118



AVCX218



AVCX236



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|--|--------------|------------------|
| KITAVCTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | STAINLESS STEEL |
| KITAVCTYPE1 | EYE-BOLTS MOUNTING KIT C/W HARDWARE | TYPE 2 | GALVANIZED STEEL |
| KITAVCTYPE4 | WALL MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVCTYPE5 | POLE MOUNTING KIT Ø2" C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |
| KITAVCTYPE5 | POLE MOUNTING KIT Ø1-1/2" C/W HARDWARE | TYPE 4 | GALVANIZED STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)

Classification: Group II - Category 3G 3D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊕ II 3 G Ex nA IIC T6/T5/T4 Gc ⊕ II 3 D Ex tc IIIC T85°C/T100°C/T135°C Dc |
| RULES OF COMPLIANCE | EN 60079-0; EN 60079-15; EN 60079-31 |
| EC Type-Examination Certificate | in progress |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|--------------------|--|
| Body | glass fibre reinforced polyester resin self-extinguishing acc. to UL94 |
| Diffuser | U/V resistant polycarbonate - hinged to body |
| Safety closing | operated by hexagonal key |
| Gaskets | EPDM 60 rubber suitable for high temperatures and resistant to environments conditions |
| Internal reflector | white stove enamelled sheet aluminum |
| Cable entry | ISO-Metric complete with 2 PVC cable gland + 2 PVC stopping plug |

Electrical characteristics

| | |
|--------------|--|
| Power supply | dual channel electronic ballast: - 110÷240Vac - 50/60 Hz (cos ρ ≥ 0,98) - 110÷240Vdc |
| Lampholders | bi-pin G13 cap |
| Terminals | suitable up to 4 sq/mm cables |



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Ex-de safety switch
- Up to 4 cable entries

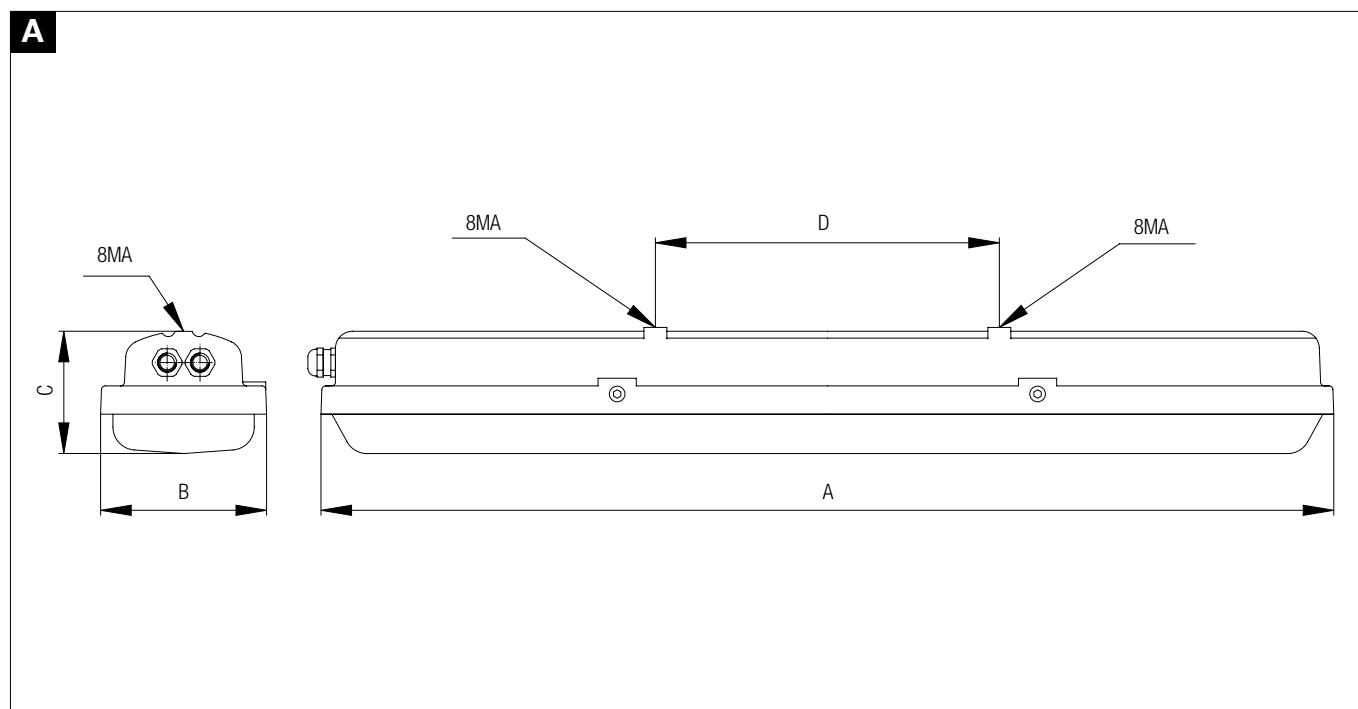
Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | ENTRY | DETAIL |
|--|---------|-------------------------|---------------------------|------------|---------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc) | | | | | | |
| ZFL-118 | 1 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 4 x M20 | A |
| | | T5 (AT = 50°C) | T 100°C | | | |
| | | T4 (AT = 60°C) | T 135°C | | | |
| ZFL-136 | 1 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 4 x M20 | A |
| | | T5 (AT = 50°C) | T 100°C | | | |
| | | T4 (AT = 60°C) | T 135°C | | | |
| ZFL-218 | 2 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 4 x M20 | A |
| | | T5 (AT = 50°C) | T 100°C | | | |
| | | T4 (AT = 60°C) | T 135°C | | | |
| ZFL-236 | 2 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 4 x M20 | A |
| | | T5 (AT = 50°C) | T 100°C | | | |
| | | T4 (AT = 60°C) | T 135°C | | | |

Technical features

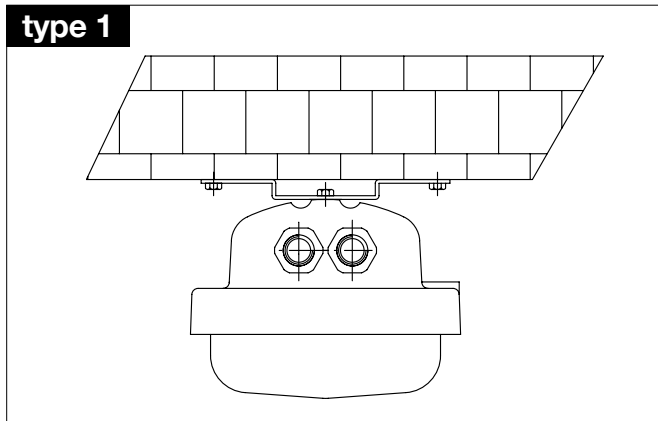
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------|--------|--------|--------|--------|------------|-------------|--------|
| ZFL-118 | 730 | 215 | 160 | 400 | 6,00 | 4 x M20 | A |
| ZFL-136 | 1340 | 215 | 160 | 450 | 6,50 | 4 x M20 | A |
| ZFL-218 | 730 | 215 | 160 | 400 | 7,00 | 4 x M20 | A |
| ZFL-236 | 1340 | 215 | 160 | 450 | 7,50 | 4 x M20 | A |

Reference details



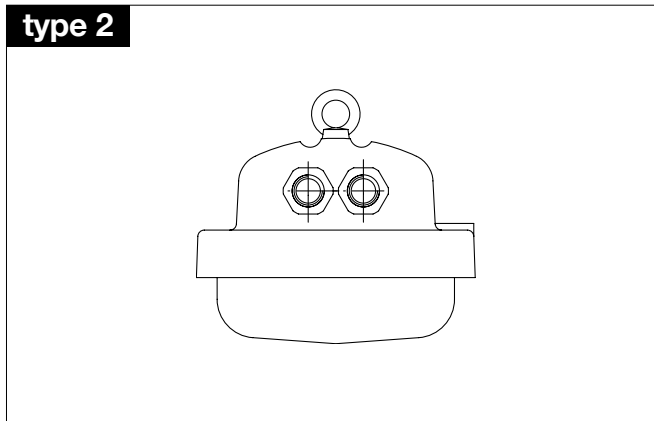
Ceiling mounting

type 1



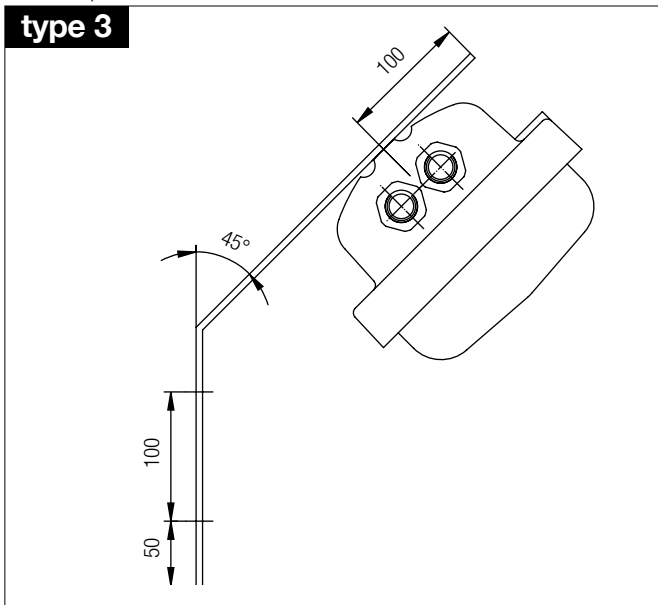
Pendant mounting

type 2



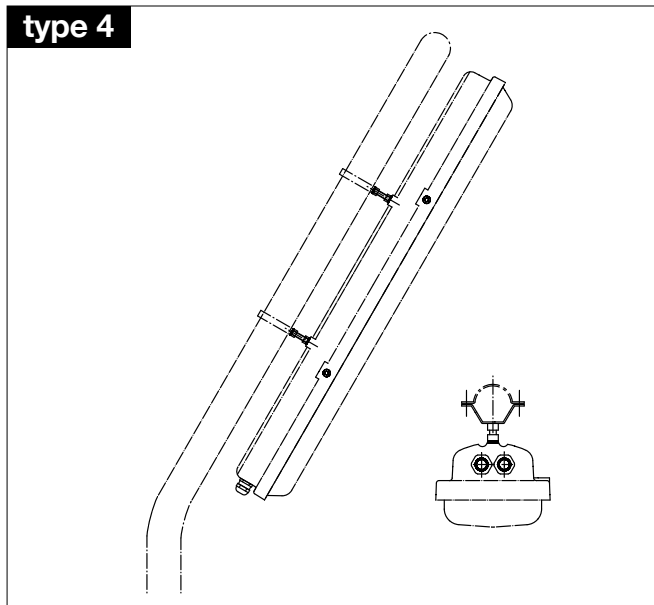
Wall/structure mounting

type 3



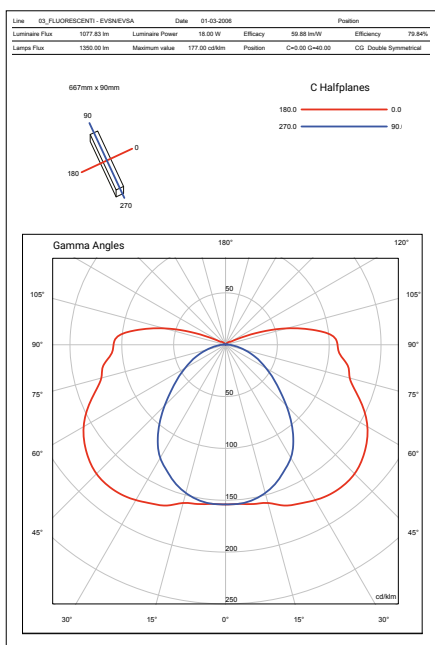
Pole mounting. Assembling detail with pole (typical)

type 4

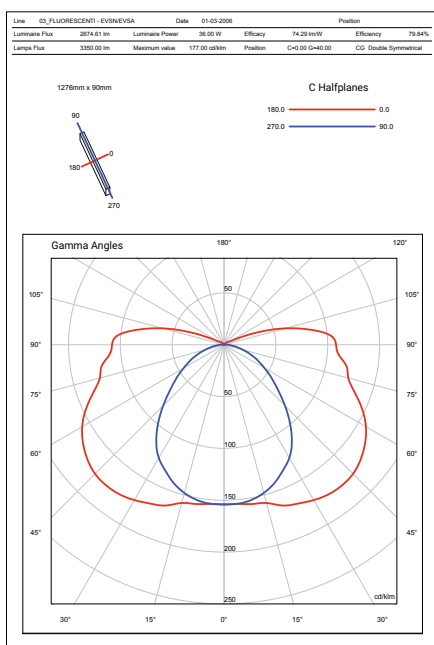


ZFL Polar diagrams – photometric data

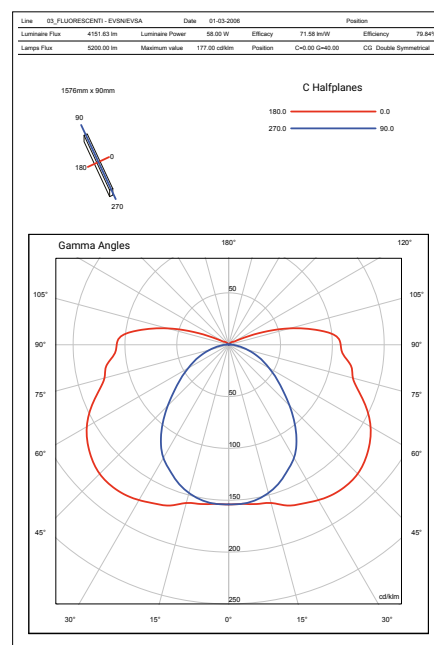
ZFL-218



ZFL-136



ZFL-236



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|---|--------------|------------------|
| KITAVFTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | GALVANIZED STEEL |
| KITAVFTYPE1 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | STAINLESS STEEL |
| KITAVFTYPE4 | WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)
Classification: Group II - Category 3G 3D



REFERENCE STANDARDS

| Directive 2014/34/EU | |
|---------------------------------|--|
| EXECUTION | ⊕ II 3 G Ex nA IIC T6/T5/T4 Gc ⊕ II 3 D Ex tc IIIC T85°C/T100°C/T135°C Dc |
| RULES OF COMPLIANCE | EN 60079-0; EN 60079-15; EN 60079-31 |
| EC Type-Examination Certificate | IMQ 09 ATEX 022X |
| PROTECTION DEGREE | IP65 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 |

Mechanical characteristics

| | |
|--------------------|--|
| Body | glass fibre reinforced polyester resin |
| Diffuser | U/V resistant polycarbonate - hinged to body |
| Safety closing | stainless steel hooks with safety device |
| Gaskets | EPDM 60 rubber suitable for high temperatures and resistant to environments conditions |
| Internal reflector | white stove enamelled sheet steel |
| Cable entry | complete with 1 PVC cable gland + 1 PVC stopping plug |

Electrical characteristics

| | |
|----------------|--|
| Power supply | dual channel electronic ballast: - 110÷240Vac - 50/60 Hz (cos ρ ≥ 0,98) - 110÷240Vdc |
| Emergency unit | emergency unit with autonomy from 120 min. - (inverter) 220÷240V 50/60Hz |
| Lampholders | bi-pin G13 cap |
| Terminals | suitable up to 6 sq/mm cables |

(*) The lighting fittings must be used appropriately without changing the mechanical and protection features, and must not be installed on surfaces subject to strong vibrations, outdoor on cables or poles. Direct exposure to sunlight could compromise the mechanical protection degree.



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Ex-de safety switch
- AUTOTEST electronic system for emergency unit
- Up to 4 cable entries

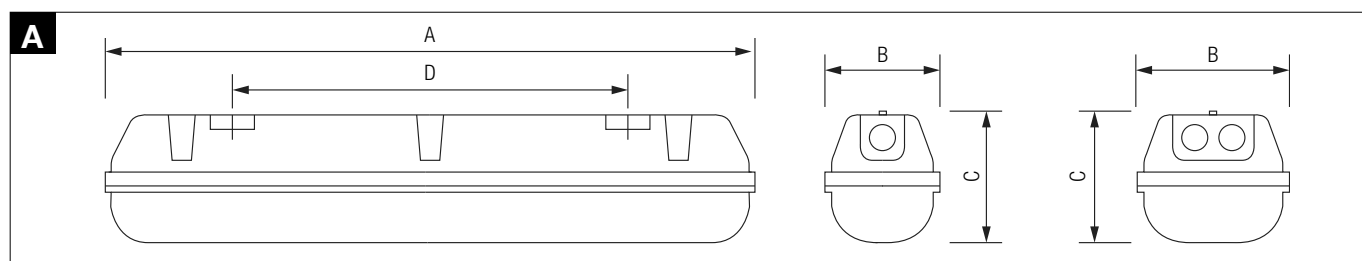
Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | CABLE ENTRY WITH CABLE GLAND | EMERGENCY UNIT | AUTONOMY | DETAIL |
|---|---------|-------------------------|---------------------------|------------|------------------------------|----------------|----------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc) | | | | | | | | |
| AVNA118EL | 1 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | - | - | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNA136EL | 1 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | - | - | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNA158EL | 1 x 58W | T5 (AT = 60°C) | T100°C | G13 | 2 x M20 | - | - | A |
| AVNA218EL | 2 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | - | - | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNA236EL | 2 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | - | - | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNA258EL | 2 x 58W | T5 (AT = 60°C) | T100°C | G13 | 2 x M20 | - | - | A |
| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220±240V - 50/60Hz | | | | | | | | |
| AVNAE118EL | 1 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNAE136EL | 1 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNAE158EL | 1 x 58W | T5 (AT = 60°C) | T100°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| AVNAE218EL | 2 x 18W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNAE236EL | 2 x 36W | T6 (AT = 40°C) | T 85°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| | | T5 (AT = 50°C) | T100°C | | | | | |
| | | T4 (AT = 60°C) | T135°C | | | | | |
| AVNAE258EL | 2 x 58W | T5 (AT = 60°C) | T100°C | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|-----------|--------|--------|--------|--------|------------|-------------|--------|
| AVNA118EL | 665 | 97 | 99 | 390 | 1,42 | 2 x M20 | A |
| AVNA136EL | 1282 | 97 | 99 | 675 | 2,15 | 2 x M20 | A |
| AVNA158EL | 1578 | 97 | 99 | 1100 | 2,94 | 2 x M20 | A |
| AVNA218EL | 665 | 140 | 99 | 390 | 2,72 | 2 x M20 | A |
| AVNA236EL | 1282 | 140 | 99 | 675 | 2,52 | 2 x M20 | A |
| AVNA258EL | 1578 | 140 | 99 | 1100 | 3,93 | 2 x M20 | A |

Reference details





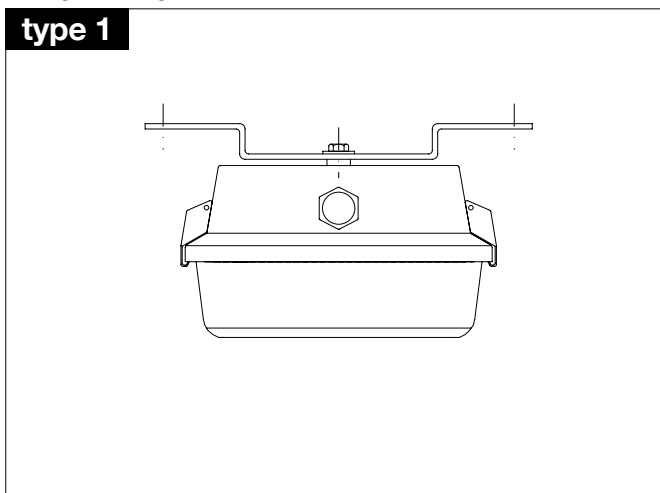
Reference details

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|------------|-------------|--------|
| AVNAE118EL | 665 | 97 | 99 | 390 | 3 | 2 x M20 | A |
| AVNAE136EL | 1282 | 97 | 99 | 800 | 3,7 | 2 x M20 | A |
| AVNAE158EL | 1578 | 97 | 99 | 1100 | 4,35 | 2 x M20 | A |
| AVNAE218EL | 665 | 140 | 99 | 390 | 3,35 | 2 x M20 | A |
| AVNAE236EL | 1282 | 140 | 99 | 800 | 5,15 | 2 x M20 | A |
| AVNAE258EL | 1578 | 140 | 99 | 1100 | 6,45 | 2 x M20 | A |

AVNA Installation and mounting details

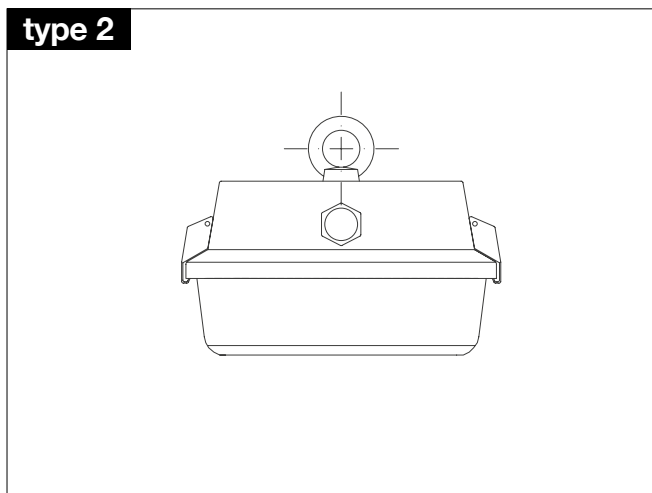
Ceiling mounting

type 1



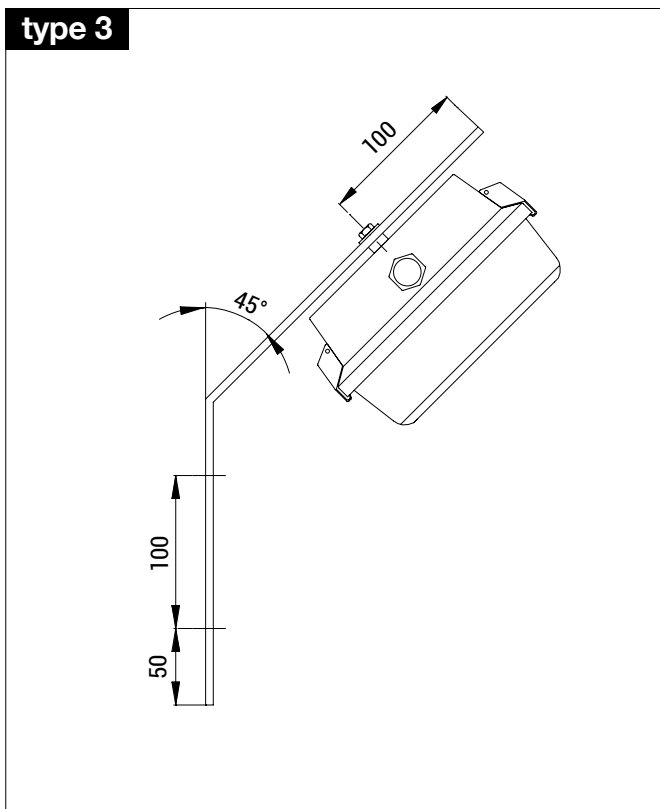
Pendant mounting

type 2



Wall/structure mounting

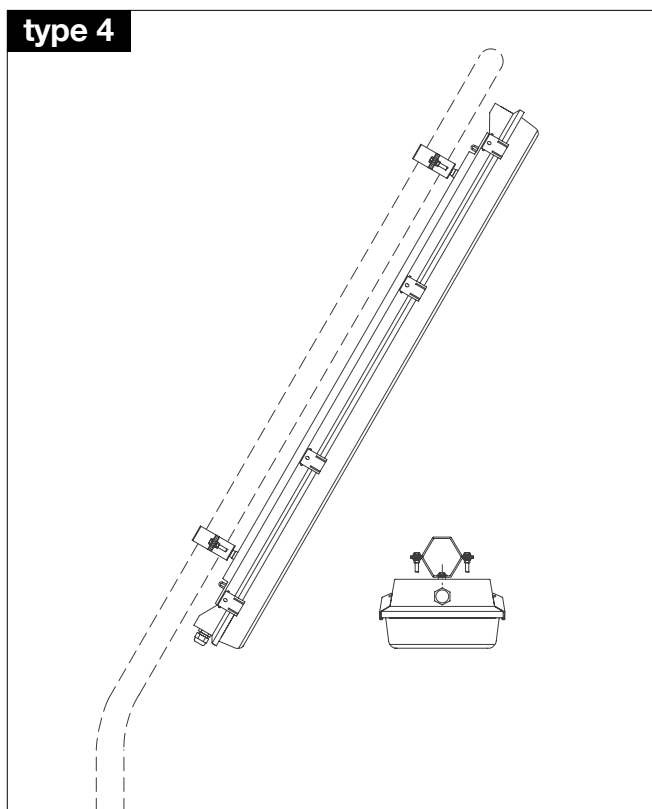
type 3



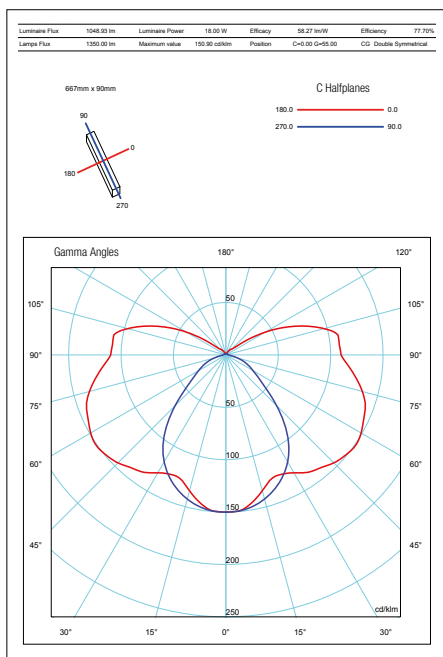
Pole mounting

Assemblig detail with pole (typical)

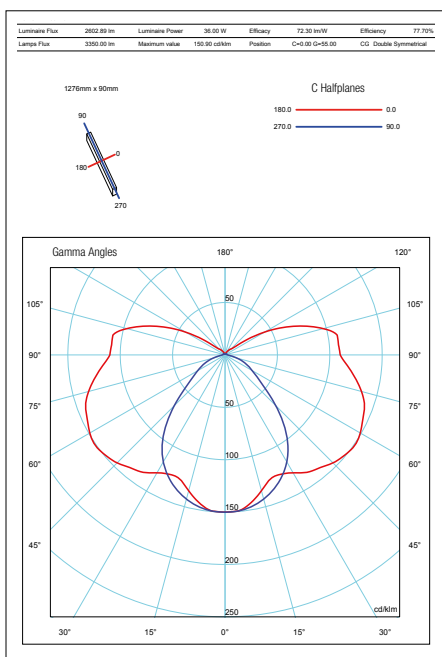
type 4



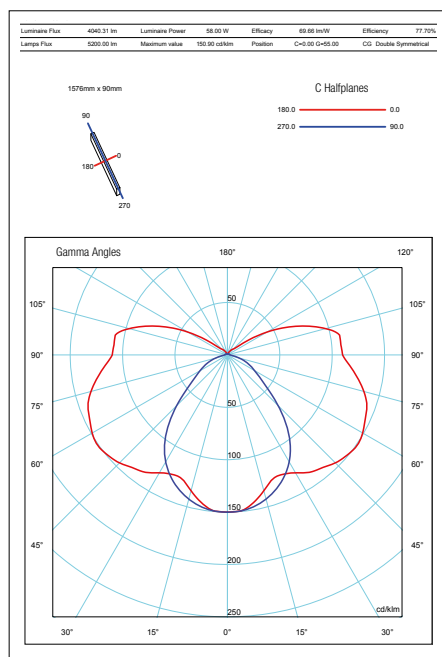
AVNA118EL



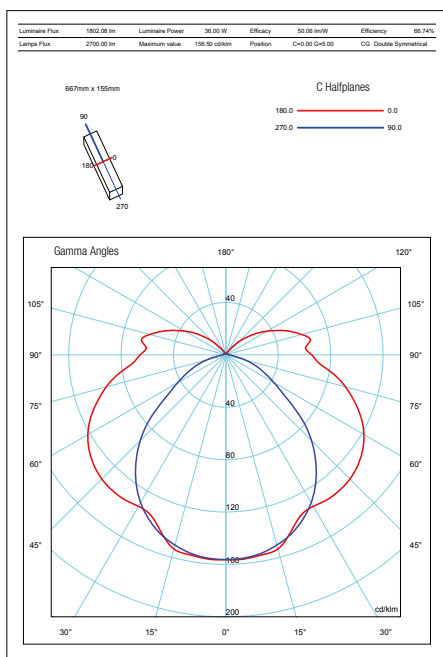
AVNA136EL



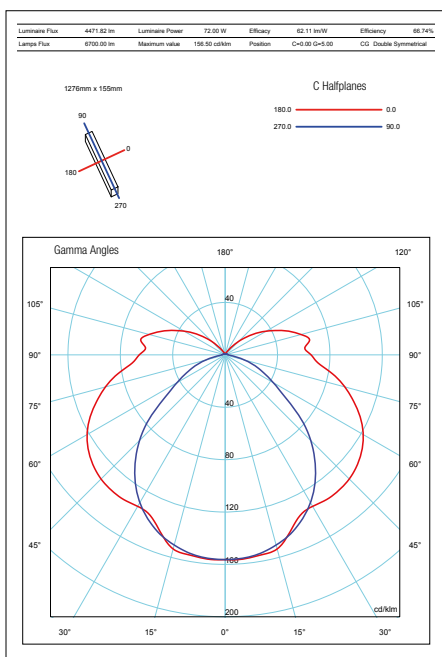
AVNA158EL



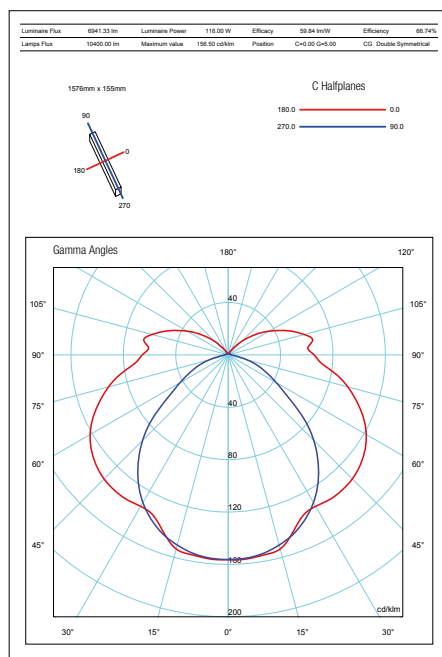
AVNA218EL



AVNA236EL



AVNA258EL



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|---|--------------|------------------|
| KITAVFTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | GALVANIZED STEEL |
| KITAVFTYPE1 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | STAINLESS STEEL |
| KITAVFTYPE4 | WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)
Classification: Group II - Category 3G 3D


REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓢ II 3 G Ex nR IIC T3/T2 Gc Ⓢ II 3 D Ex tc IIIB T200°C/T300°C Dc |
| RULES OF COMPLIANCE | EN 60079-0 + A11; EN 60079-15; EN 60079-31 |
| EC Type-Examination Certificate | LCIE 15 ATEX 1011X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx LCIE 15.0019X INMETRO: CEPEL 15.2354X RUSSIAN MARINE CERTIFICATE (RMRS): 19.02457.280 |

Mechanical characteristics

| | |
|----------------|--|
| Body | marine grade copper free aluminum (SFNR version) stainless steel AISI 316L - sp. 1,5mm pickled, polished and brightened (SFNRX version) |
| Diffuser | tempered front glass |
| Support | steel bracket with rotation-proof system |
| Reflector | anodized and polished 99,85 pure aluminum internal optic |
| Painting | thermosetting polyester powder resistant to atmospheric agents and corrosion grey RAL 9006 colour (on request for SFNR version - on request for SFNRX version) |
| Screws | stainless steel |
| Gaskets | pure silicon heat resistance |
| Cable entry | ISO-METRIC complete with cable gland |
| Internal optic | (S) symmetric optic - (A) asymmetric optic - (C) concentrating beam optic (Internal optical selection for SFNR version only) |



> Asymmetric



> Symmetric



> Concentrating

Electrical characteristics

| | |
|-----------------|--|
| Power supply | conventional ballast 230V - 50Hz (P.F. CORRECTED - $\cos \rho \geq 0,95$) |
| Lampholders | porcelain E40 |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |

On Request Accessories:

- Control gear with voltage supply different than standard
- Internal optical code (S – A – C), has to be added to the floodlight code (only for SFNR)

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY WITH CABLE GLAND | DETAIL |
|--|-------|-------------------------|---------------------------|-----------------|------------------------------|--------|
| FLOODLIGHT FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
| SFNR-250QT* | 250 W | T3 (Ta = -40°C / +45°C) | T 200°C | E-40 | 1 x ISO-M20 | A |
| SFNR-400QT* | 400 W | T2 (Ta = -40°C / +60°C) | T 300°C | | | |

Note: available with symmetric optic only

| FLOODLIGHT FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | | |
|--|-------|--|--------------------|------|-------------|---|
| SFNR-150MT* | 150 W | T3 (Ta = -40°C / +60°C) | T 200°C | E-40 | 1 x ISO-M20 | A |
| SFNRX-150MT | 150 W | | | | | B |
| SFNR-250MT* | 250 W | T3 (Ta = -40°C / +45°C) T2 (Ta = -40°C / +60°C) | T 200°C T 300°C | | | A |
| SFNRX-250MT | 250 W | | | | | B |
| SFNR-400MT* | 400 W | | | | | A |
| SFNRX-400MT | 400 W | | | | | B |

| FLOODLIGHT FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V-50Hz | | | | | | |
|--|-------|--|--------------------|------|-------------|---|
| SFNR-150ST* | 150 W | T3 (Ta = -40°C / +60°C) | T 200°C | E-40 | 1 x ISO-M20 | A |
| SFNRX-150ST | 150 W | | | | | B |
| SFNR-250ST* | 250 W | T3 (Ta = -40°C / +45°C) T2 (Ta = -40°C / +60°C) | T 200°C T 300°C | | | A |
| SFNRX-250ST | 250 W | | | | | B |
| SFNR-400ST* | 400 W | | | | | A |
| SFNRX-400ST | 400 W | | | | | B |

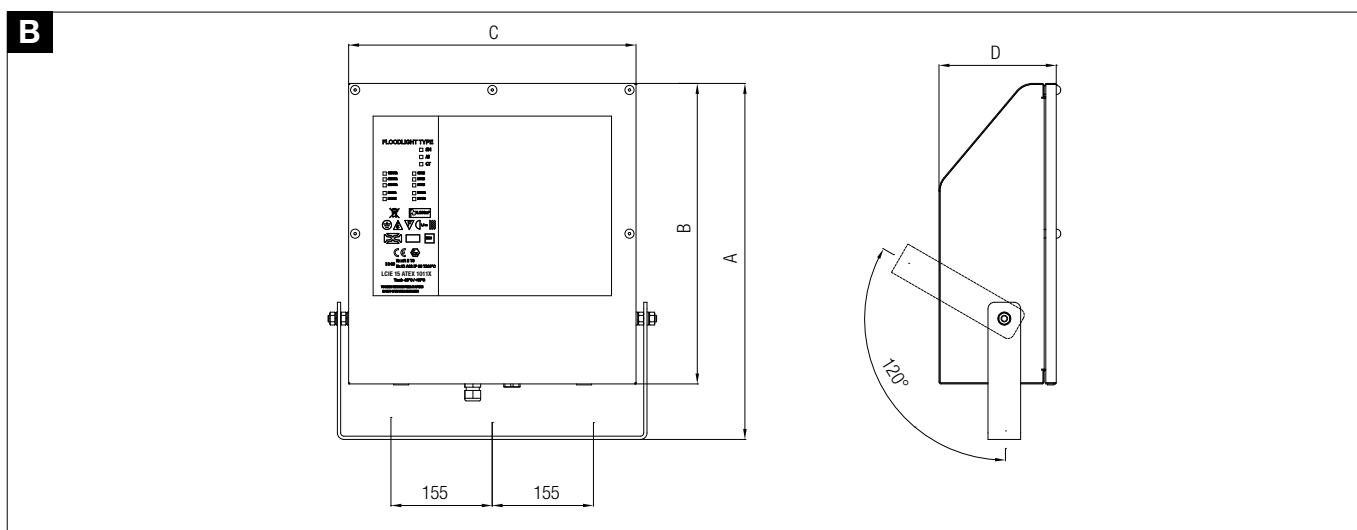
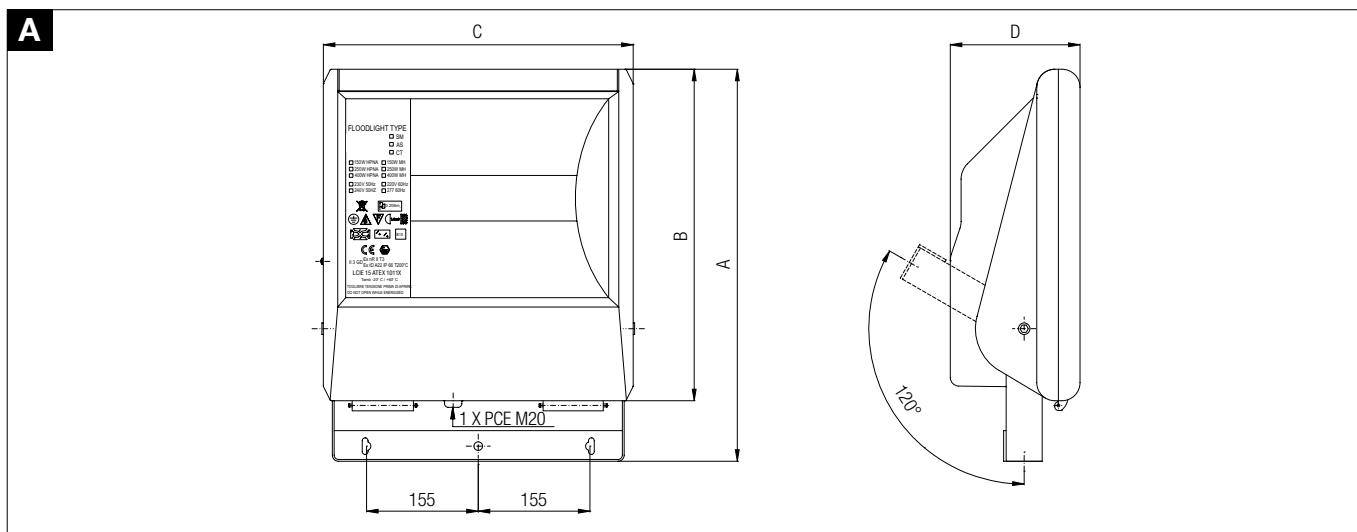
(*) INTERNAL OPTICAL BEAM: (SM) SYMMETRIC BEAM - (AS) ASYMMETRIC BEAM - (CT) CONCENTRATING BEAM

SAMPLE: SFNR#400MH-SM= 400W METAL HALIDE FLOODLIGHT WITH SYMMETRIC OPTICAL BEAM

Technical features

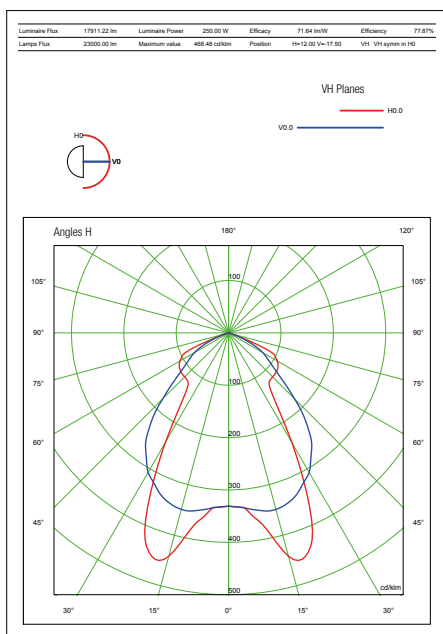
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|-------------|--------|--------|--------|--------|-------------|-------------|--------|
| SFNR-250QT | 544 | 461 | 430 | 180 | 8,80 | 1 x ISO-M20 | A |
| SFNR-400QT | 544 | 461 | 430 | 180 | 9,10 | 1 x ISO-M20 | A |
| SFNR-150MT | 544 | 461 | 430 | 180 | 9,50 | 1 x ISO-M20 | A |
| SFNRX-150MT | 545 | 460 | 440 | 180 | 9,50 | 1 x ISO-M20 | B |
| SFNR-250MT | 544 | 461 | 430 | 180 | 9,70 | 1 x ISO-M20 | A |
| SFNRX-250MT | 545 | 460 | 440 | 180 | 9,70 | 1 x ISO-M20 | B |
| SFNR-400MT | 544 | 461 | 430 | 180 | 11,00 | 1 x ISO-M20 | A |
| SFNRX-400MT | 545 | 460 | 440 | 180 | 11,00 | 1 x ISO-M20 | B |
| SFNR-150ST | 544 | 461 | 430 | 180 | 10,50 | 1 x ISO-M20 | A |
| SFNRX-150ST | 545 | 460 | 440 | 180 | 10,50 | 1 x ISO-M20 | B |
| SFNR-250ST | 544 | 461 | 430 | 180 | 11,10 | 1 x ISO-M20 | A |
| SFNRX-250ST | 545 | 460 | 440 | 180 | 11,10 | 1 x ISO-M20 | B |
| SFNR-400ST | 544 | 461 | 430 | 180 | 12,30 | 1 x ISO-M20 | A |
| SFNRX-400ST | 545 | 460 | 440 | 180 | 12,30 | 1 x ISO-M20 | B |

Reference details

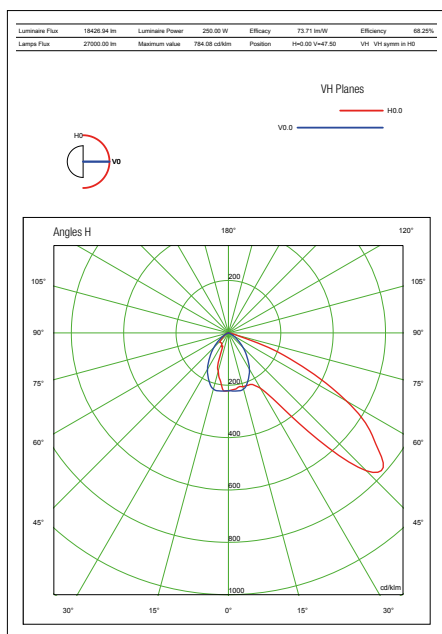


SFNR-SFNRX Polar diagrams – photometric data

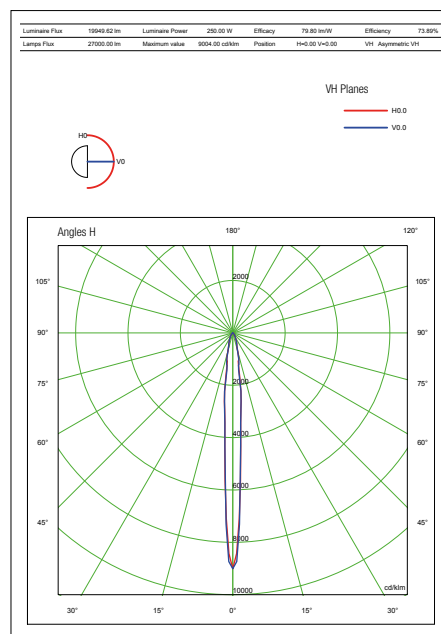
SFNR-250ST-SM



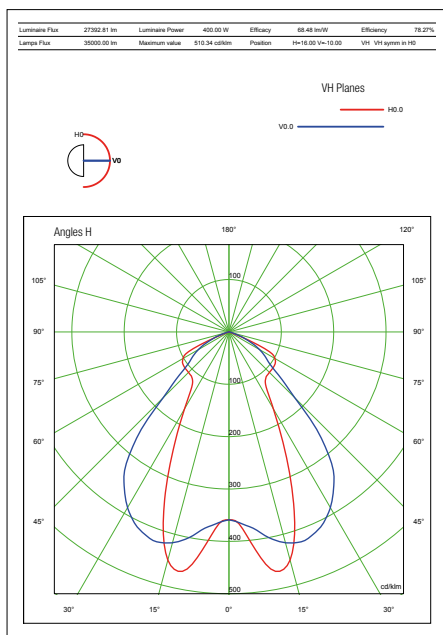
SFNR-250ST-AS



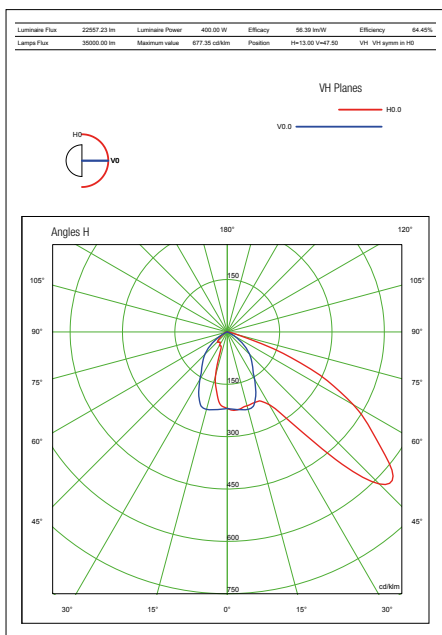
SFNR-250ST-C



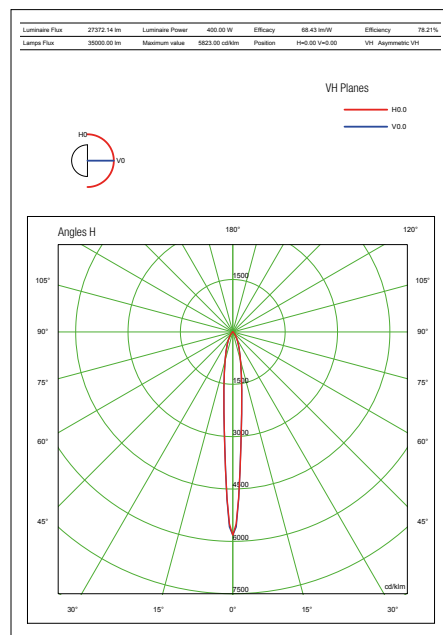
SFNR-400MT-SM



SFNR-400MT-AS



SFNR-400MT-CT

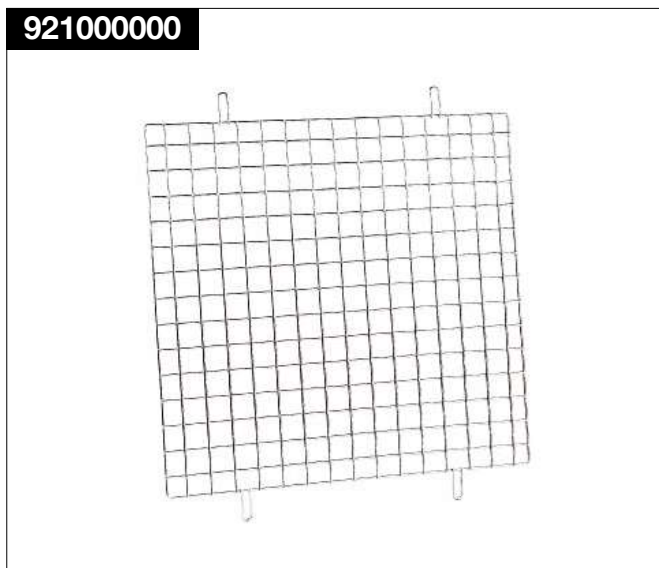


On request accessories

| CODE | DESCRIPTION | MATERIAL |
|-----------|------------------------------|---------------|
| 921000000 | PROTECTION GRID | ALUMINIUM |
| 921003004 | POLE ADAPTER FOR DIA 40÷60MM | PAINTED STEEL |

Protection grid

921000000



Pole adapter

921003004



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.


Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)

Classification: Group II - Category 3G 3D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓢ II 3 G Ex ec IIC T4 Gc Ⓢ II 3 D Ex tc IIIC T135°C Dc |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 19 ATEX 3009X |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529) |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 19.0033X EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 3mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | 220÷240Vac electronic driver 50/60 Hz - input surge protection and over temperature protection |
| Lamp type | Samsung LH 181B - CRI>80 CCT 4000K Lifetime: 80.000 hours L80 B10 @ta 25, 50.000 hours L80 B20 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency AS = with asymmetrical lens with vertex at 50deg |


On Request Accessories:

- External painting colour on request
- DALI dimmable driver and output reduction Vmidnight system
- CCT 2200/3000/5700 K
- Customized LED current drivers
- Additional optics

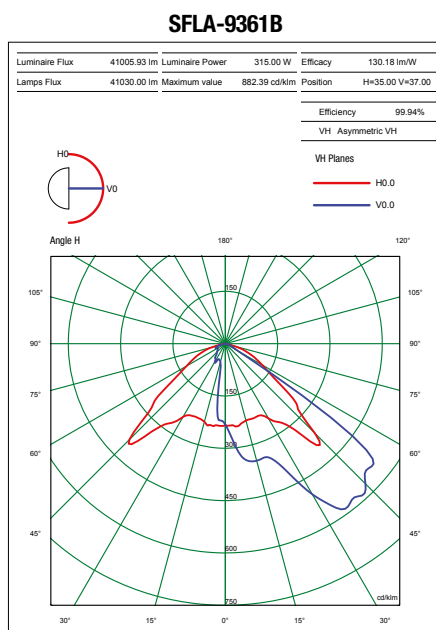
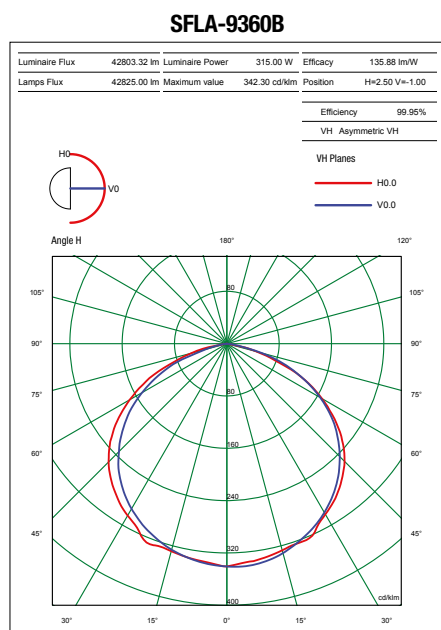
| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|---------|-------------------------|---------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| SFLA-4160B | 140 W | 64 LED | T4 (Ta +60°C) | T135°C | 20800 | 19035 | 1 X ISO-M20 | A |
| SFLA-4161B | | | | | | | | |
| SFLA-5200B | 175 W | 80 LED | | | 26000 | 23790 | | |
| SFLA-5201B | | | | | | | | |
| SFLA-6240B | 210 W | 96 LED | | | 31200 | 28550 | | |
| SFLA-6241B | | | | | | | | |
| SFLA-7280B | 245 W | 112 LED | | | 36400 | 33310 | | |
| SFLA-7281B | | | | | | | | |
| SFLA-8320B | 280 W | 128 LED | | | 41600 | 38070 | | |
| SFLA-8321B | | | | | | | | |
| SFLA-9360B | 315 W | 144 LED | 46800 | 42825 | | | | |
| SFLA-9361B | | | | | | | | |

OPTIC BEAM: 0B=SM - WITHOUT LENS / 1B=AS - ASYMMETRICAL LENS

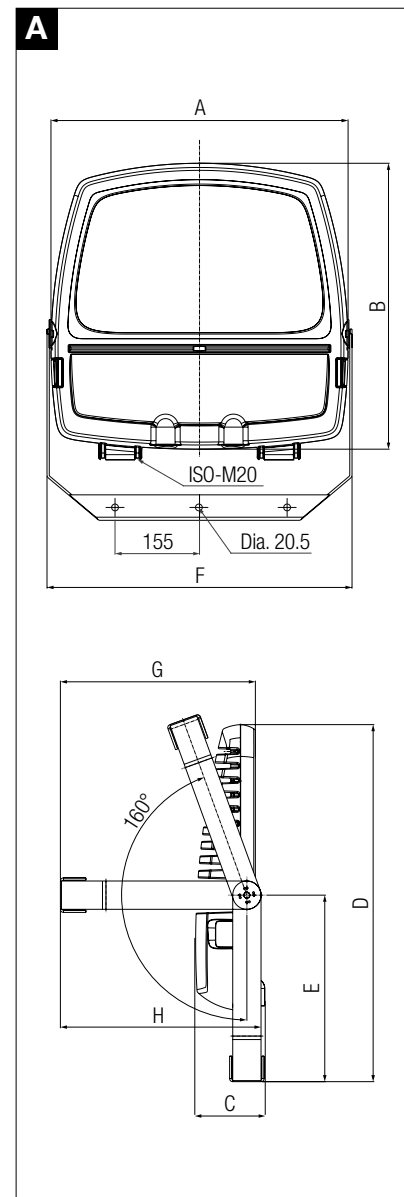
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| SFLA-4160B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,02 | 1 X ISO-M20 | A |
| SFLA-4161B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,07 | 1 X ISO-M20 | A |
| SFLA-5200B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,46 | 1 X ISO-M20 | A |
| SFLA-5201B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,52 | 1 X ISO-M20 | A |
| SFLA-6240B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,73 | 1 X ISO-M20 | A |
| SFLA-6241B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,80 | 1 X ISO-M20 | A |
| SFLA-7280B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,93 | 1 X ISO-M20 | A |
| SFLA-7281B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,01 | 1 X ISO-M20 | A |
| SFLA-8320B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,96 | 1 X ISO-M20 | A |
| SFLA-8321B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,05 | 1 X ISO-M20 | A |
| SFLA-9360B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,06 | 1 X ISO-M20 | A |
| SFLA-9361B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,22 | 1 X ISO-M20 | A |

SFLA LED Installation and mounting details



Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.




Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)

Classification: Group II - Category 3G 3D

REFERENCE STANDARDS
Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓜ II 3 G Ex ec IIC T4 Gc Ⓜ II 3 D Ex tc IIIB T115°C Dc |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 19 ATEX 3009X |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529 with silicone grease applied on gasket) |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 19.0033X EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 3mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 220÷240Vac electronic driver 50/60 Hz - input surge protection and over temperature protection |
| Lamp type | Samsung LH 181B - CRI>80 CCT 4000K Lifetime: 80.000 hours L80 B10 @ta 25, 50.000 hours L80 B20 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency AS = with asymmetrical lens vertex at 50deg ST = road lens with asymmetry vertex 30deg |


On Request Accessories:

- External painting colour on request
- DALI dimmable driver and output reduction with Vmidnight system
- CCT 2200/3000/5700 K
- Customized LED current drivers
- Additional optics
- SPD 10KV
- Pole mounting

Technical data

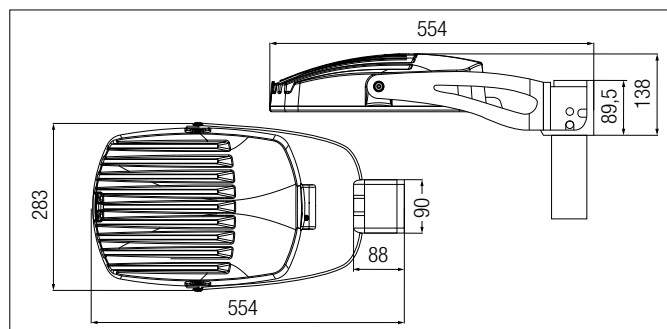
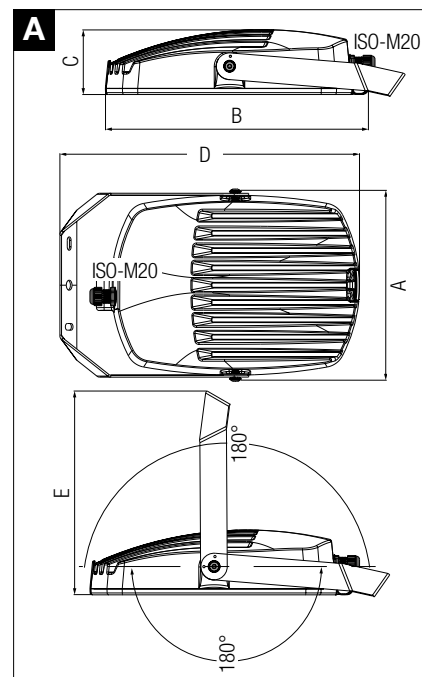
| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|--------|-------------------------|---------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| SFLP-1040B | 35 W | 16 LED | T4 (Ta +60°C) | T115°C | 5200 | 4760 | 1 X ISO-M20 | A |
| SFLP-1041B | | | | | | 4560 | | |
| SFLP-1042B | | | | | | 4475 | | |
| SFLP-2080B | 70 W | 32 LED | | | 10400 | 9515 | | |
| SFLP-2081B | | | | | | 9120 | | |
| SFLP-2082B | | | | | | 8950 | | |
| SFLP-3120B | 105 W | 48 LED | | | 15600 | 14275 | | |
| SFLP-3121B | | | | | | 13670 | | |
| SFLP-3122B | | | | | | 13420 | | |
| SFLP-4160B | 140 W | 64 LED | 20800 | 19030 | | | | |
| SFLP-4161B | | | | 18235 | | | | |
| SFLP-4162B | | | | 17900 | | | | |

OPTIC BEAM: 0B=SM - WITHOUT LENS / 1B=AS - ASYMMETICAL LENS / 2B=ST - STREET-ROAD LENS

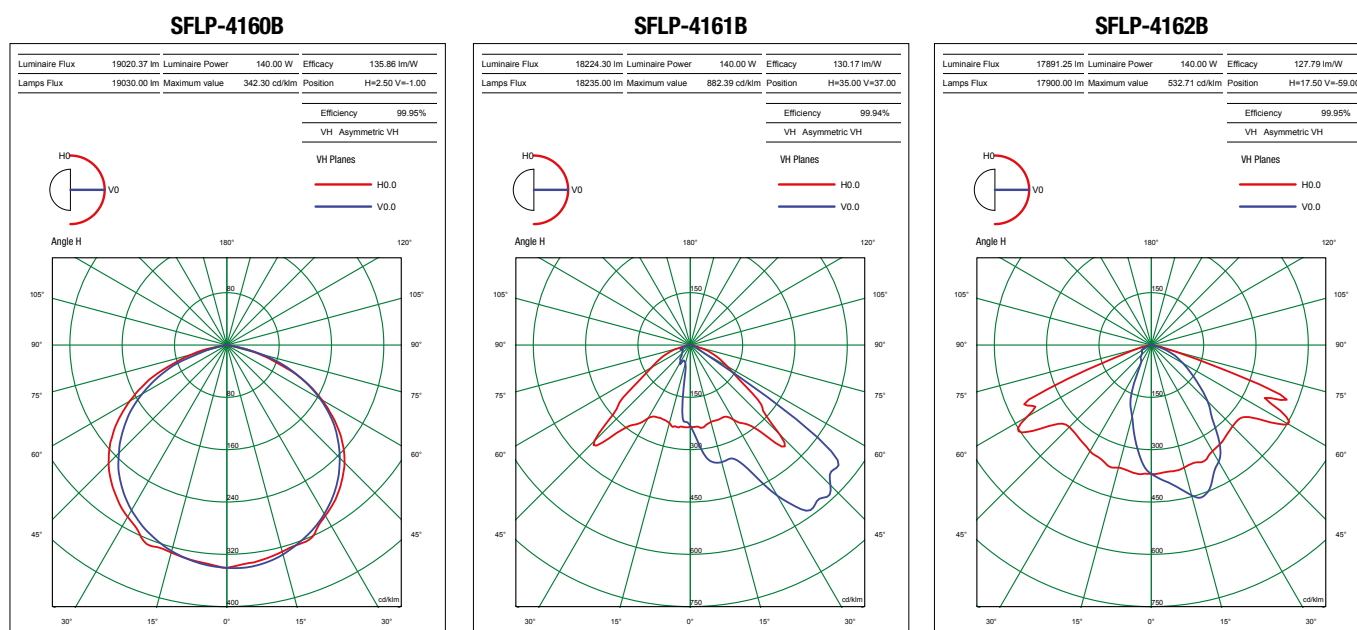
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| SFLP-1040B | 283 | 395 | 97 | 450 | 305 | 6,42 | 1 X ISO-M20 | A |
| SFLP-1041B | 283 | 395 | 97 | 450 | 305 | 6,45 | 1 X ISO-M20 | A |
| SFLP-1042B | 283 | 395 | 97 | 450 | 305 | 6,44 | 1 X ISO-M20 | A |
| SFLP-2080B | 283 | 395 | 97 | 450 | 305 | 6,45 | 1 X ISO-M20 | A |
| SFLP-2081B | 283 | 395 | 97 | 450 | 305 | 6,51 | 1 X ISO-M20 | A |
| SFLP-2082B | 283 | 395 | 97 | 450 | 305 | 6,50 | 1 X ISO-M20 | A |
| SFLP-3120B | 283 | 395 | 97 | 450 | 305 | 6,34 | 1 X ISO-M20 | A |
| SFLP-3121B | 283 | 395 | 97 | 450 | 305 | 6,43 | 1 X ISO-M20 | A |
| SFLP-3122B | 283 | 395 | 97 | 450 | 305 | 6,42 | 1 X ISO-M20 | A |
| SFLP-4160B | 283 | 395 | 97 | 450 | 305 | 6,40 | 1 X ISO-M20 | A |
| SFLP-4161B | 283 | 395 | 97 | 450 | 305 | 6,52 | 1 X ISO-M20 | A |
| SFLP-4162B | 283 | 395 | 97 | 450 | 305 | 6,51 | 1 X ISO-M20 | A |

Reference details



SFLP LED Installation and mounting details



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|-------------|------------------------|---------------|
| 923.503.002 | T Pole adapter Ø 60 mm | Painted steel |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)

Classification: Group II - Category 3G 3D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 3 G Ex ec IIC T3 Gc ⊗ II 3 D Ex tc IIIB T120°C Dc |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 19 ATEX 3009X |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529) |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 19.0033X EAC: TC RU C-IT.BH02.B.00254/19 (-40°C ÷ +60°C) |

Mechanical characteristics

| | |
|-------------|--|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 2mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 220÷240Vac electronic driver 50/60 Hz - input surge protection and over temperature protection |
| Lampholders | Samsung COB D-Gen3 - CRI>80 CCT 4000K Lifetime: 58.000 hours L80 B10 @ta 25, 50.000 hours L70 B50 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency |



On Request Accessories:

- External painting colour on request
- Frosted diffuser glass
- CCT 3000/5700/6500 K
- DALI dimmable driver
- GORE® protective vents system

Technical data

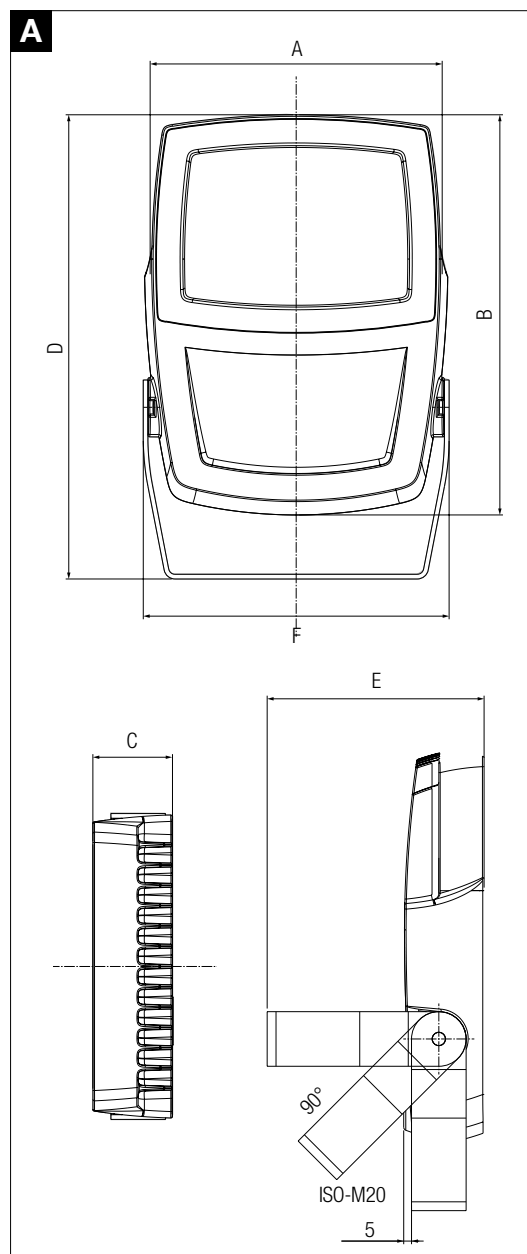
| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|--------|-------------------------|---------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| SFLJ-1300B | 17,5 W | 1 LED | T3 (Ta +60°C) | T120°C | 3040 | 2705 | 1 X ISO-M20 | A |
| SFLJ-1380B | 24,5 W | | | | 4000 | 3560 | | |
| SFLJ-1440B | 32 W | | | | 5000 | 4450 | | |

OPTIC BEAM: OB=SM - WITHOUT LENS

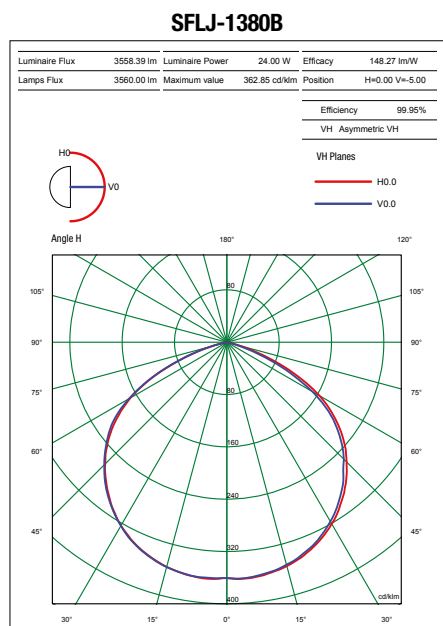
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| SFLJ-1300B | 187 | 256 | 51 | 297 | 139 | 196 | 2,79 | 1 X ISO-M20 | A |
| SFLJ-1380B | 187 | 256 | 51 | 297 | 139 | 196 | 2,81 | 1 X ISO-M20 | A |
| SFLJ-1440B | 187 | 256 | 51 | 297 | 139 | 196 | 2,83 | 1 X ISO-M20 | A |

Reference details



SFLJ LED Installation and mounting details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area
Insulation Class: I



REFERENCE STANDARDS

| | CEI / EN |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP65 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |

Mechanical characteristics

| | |
|--------------------|---|
| Body | glass fibre reinforced polyester resin |
| Diffuser | U/V resistant polycarbonate - hinged to body |
| Safety closing | stainless steel hooks |
| Gaskets | EPDM 60 rubber suitable for high temperatures and resistant to enviroments conditions |
| Internal reflector | white stove enamelled sheet steel |
| Cable entry | complete with 1 PVC cable gland and 1 cap |

Electrical characteristics

| | |
|----------------|--|
| Power supply | dual channel electronic ballast: - 110÷240Vac - 50/60 Hz (cos ρ ≥ 0,98) - 110÷240Vdc |
| Emergency unit | emergency unit with autonomy from 120 min. - (inverter) 220÷240V 50/60Hz |
| Lampholders | bi-pin G13 cap |
| Terminals | suitable up to 6 sq/mm cables |

(*) The lighting fittings must be used appropriately without changing the mechanical and protection features, and must not be installed on surfaces



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Emergency Group
- Up to 4 cable entries

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | CABLE ENTRY WITH CABLE GLAND | EMERGENCY UNIT | AUTONOMY | DETAIL |
|--|---------|-------------------------|---------------------------|------------|------------------------------|----------------|----------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc) | | | | | | | | |
| ATLANTIS118EL | 1 x 18W | - | - | G13 | 2 x M20 | - | - | A |
| ATLANTIS136EL | 1 x 36W | - | - | G13 | 2 x M20 | - | - | A |
| ATLANTIS158EL | 1 x 58W | - | - | G13 | 2 x M20 | - | - | A |
| ATLANTIS218EL | 2 x 18W | - | - | G13 | 2 x M20 | - | - | A |
| ATLANTIS236EL | 2 x 36W | - | - | G13 | 2 x M20 | - | - | A |
| ATLANTIS258EL | 2 x 58W | - | - | G13 | 2 x M20 | - | - | A |

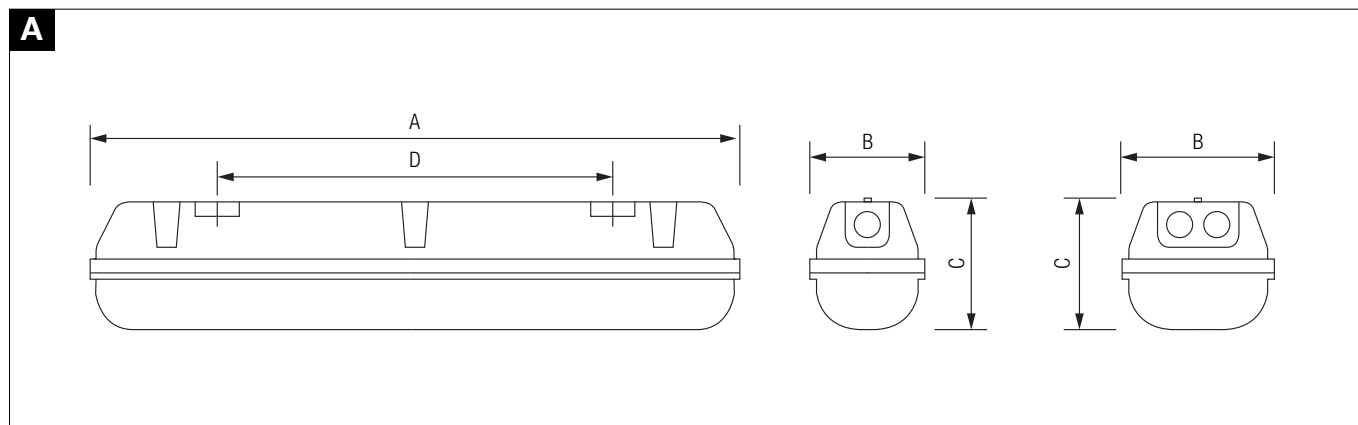
| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 220V / 240V - 50/60Hz | | | | | | | | |
|---|---------|---|---|-----|---------|------------|----------|---|
| ATLANTIS-E118EL | 1 x 18W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| ATLANTIS-E136EL | 1 x 36W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| ATLANTIS-E158EL | 1 x 58W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| ATLANTIS-E218EL | 2 x 18W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| ATLANTIS-E236EL | 2 x 36W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |
| ATLANTIS-E258EL | 2 x 58W | - | - | G13 | 2 x M20 | 4,8V - 4Ah | 120 min. | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|---------------|--------|--------|--------|--------|-------------|-------------|--------|
| ATLANTIS118EL | 665 | 97 | 99 | 390 | 1,42 | 2 x M20 | A |
| ATLANTIS136EL | 1282 | 97 | 99 | 800 | 2,15 | 2 x M20 | A |
| ATLANTIS158EL | 1578 | 97 | 99 | 1100 | 2,94 | 2 x M20 | A |
| ATLANTIS218EL | 665 | 140 | 99 | 390 | 2,72 | 2 x M20 | A |
| ATLANTIS236EL | 1282 | 140 | 99 | 800 | 2,52 | 2 x M20 | A |
| ATLANTIS258EL | 1578 | 140 | 99 | 1100 | 3,93 | 2 x M20 | A |

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|-----------------|--------|--------|--------|--------|-------------|-------------|--------|
| ATLANTIS-E118EL | 665 | 97 | 99 | 390 | 2,3 | 2 x M20 | A |
| ATLANTIS-E136EL | 1282 | 97 | 99 | 800 | 3 | 2 x M20 | A |
| ATLANTIS-E158EL | 1578 | 97 | 99 | 1100 | 3,6 | 2 x M20 | A |
| ATLANTIS-E218EL | 665 | 140 | 99 | 390 | 2,6 | 2 x M20 | A |
| ATLANTIS-E236EL | 1282 | 140 | 99 | 800 | 4,4 | 2 x M20 | A |
| ATLANTIS-E258EL | 1578 | 140 | 99 | 1100 | 5,7 | 2 x M20 | A |

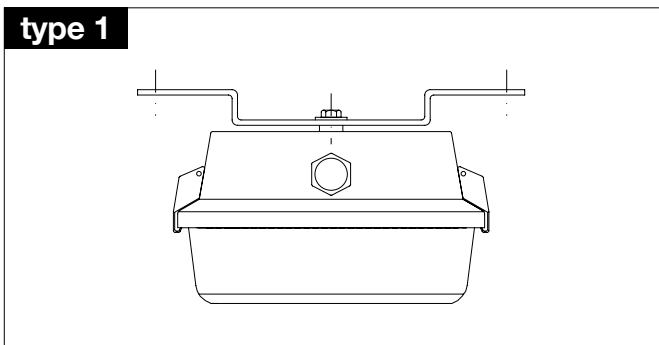
Reference details





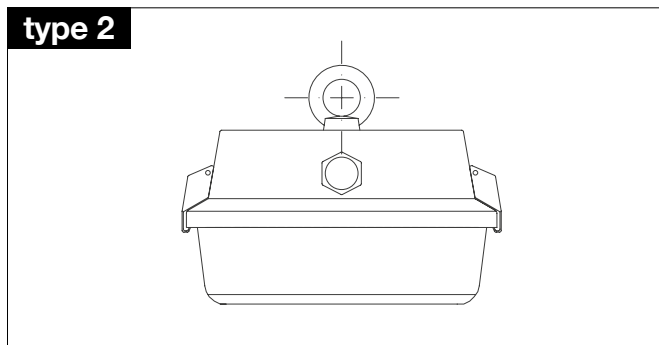
Ceiling mounting

type 1



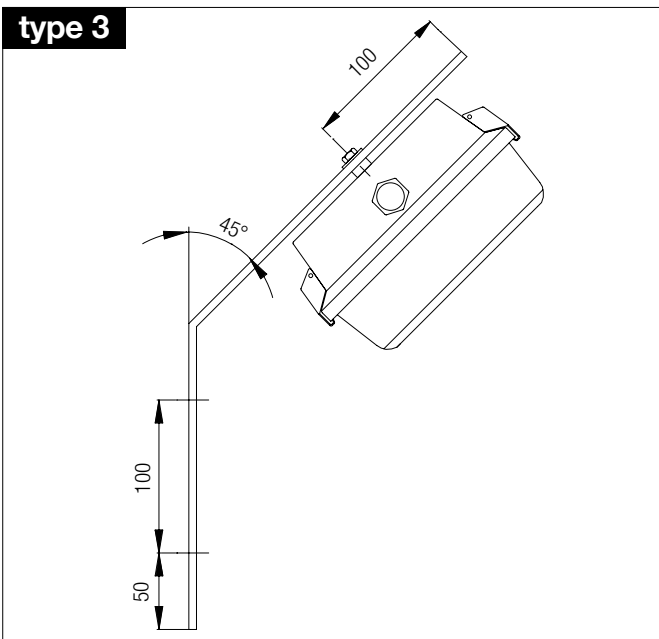
Pendant mounting

type 2



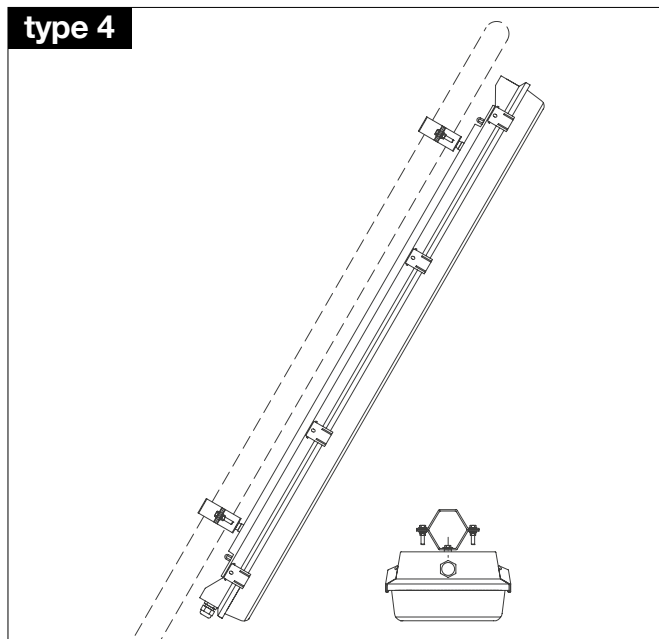
Wall/structure mounting

type 3



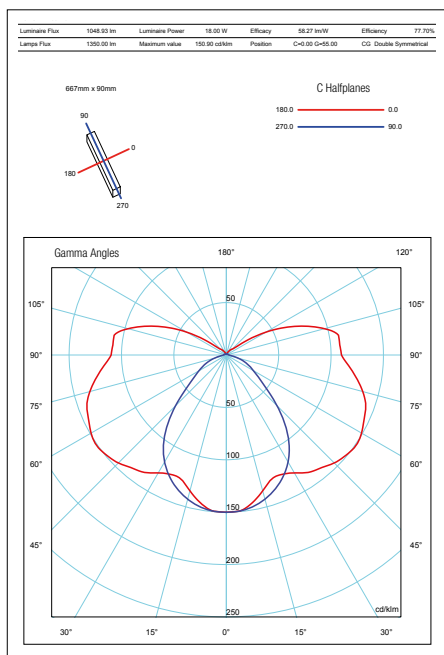
Pole mounting
Assemblg detail with pole (typical)

type 4

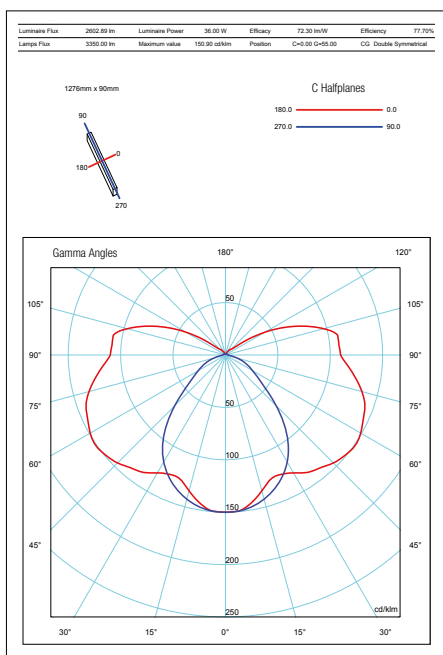


ATLANTIS Polar diagrams – photometric data

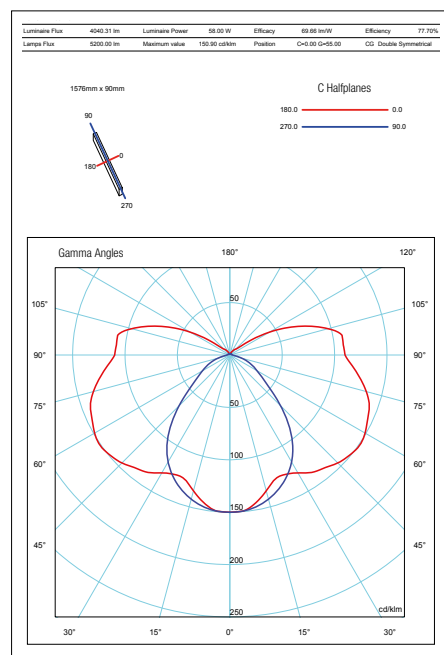
ATLANTIS118EL



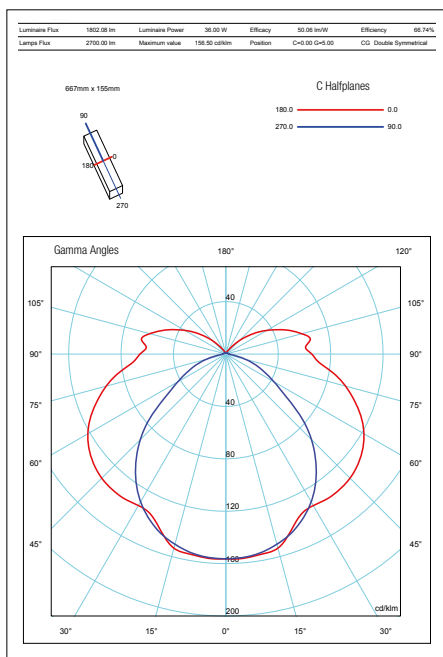
ATLANTIS136EL



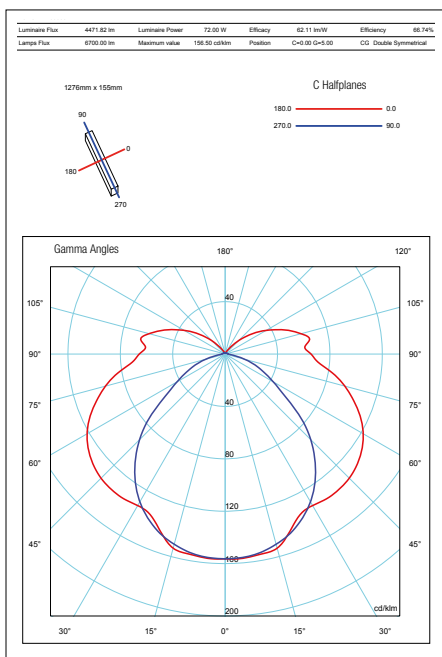
ATLANTIS158EL



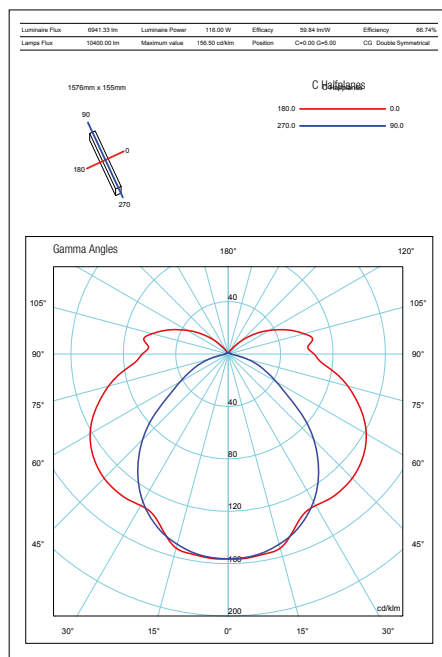
ATLANTIS218EL



ATLANTIS236EL



ATLANTIS258EL



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|---|--------------|------------------|
| KITAVFTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | GALVANIZED STEEL |
| KITAVFTYPE1 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | STAINLESS STEEL |
| KITAVFTYPE4 | WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Insulation Class: I



REFERENCE STANDARDS

CEI/EN

| | |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |

Mechanical characteristics

| | |
|--------------------|---|
| Body | glass fibre reinforced polyester resin self-extinguishing acc. to UL94 |
| Diffuser | U/V resistant polycarbonate - hinged to body |
| Safety closing | operated by hexagonal key |
| Gaskets | EPDM 60 rubber suitable for high temperatures and resistant to enviroments conditions |
| Internal reflector | white stove enamelled sheet aluminum |
| Cable entry | ISO-Metric complete with 2 PVC cable gland + 2 PVC stopping plug |

Electrical characteristics for fluorescent lamps

| | |
|----------------|--|
| Power supply | dual channel electronic ballast: - 110÷240Vac - 50/60 Hz (cos ρ ≥ 0,98) - 110÷240Vdc |
| Emergency unit | emergency unit with autonomy from 180 min. (inverter) 220÷240V 50/60Hz |
| Lampholders | bi-pin G13 cap |
| Terminals | suitable up to 4 sq/mm cables |

Electrical characteristics for LED strips lamp

| | |
|-----------------|--|
| Power Supply | 220÷240V 50/60Hz (cos ρ ≥ 0,98) |
| Internal Wiring | 105° C resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |
| Emergency Unit | emergency unit composed of inverter charger and Ni-Cd battery pack 4A/h 6.0V autonomy 180min. LED power-on indicating lamp provided - (inverter) 220÷240V 50/60Hz |



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Electronic ballast with voltage supply different than standard
- Ex-de safety switch
- Up to 4 cable entries

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | ENTRY | EMERGENCY UNIT | AUTONOMY | DETAIL |
|--|---------|-------------------------|---------------------------|------------|---------|----------------|----------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110÷240Vac - 50/60 Hz) - (110÷240Vdc) | | | | | | | | |
| WFL-118 | 1 x 18W | - | - | G13 | 4 x M20 | - | - | A |
| WFL-136 | 1 x 36W | - | - | G13 | 4 x M20 | - | - | A |
| WFL-218 | 2 x 18W | - | - | G13 | 4 x M20 | - | - | A |
| WFL-236 | 2 x 36W | - | - | G13 | 4 x M20 | - | - | A |

| EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220÷240V - 50/60Hz | | | | | | | | |
|---|---------|---|---|-----|---------|------------|----------|---|
| WFLE-118 | 1 x 18W | - | - | G13 | 4 x M20 | 4,8V - 4Ah | 180 min. | A |
| WFLE-136 | 1 x 36W | - | - | G13 | 4 x M20 | 4,8V - 4Ah | 180 min. | A |
| WFLE-218 | 2 x 18W | - | - | G13 | 4 x M20 | 4,8V - 4Ah | 180 min. | A |
| WFLE-236 | 2 x 36W | - | - | G13 | 4 x M20 | 4,8V - 4Ah | 180 min. | A |

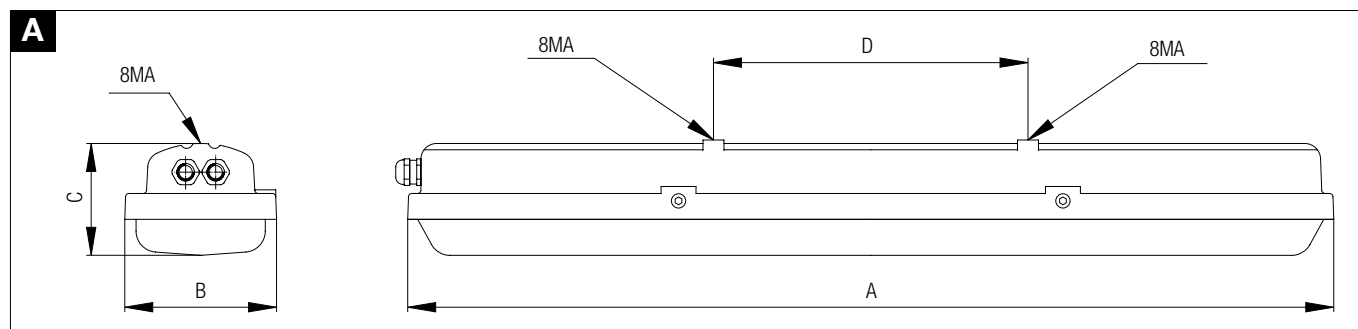
| LIGHTING FIXTURES FOR LED STRIPES LAMP ("TR" VERSION) - CCT: 5000K / CRI: 80 - POWER SUPPLY 220÷240Vac | | | | | | |
|---|---------------|-------------------------|---------------------------|-------------|----------------------------------|-----------------------------|
| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT (lm) | EMERGENCY UNIT | DIMENSIONALLY EQUIVALENT TO |
| WFL-66LED | 66 LED / 22W | - | - | 3180 | - | 18W FLUO. L=730 mm |
| WFL-132LED | 132 LED / 44W | - | - | 6340 | - | 36W FLUO. L=1340 mm |
| WFLE-66LED | 66 LED / 22W | - | - | 3180 | 6.0 V - 4Ah AUTONOMY 180 min. | 18W FLUO. L=730 mm |
| WFLE-132LED | 132 LED / 44W | - | - | 6340 | 6.0 V - 4Ah AUTONOMY 180 min. | 36W FLUO. L=1340 mm |

Note: LED stripes lamps included along with lighting fixtures
EMERGENCY OPERATING WITH 66 LED UNITS ONLY AS STANDARD

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------------------|--------|--------|--------|--------|------------|-------------|--------|
| WFL-118 | 730 | 215 | 160 | 400 | 6,00 | 4 x M20 | A |
| WFL-136 | 1340 | 215 | 160 | 450 | 6,50 | 4 x M20 | A |
| WFL-218 / WFL-66LED | 730 | 215 | 160 | 400 | 7,00 | 4 x M20 | A |
| WFL-236 / WFL-132LED | 1340 | 215 | 160 | 450 | 7,50 | 4 x M20 | A |
| WFLE-118 | 730 | 215 | 160 | 400 | 11,00 | 4 x M20 | A |
| WFLE-136 | 1340 | 215 | 160 | 450 | 11,50 | 4 x M20 | A |
| WFLE-218 / WFLE-66LED | 730 | 215 | 160 | 400 | 12,00 | 4 x M20 | A |
| WFLE-236 / WFLE-132LED | 1340 | 215 | 160 | 450 | 12,50 | 4 x M20 | A |

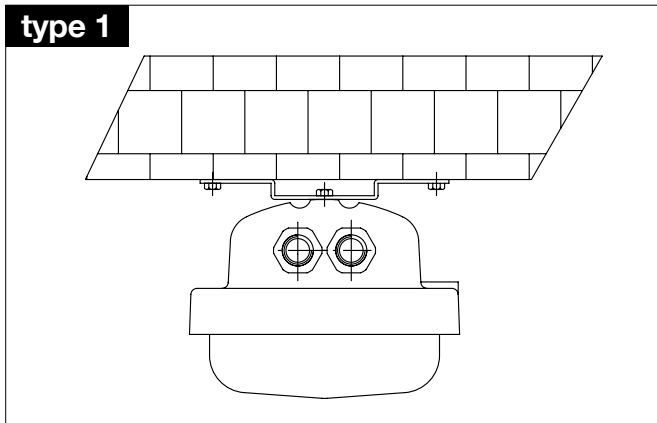
Reference details





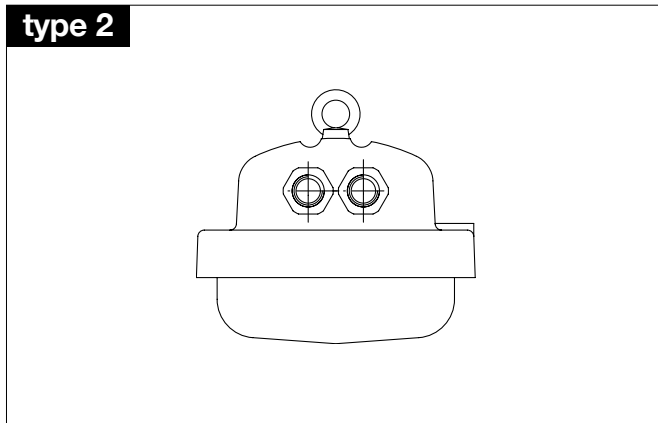
Ceiling mounting

type 1



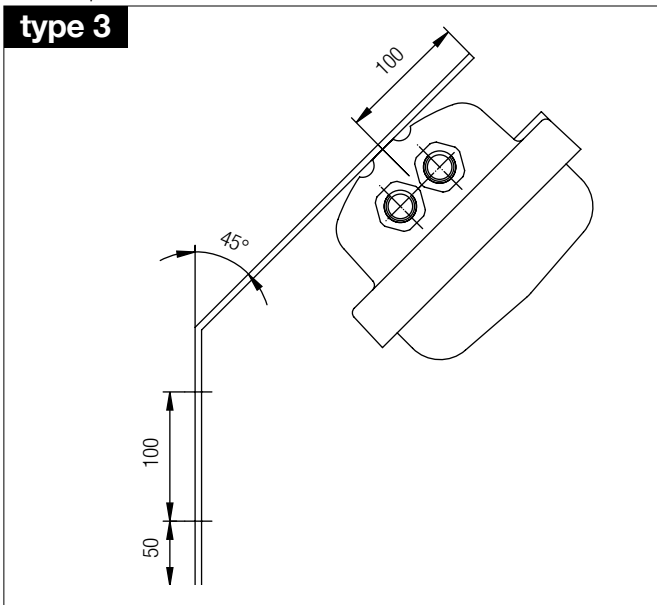
Pendant mounting

type 2



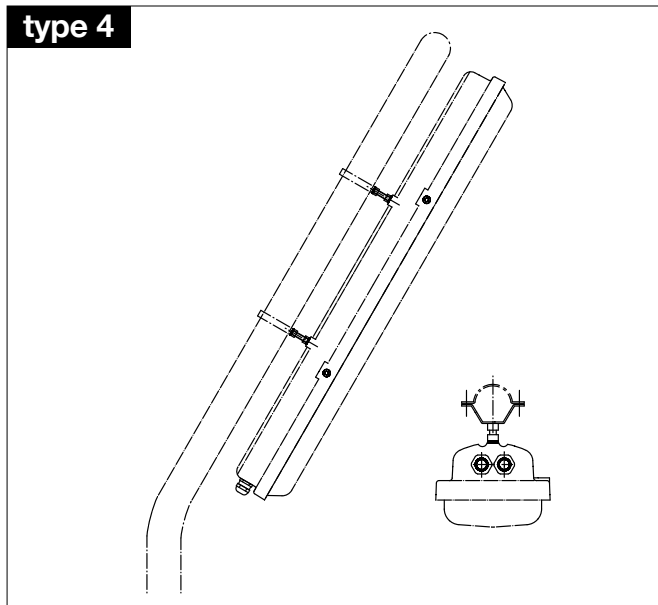
Wall/structure mounting

type 3



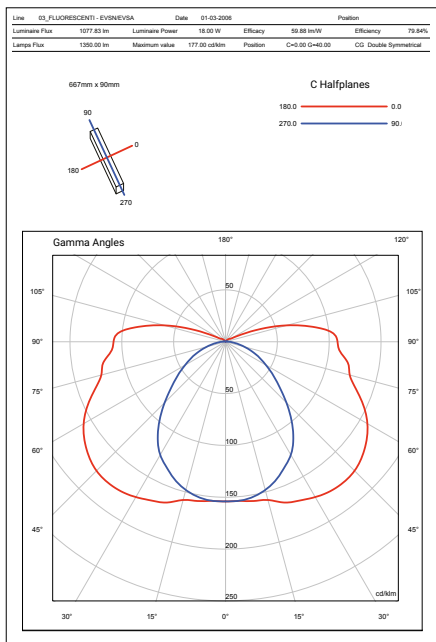
Pole mounting. Assembling detail with pole (typical)

type 4

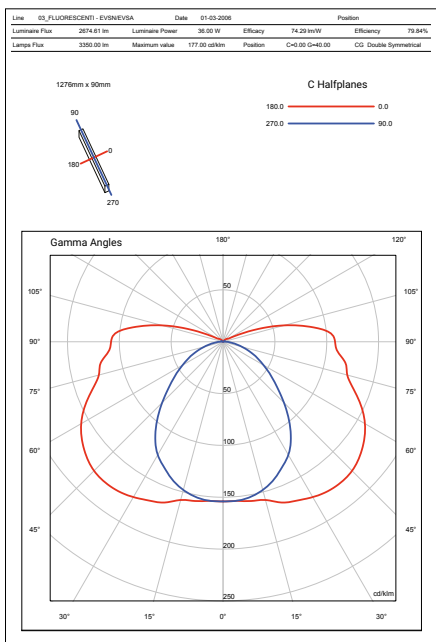


WFL Polar diagrams – photometric data

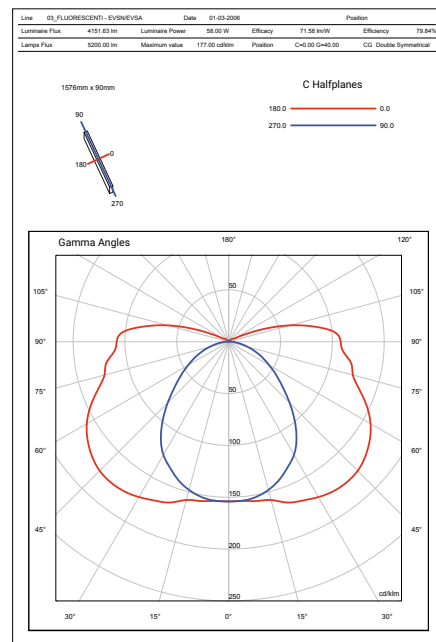
WFL-218



WFL-136



WFL-236

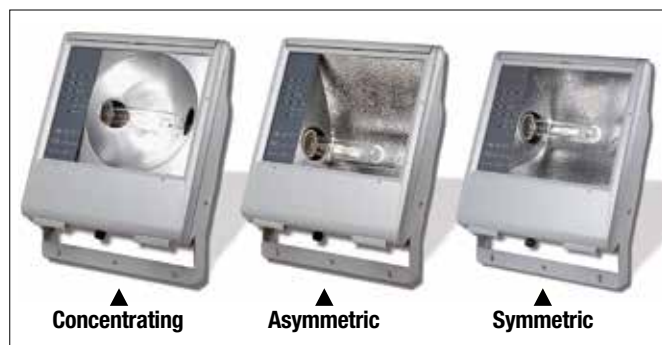


On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|-------------|---|--------------|------------------|
| KITAVFTYPE3 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | GALVANIZED STEEL |
| KITAVFTYPE1 | PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS | TYPE 2 | STAINLESS STEEL |
| KITAVFTYPE4 | WALL/STRUCTURE MOUNTING KIT C/W HARDWARE | TYPE 3 | GALVANIZED STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |
| KITAVFTYPE5 | POLE MOUNTING KIT (SIZE 1" DIA.) C/W HARDWARE | TYPE 4 | STAINLESS STEEL |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area
Insulation Class: I


REFERENCE STANDARDS

| | CEI / EN |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |

Mechanical characteristics

| | |
|----------------|---|
| Body | marine grade copper free aluminum |
| Diffuser | tempered front glass |
| Support | steel bracket with rotation-proof system |
| Reflector | anodized and polished 99,85 pure aluminum internal optic |
| Painting | thermosetting polyester powder resistant to atmospheric agents and corrosion grey RAL 9006 colour |
| Screws | stainless steel |
| Gaskets | pure silicon heat resistance |
| Cable entry | ISO-METRIC complete with cable gland |
| Internal optic | (S) symmetric optic - (A) asymmetric optic (C) concentrating beam optic |


Electrical characteristics

| | |
|-----------------|---|
| Power supply | conventional ballast 230V - 50Hz (P.F. CORRECTED - $\cos \rho \geq 0,95$) |
| Lampholders | porcellain E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |


On Request Accessories:

- Control gear with voltage supply different than standard
- Internal optical code (S – A – C), has to be added to the floodlight code

Technical data

| CODE | LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | CABLE ENTRY WITH CABLE GLAND | DETAIL |
|------|------|-------------------------|---------------------------|-----------------|------------------------------|--------|
|------|------|-------------------------|---------------------------|-----------------|------------------------------|--------|

FLOODLIGHT FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz

| | | | | | | |
|----------------|-------|---|---|------|-------------|---|
| EVOLUTION250HG | 250 W | - | - | E-40 | 1 x ISO-M20 | A |
| EVOLUTION400HG | 400 W | | | | | |

Note: Available with symmetric optical only

FLOODLIGHT FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz

| | | | | | | |
|------------------|-------|---|---|------|-------------|---|
| EVOLUTION150MH-* | 150 W | - | - | E-40 | 1 x ISO-M20 | A |
| EVOLUTION250MH-* | 250 W | | | | | |
| EVOLUTION400MH-* | 400 W | | | | | |

FLOODLIGHT FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz

| | | | | | | |
|------------------|-------|---|---|------|-------------|---|
| EVOLUTION150NA-* | 150 W | - | - | E-40 | 1 x ISO-M20 | A |
| EVOLUTION250NA-* | 250 W | | | | | |
| EVOLUTION400NA-* | 400 W | | | | | |

(*) INTERNAL OPTICAL BEAM: (SM) SYMMETRIC BEAM - (AS) ASYMMETRIC BEAM - (CT) CONCENTRATING BEAM

SAMPLE: EVOLUTION400MH-SM = FLOODLIGHT 400W METAL HALIDE WITH SYMMETRIC OPTICAL BEAM

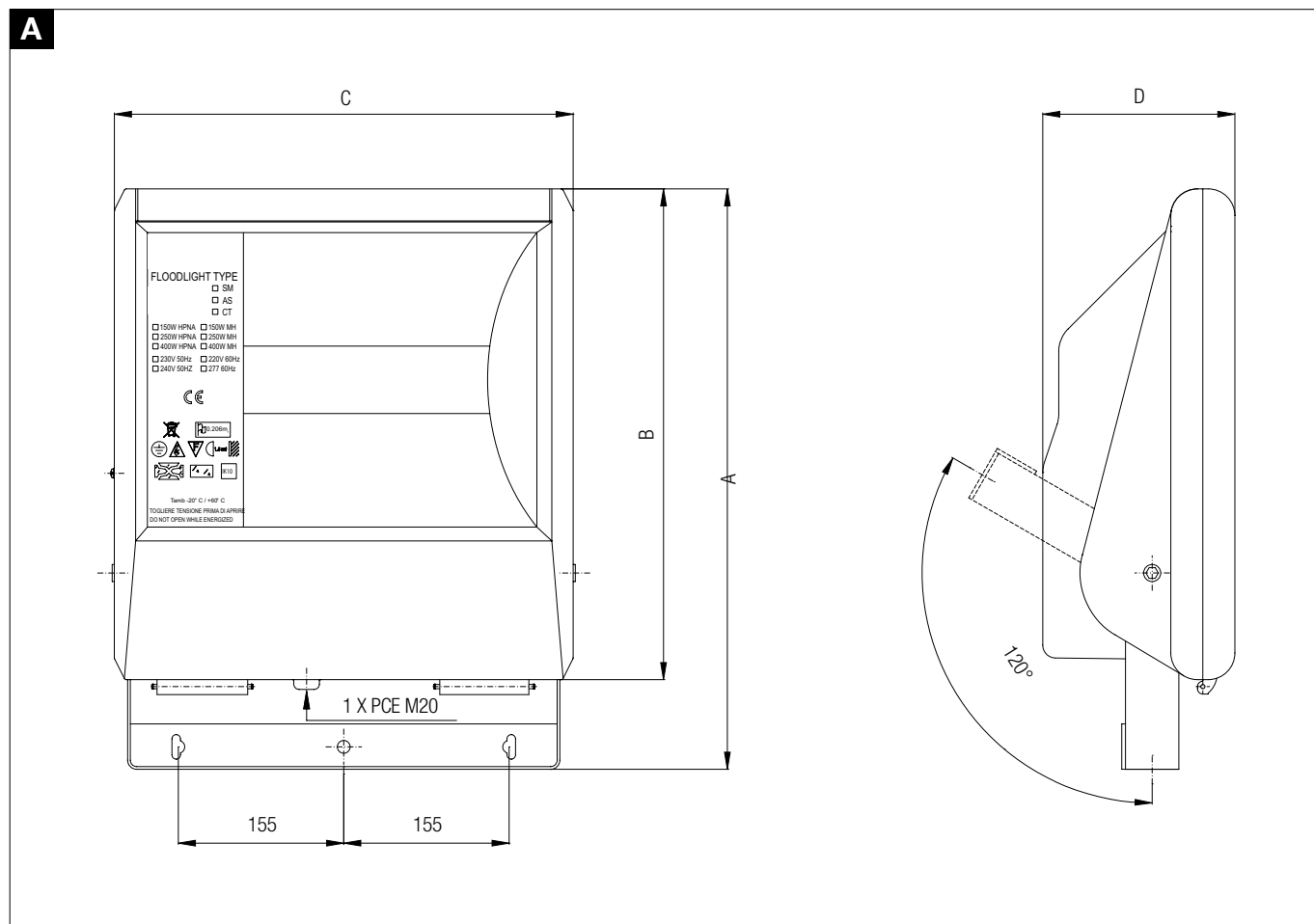
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|----------------|--------|--------|--------|--------|-------------|-------------|--------|
| EVOLUTION250HG | 544 | 461 | 430 | 180 | 8,80 | 1 x ISO-M20 | A |
| EVOLUTION400HG | 544 | 461 | 430 | 180 | 9,10 | 1 x ISO-M20 | A |
| EVOLUTION150MH | 544 | 461 | 430 | 180 | 9,50 | 1 x ISO-M20 | A |
| EVOLUTION250MH | 544 | 461 | 430 | 180 | 9,70 | 1 x ISO-M20 | A |
| EVOLUTION400MH | 544 | 461 | 430 | 180 | 11,00 | 1 x ISO-M20 | A |
| EVOLUTION150NA | 544 | 461 | 430 | 180 | 10,50 | 1 x ISO-M20 | A |
| EVOLUTION250NA | 544 | 461 | 430 | 180 | 11,10 | 1 x ISO-M20 | A |
| EVOLUTION400NA | 544 | 461 | 430 | 180 | 12,30 | 1 x ISO-M20 | A |

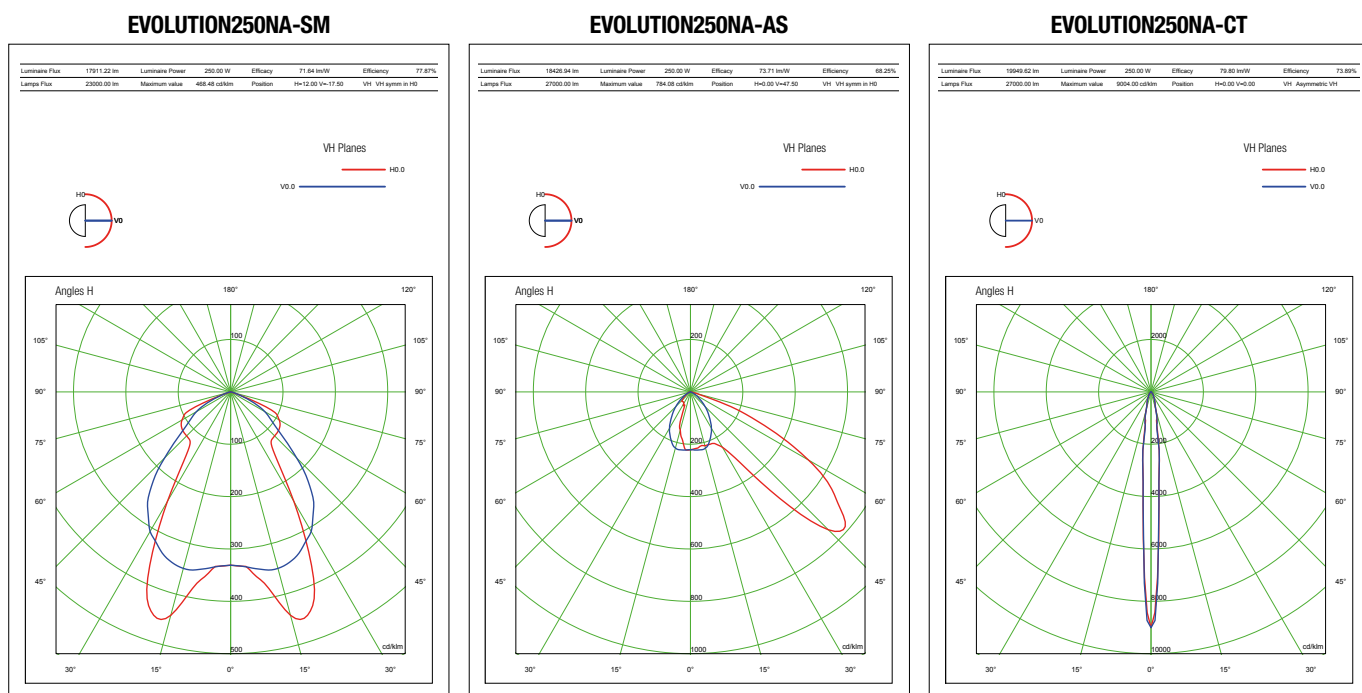




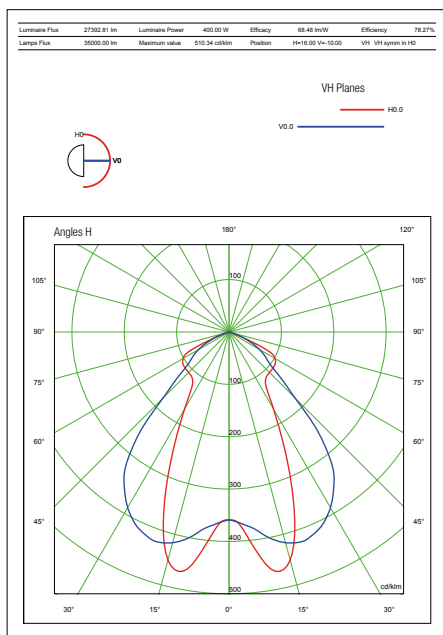
Reference details



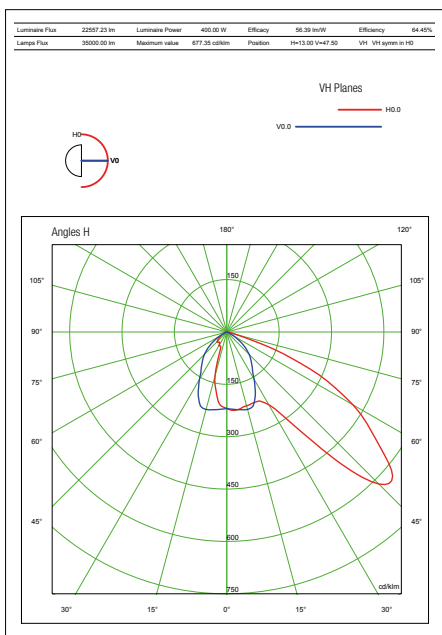
EVOLUTION Polar diagrams - photometric data



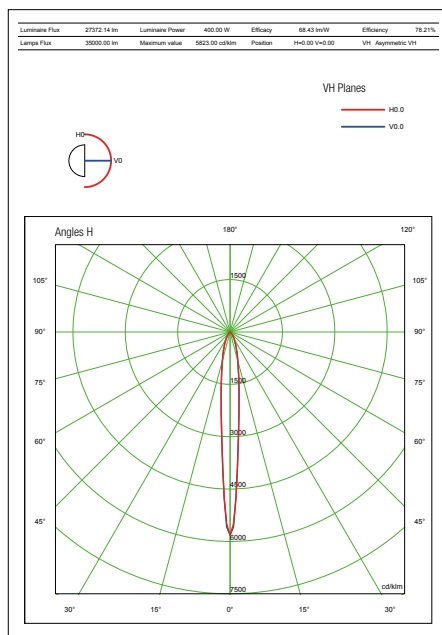
EVOLUTION400MH-SM



EVOLUTION400MH-AS



EVOLUTION400MH-CT

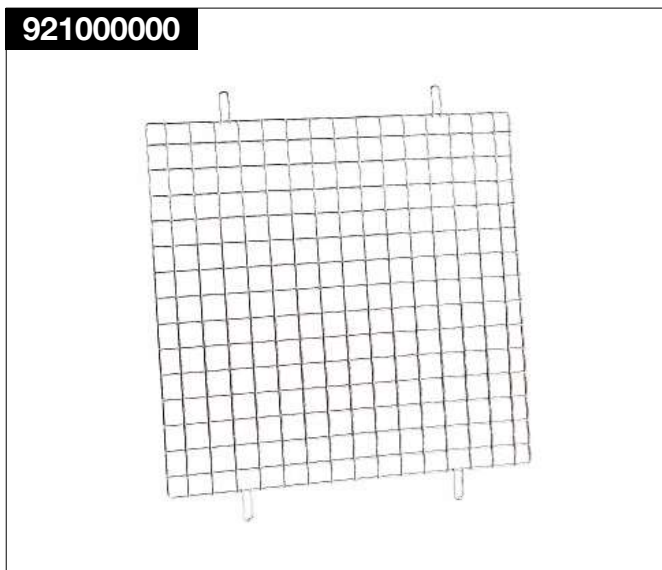


On request accessories

| CODE | DESCRIPTION | MATERIAL |
|-----------|------------------------------|---------------|
| 921000000 | PROTECTION GRID | ALUMINIUM |
| 921003004 | POLE ADAPTER FOR DIA 40÷60MM | PAINTED STEEL |

Protection grid

921000000



Pole adapter

921003004



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: Safe Area

Insulation Class: I



REFERENCE STANDARDS

CEI / EN

| | |
|---------------------------------|-----------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529) |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 3mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | 220-240Vac electronic driver 50/60 Hz - C/W surge protection 6/8-10KV and NTC thermal sensor |
| Lamp type | Samsung LH 181B - CRI>80 CCT 4000K Lifetime: 80.000 hours L80 B10 @ta 25, 50.000 hours L80 B20 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency AS = with asymmetrical lens with vertex at 50deg |



On Request Accessories:

- External painting colour on request
- DALI dimmable driver and output reduction Vmidnight system
- CCT 2200/3000/5700 K
- Customized LED current drivers
- Additional optics

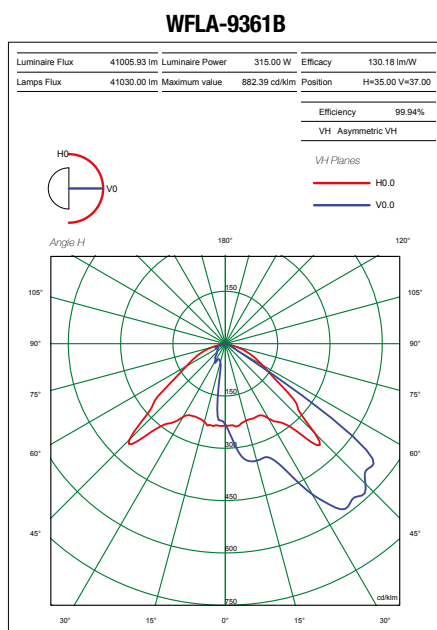
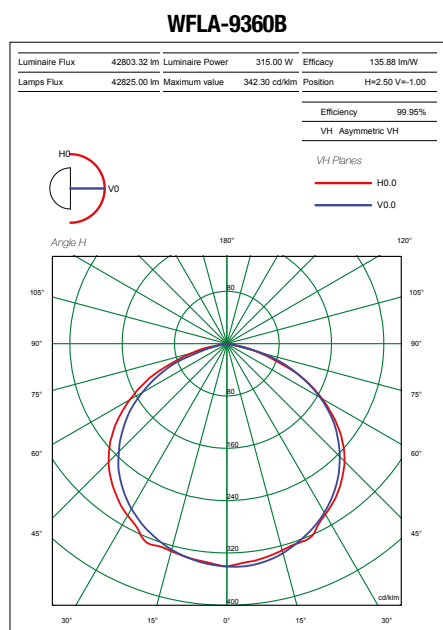
| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|---------|-------------------------|---------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| WFLA-4160B | 140 W | 64 LED | | | 20800 | 19035 | 1 X ISO-M20 | A |
| WFLA-4161B | | | | | 26000 | 23790 | | |
| WFLA-5200B | 175 W | 80 LED | | | 31200 | 28550 | 1 X ISO-M20 | A |
| WFLA-5201B | | | | | 36400 | 33310 | | |
| WFLA-6240B | 210 W | 96 LED | | | 41600 | 38070 | 1 X ISO-M20 | A |
| WFLA-6241B | | | | | 46800 | 42825 | | |
| WFLA-7280B | 245 W | 112 LED | | | | | 1 X ISO-M20 | A |
| WFLA-7281B | | | | | | | | |
| WFLA-8320B | 280 W | 128 LED | | | | | 1 X ISO-M20 | A |
| WFLA-8321B | | | | | | | | |
| WFLA-9360B | 315 W | 144 LED | | | | | 1 X ISO-M20 | A |
| WFLA-9361B | | | | | | | | |

OPTIC BEAM: 0B=SM - WITHOUT LENS / 1B=AS - ASYMMETRICAL LENS

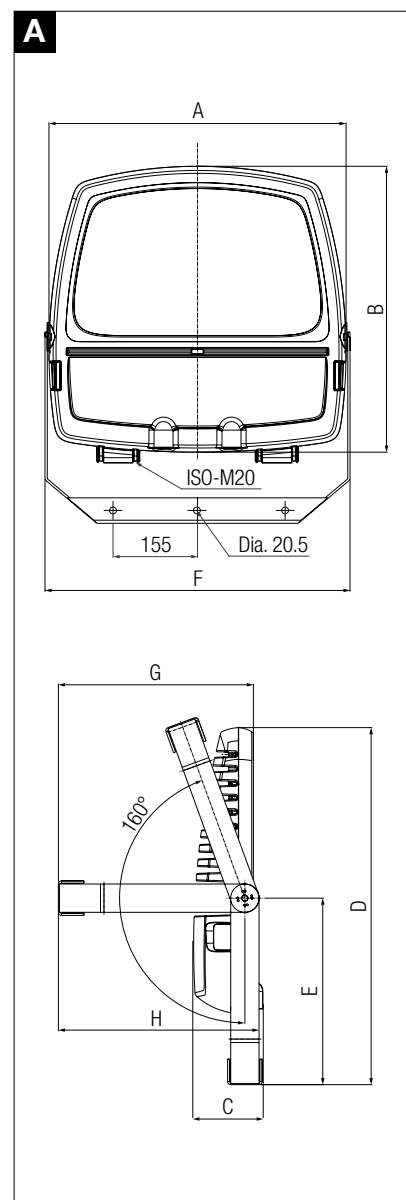
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| WFLA-4160B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,02 | 1 X ISO-M20 | A |
| WFLA-4161B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,07 | 1 X ISO-M20 | A |
| WFLA-5200B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,46 | 1 X ISO-M20 | A |
| WFLA-5201B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,52 | 1 X ISO-M20 | A |
| WFLA-6240B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,73 | 1 X ISO-M20 | A |
| WFLA-6241B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,80 | 1 X ISO-M20 | A |
| WFLA-7280B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,93 | 1 X ISO-M20 | A |
| WFLA-7281B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,01 | 1 X ISO-M20 | A |
| WFLA-8320B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 20,96 | 1 X ISO-M20 | A |
| WFLA-8321B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,05 | 1 X ISO-M20 | A |
| WFLA-9360B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,06 | 1 X ISO-M20 | A |
| WFLA-9361B | 525 | 505 | 122 | 630,60 | 329 | 539 | 344 | 354 | 21,22 | 1 X ISO-M20 | A |

WFLA LED Installation and mounting details



Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: Safe Area

Insulation Class: I



REFERENCE STANDARDS

CEI / EN

| | |
|---------------------------------|--|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529 with silicone grease applied on gasket) |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 3mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 220-240Vac electronic driver 50/60 Hz - C/W surge protection 6/8KV and NTC thermal sensor |
| Lamp type | Samsung LH 181B - CRI>80 CCT 4000K Lifetime: 80.000 hours L80 B10 @ta 25, 50.000 hours L80 B20 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency AS = with asymmetrical lens vertex at 50deg ST = road lens with asymmetry vertex 30deg |



On Request Accessories:

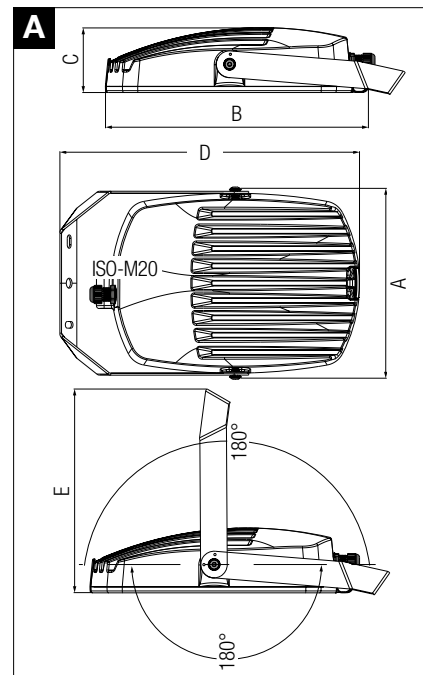
- External painting colour on request
- DALI dimmable driver and output reduction with Vmidnight system
- CCT 2200/3000/5700 K
- Customized LED current drivers
- Additional optics
- SPD 10KV
- Pole mounting

Technical data

| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|--------|-------------------------|---------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| WFLP-1040B | 35 W | 16 LED | - | - | 5200 | 4760 | 1 X ISO-M20 | A |
| WFLP-1041B | | | | | | 4560 | | |
| WFLP-1042B | | | | | | 4475 | | |
| WFLP-2080B | 70 W | 32 LED | | | 10400 | 9515 | | |
| WFLP-2081B | | | | | | 9120 | | |
| WFLP-2082B | | | | | | 8950 | | |
| WFLP-3120B | 105 W | 48 LED | | | 15600 | 14275 | | |
| WFLP-3121B | | | | | | 13670 | | |
| WFLP-3122B | | | | | | 13420 | | |
| WFLP-4160B | 140 W | 64 LED | 20800 | 19030 | | | | |
| WFLP-4161B | | | | 18235 | | | | |
| WFLP-4162B | | | | 17900 | | | | |

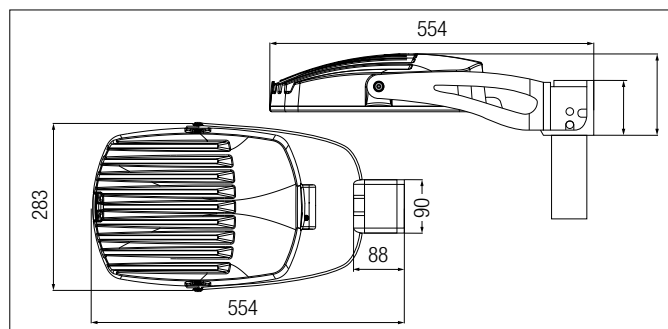
OPTIC BEAM: 0B=SM - WITHOUT LENS / 1B=AS - ASYMMETICAL LENS / 2B=ST - STREET-ROAD LENS

Reference details

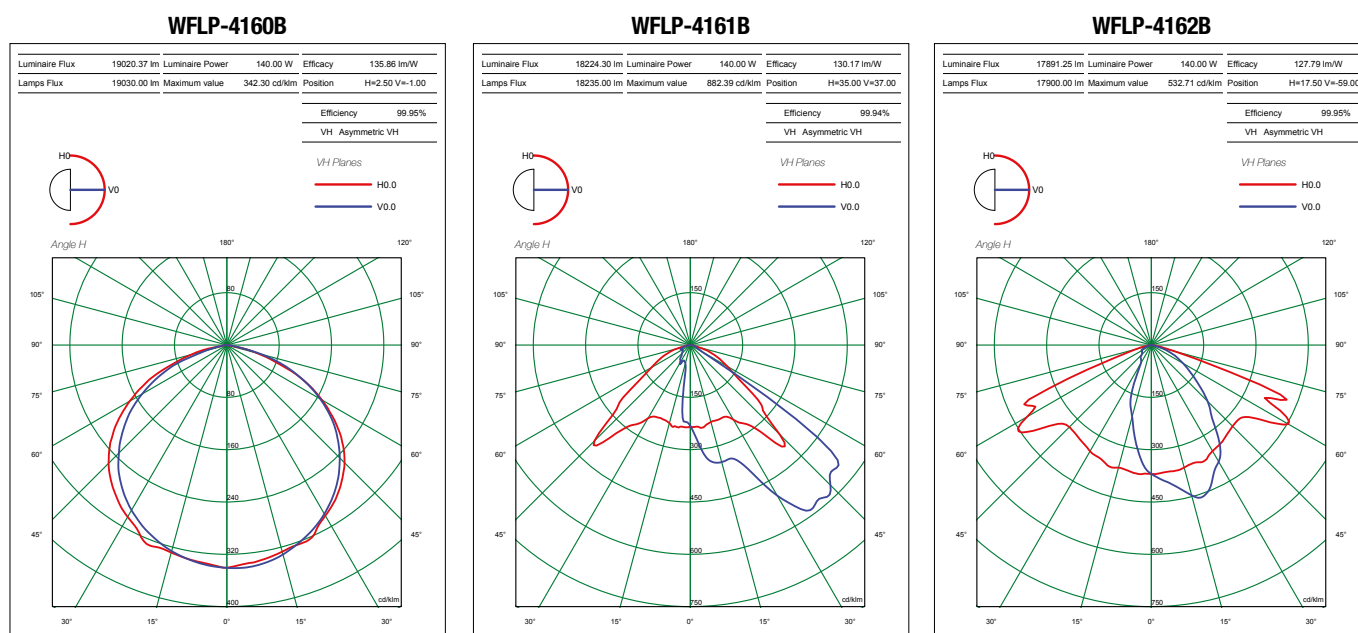


Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| WFLP-1040B | 283 | 395 | 97 | 450 | 305 | 6,42 | 1 X ISO-M20 | A |
| WFLP-1041B | 283 | 395 | 97 | 450 | 305 | 6,45 | 1 X ISO-M20 | A |
| WFLP-1042B | 283 | 395 | 97 | 450 | 305 | 6,44 | 1 X ISO-M20 | A |
| WFLP-2080B | 283 | 395 | 97 | 450 | 305 | 6,45 | 1 X ISO-M20 | A |
| WFLP-2081B | 283 | 395 | 97 | 450 | 305 | 6,51 | 1 X ISO-M20 | A |
| WFLP-2082B | 283 | 395 | 97 | 450 | 305 | 6,50 | 1 X ISO-M20 | A |
| WFLP-3120B | 283 | 395 | 97 | 450 | 305 | 6,34 | 1 X ISO-M20 | A |
| WFLP-3121B | 283 | 395 | 97 | 450 | 305 | 6,43 | 1 X ISO-M20 | A |
| WFLP-3122B | 283 | 395 | 97 | 450 | 305 | 6,42 | 1 X ISO-M20 | A |
| WFLP-4160B | 283 | 395 | 97 | 450 | 305 | 6,40 | 1 X ISO-M20 | A |
| WFLP-4161B | 283 | 395 | 97 | 450 | 305 | 6,52 | 1 X ISO-M20 | A |
| WFLP-4162B | 283 | 395 | 97 | 450 | 305 | 6,51 | 1 X ISO-M20 | A |



WFLP LED Installation and mounting details



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|-------------|------------------------|---------------|
| 923.503.002 | T Pole adapter Ø 60 mm | Painted steel |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Insulation Class: I



REFERENCE STANDARDS

CEI / EN

| | |
|---------------------------------|-----------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 (in accordance to IEC 60529) |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|-------------|---|
| Body | marine grade copper free aluminium |
| Diffuser | tempered front glass 4mm |
| Support | adjustable type 2mm thick shaped steel |
| Painting | external thermosetting polyester powder RAL-7039 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Cable entry | Dia. 20.5mm |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | 220-240Vac electronic driver 50/60 Hz - C/W surge protection 2/4KV |
| Lampholders | Samsung COB D-Gen3 - CRI>80 CCT 4000K Lifetime: 58.000 hours L80 B10 @ta 25, 50.000 hours L70 B50 @tamax |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |
| Optic | SM = without lens, maximum efficiency |



On Request Accessories:

- External painting colour on request
- Frosted diffuser glass
- CCT 3000/5700/6500 K
- DALI dimmable driver
- GORE® protective vents system

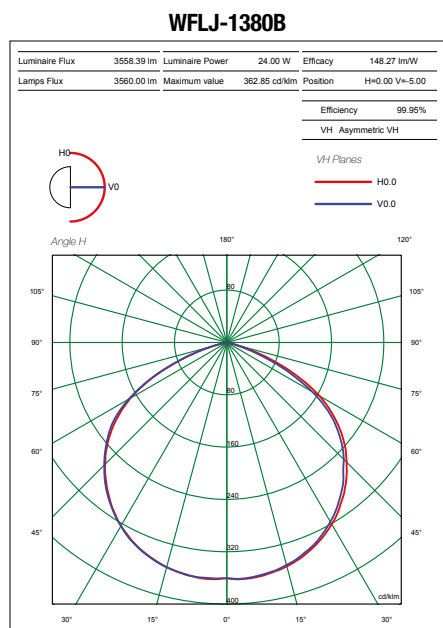
Technical data

| CODE | POWER LAMP | WIRING | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | OUTPUT TYPICAL (lm) | OUTPUT NET (lm) | CABLE ENTRY SIZE | DETAIL |
|---|------------|--------|---------------------------|-----------------------------|---------------------|-----------------|------------------|--------|
| FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz | | | | | | | | |
| WFLJ-1150B | 12 W | 1 LED | - | - | 2210 | 1965 | 1 X ISO-M20 | A |
| WFLJ-1300B | 17,5 W | | | | 3040 | 2705 | | |
| WFLJ-1380B | 24,5 W | | | | 4000 | 3560 | | |
| WFLJ-1440B | 32 W | | | | 5000 | 4450 | | |
| WFLJ-1460B | 37 W | | | | 6520 | 5800 | | |

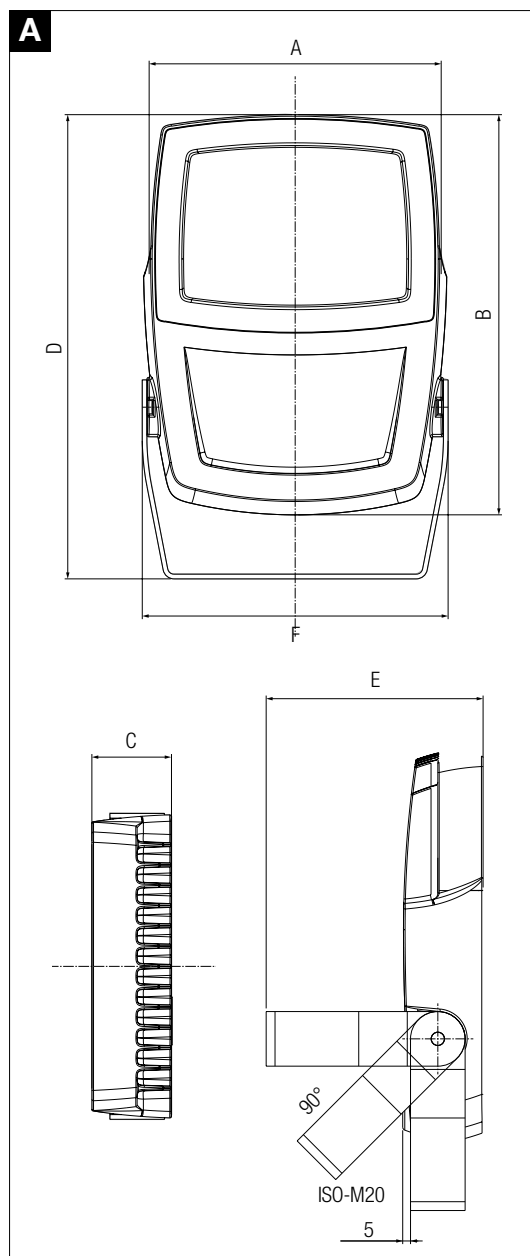
Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|------------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|
| WFLJ-1150B | 187 | 256 | 51 | 297 | 139 | 196 | 2,70 | 1 X ISO-M20 | A |
| WFLJ-1300B | 187 | 256 | 51 | 297 | 139 | 196 | 2,79 | 1 X ISO-M20 | A |
| WFLJ-1380B | 187 | 256 | 51 | 297 | 139 | 196 | 2,81 | 1 X ISO-M20 | A |
| WFLJ-1440B | 187 | 256 | 51 | 297 | 139 | 196 | 2,83 | 1 X ISO-M20 | A |
| WFLJ-1460B | 187 | 256 | 51 | 297 | 139 | 196 | 2,87 | 1 X ISO-M20 | A |

WFLJ LED Installation and mounting details



Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 2 (Gases) - Zone 22 (Dusts)
Classification: Group II - Category 3G 3D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 3 G Ex nR IIC T3/T4 Gc ⊗ II 3 D Ex tc IIIC T200°C/T135°C Dc |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-15; EN/IEC 60079-31 |
| EC Type-Examination Certificate | IMQ 11 ATEX 004X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | RUSSIAN MARINE CERTIFICATE (RMRS): 19.02547.280 INMETRO: CEPEL 14.2312X |

Mechanical characteristics

| | |
|----------|---|
| Body | marine grade copper free aluminium (control gear & lamp body) |
| Globe | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | conventional ballast 230v - 50hz (p.f.corrected - cos p ≥ 0,95) |
| Lampholders | porcelain E27/E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |

On Request Accessories:

- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Pole mounting 25° kit 1 1/2" dia. complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Galvanized steel wire protection guard
- Stainless steel wire protection guard
- White stove enamelled aluminium reflectors
- White stove enamelled aluminium reflectors inclined 30°
- Stainless steel AISI 316L reflectors
- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard



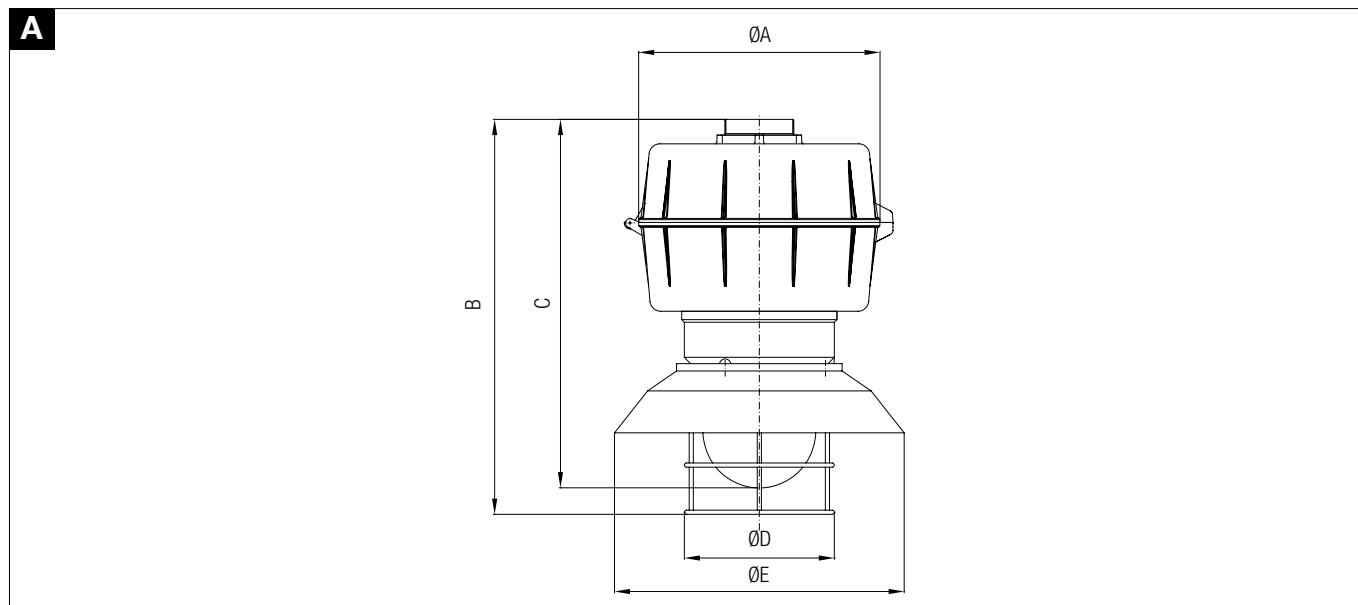
Technical data

| CODE | TYPE LAMP | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | DETAIL |
|--|-----------|-------------------------|---------------------------|-----------------|--------|
| LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EWNR2-80HG | 80 W | T4 | T 135°C | E-27 | A |
| EWNR2-125HG | 125 W | T3 | T 200°C | E-27 | A |
| EWNR3-250HG | 250W | T4 | T 135°C | E-40 | A |
| EWNR5-400HG | 400 W | T3 | T 200°C | E-40 | A |
| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EWNR2-70MH | 70 W | T4 | T 135°C | E-27 | A |
| EWNR2-100MH | 100 W | T4 | T 135°C | E-27 | A |
| EWNR2-150MH | 150 W | T3 | T 200°C | E-27 | A |
| EWNR3-175MH | 175 W | T3 | T 200°C | E-40 | A |
| EWNR3-250MH | 250 W | T3 | T 200°C | E-40 | A |
| EWNR5-400MH | 400 W | T3 | T 200°C | E-40 | A |
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EWNR2-70NA | 70 W | T4 | T 135°C | E-27 | A |
| EWNR3-100NA | 100 W | T4 | T 135°C | E-40 | A |
| EWNR3-150NA | 150 W | T3 | T 200°C | E-40 | A |
| EWNR3-250NA | 250 W | T3 | T 200°C | E-40 | A |
| EWNR5-400NA | 400 W | T3 | T 200°C | E-40 | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | Ø D [mm] | Ø E [mm] | WEIGHT [Kg] | DETAIL |
|-------|--------|--------|--------|----------|----------|-------------|--------|
| EWNR2 | 280 | 430 | 415 | 145 | 280 | 8,5 | A |
| EWNR3 | 280 | 510 | 480 | 190 | 402 | 9,5 | A |
| EWNR5 | 280 | 570 | 545 | 255 | 515 | 10 | A |

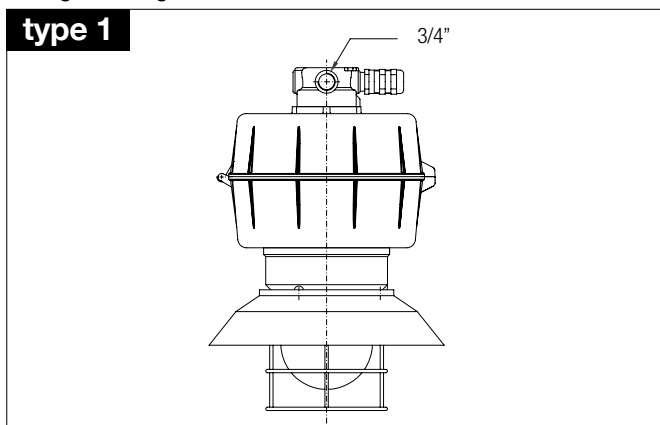
Reference details





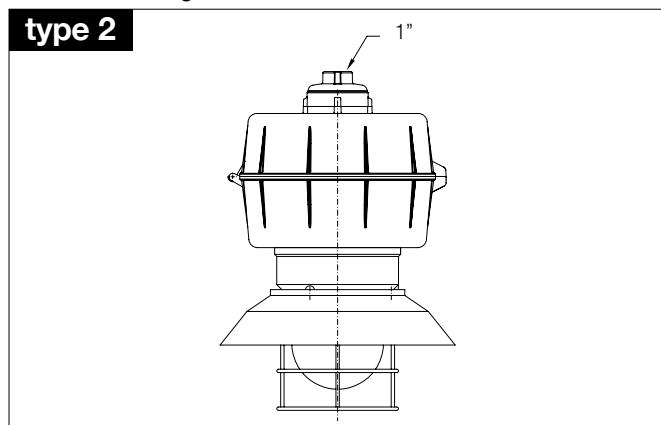
Ceiling mounting

type 1



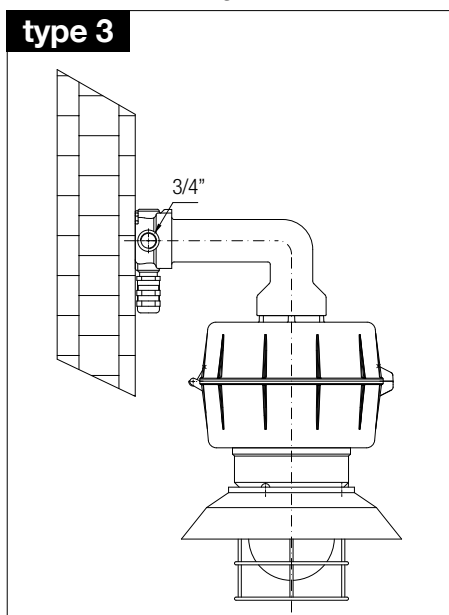
Pendant mounting

type 2



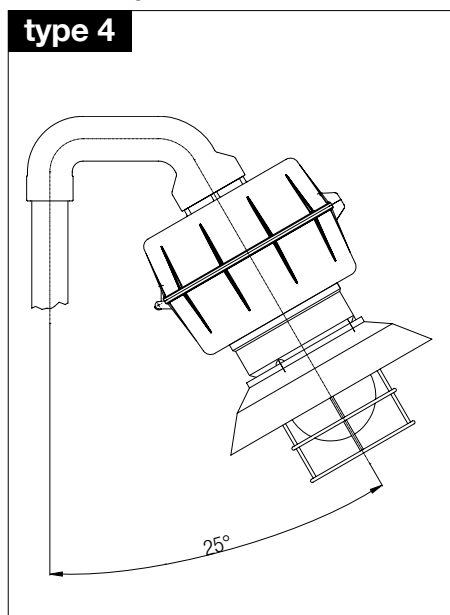
Wall/structure mounting

type 3



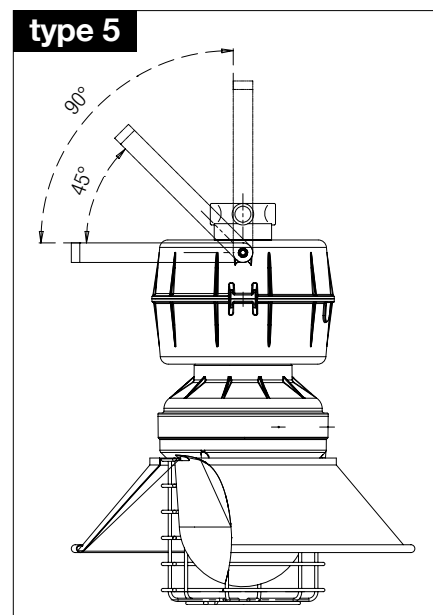
Pole mounting 25°

type 4



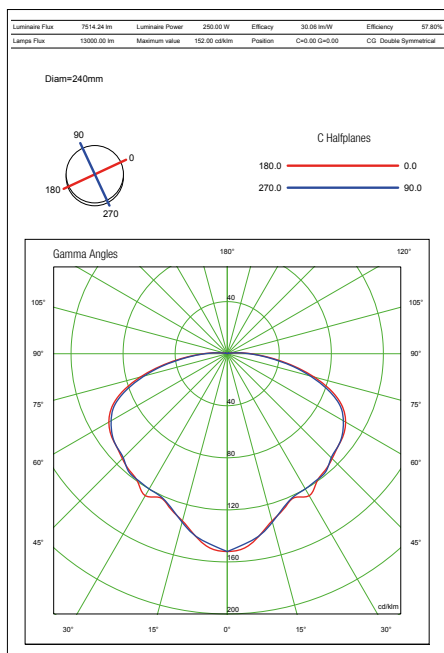
Universal mounting inst. with adjustable bracket

type 5

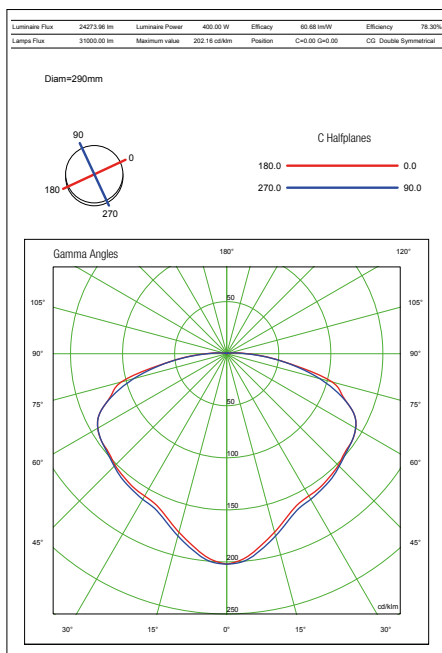


EWNR Polar diagrams - photometric data

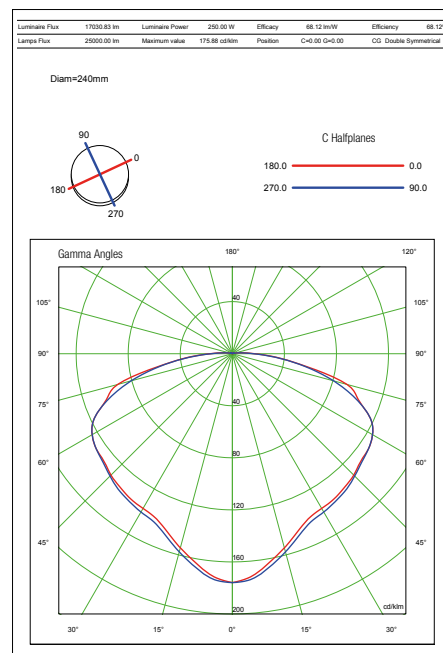
EWNR3-250HG



EWNR5-400MH



EWNR3-250NA



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|--------------|---|--------------|-----------------------------|
| D200 | EVAC 200 / 201 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D300 | EVAC 300 / 301 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D500 | EVAC 500 / 501 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D200X | EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D300X | EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D500X | EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D200/45 | EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| D300/45 | EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| D500/45 | EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| G200G | EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G300G | EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G500G | EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G200X | EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| G300X | EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| G300X | EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| KITEWNRTYPE1 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | ALUMINIUM |
| KITEWNRTYPE2 | PENDANT MOUNTING KIT | TYPE 2 | ALUMINIUM |
| KITEWNRTYPE3 | WALL / STRUCTURE MOUNTING KIT | TYPE 3 | ALUMINIUM |
| KITEWNRTYPE4 | 2" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMINIUM |
| KITEWNRTYPE4 | 1-1/2" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMINIUM |
| KITEWNRTYPE4 | 1" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMINIUM |
| KITEWNRTYPE5 | UNIVERSAL MOUNTING INST. WITH ADJUSTABLE BRACKET C/W HARDWARE | TYPE 5 | STAINLESS STEEL AISI 316L |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area
Insulation Class: I


LIGHTING FIXTURE

| | CEI / EN |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -40°C ÷ +60°C |

Mechanical characteristics

| | |
|----------|---|
| Body | marine grade copper free aluminium (control gear & lamp body) |
| Globe | high-temperature resistant borosilicate glass |
| Painting | external epoxy powders grey RAL-9006 colour |
| Screws | external stainless steel |
| Gaskets | silicon rubber |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | conventional ballast 230v - 50hz (p.f.corrected - $\cos \rho \geq 0,95$) |
| Lampholders | porcelain e27/e40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4 sq/mm cables |

On Request Accessories:

- Ceiling mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Pole mounting 25° kit 1 1/2" dia. complete with stainless steel hardware
- Wall/Structure mounting kit complete with stainless steel hardware
- Galvanized steel wire protection guard
- Stainless steel wire protection guard
- White stove enamelled aluminium reflectors Ceiling mounting kit complete with stainless steel hardware
- White stove enamelled aluminium reflectors
- White stove enamelled aluminium reflectors inclined 30°
- Stainless steel AISI 316L reflectors
- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard



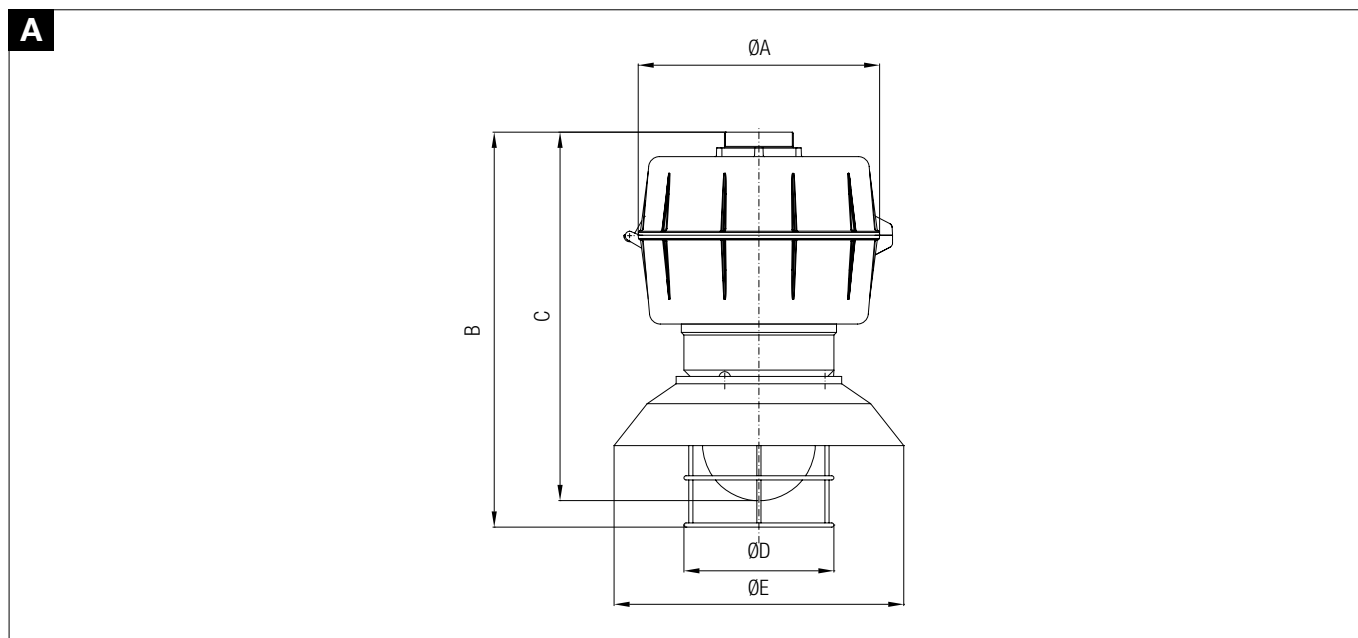
Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | DETAIL |
|--|-----------|-------------------------|---------------------------|-----------------|--------|
| LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EW2-80HG | 80 W | - | - | E-27 | A |
| EW2-125HG | 125 W | - | - | E-27 | A |
| EW3-250HG | 250W | - | - | E-40 | A |
| EW5-400HG | 400 W | - | - | E-40 | A |
| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EW2-70MH | 70 W | - | - | E-27 | A |
| EW2-100MH | 100 W | - | - | E-27 | A |
| EW2-150MH | 150 W | - | - | E-27 | A |
| EW3-175MH | 175 W | - | - | E-40 | A |
| EW3-250MH | 250 W | - | - | E-40 | A |
| EW5-400MH | 400 W | - | - | E-40 | A |
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| EW2-70NA | 70 W | - | - | E-27 | A |
| EW3-100NA | 100 W | - | - | E-40 | A |
| EW3-150NA | 150 W | - | - | E-40 | A |
| EW3-250NA | 250 W | - | - | E-40 | A |
| EW5-400NA | 400 W | - | - | E-40 | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | Ø D [mm] | Ø E [mm] | WEIGHT [Kg] | DETAIL |
|------|--------|--------|--------|----------|----------|-------------|--------|
| EW2 | 280 | 430 | 415 | 145 | 280 | 8,5 | A |
| EW3 | 280 | 510 | 480 | 190 | 402 | 9,5 | A |
| EW5 | 280 | 570 | 545 | 255 | 515 | 10 | A |

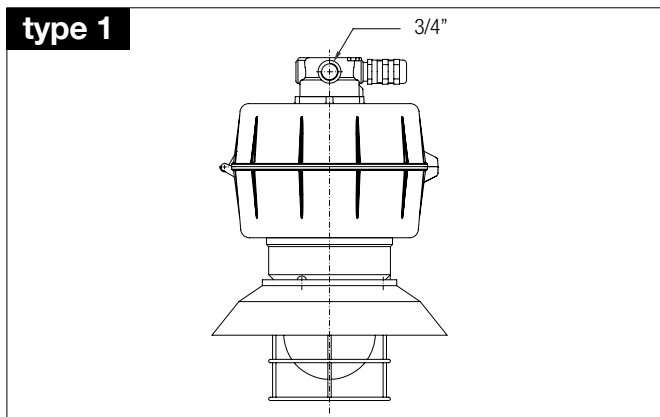
Reference details





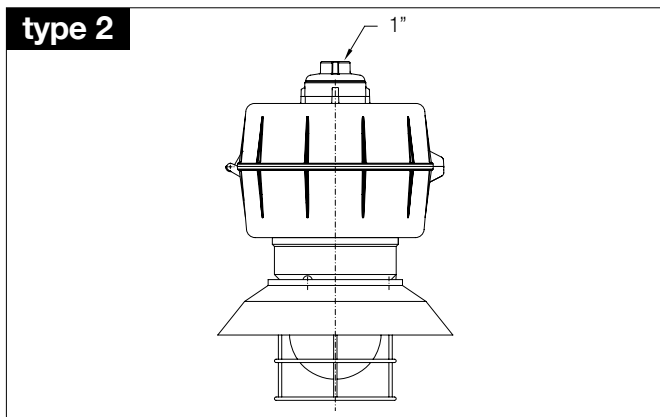
Ceiling mounting

type 1



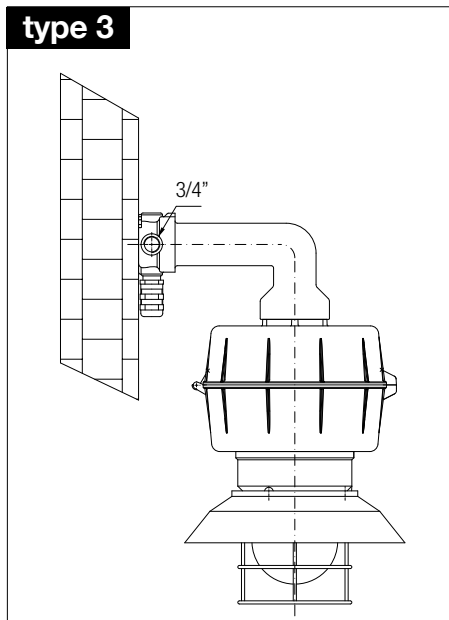
Pendant mounting

type 2



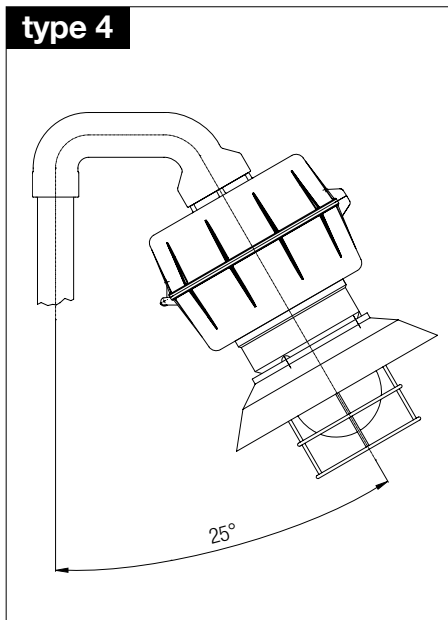
Wall/structure mounting

type 3



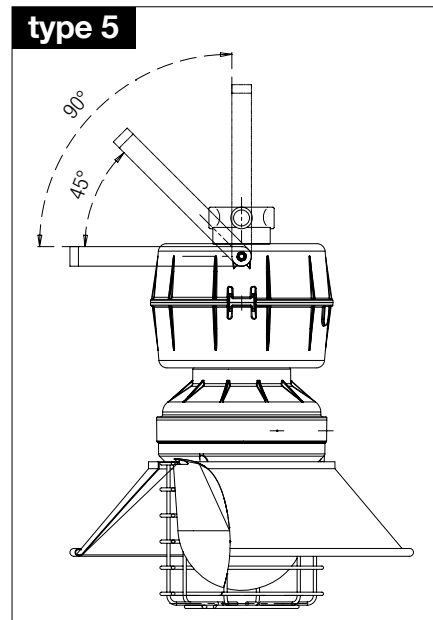
Pole mounting 25°

type 4



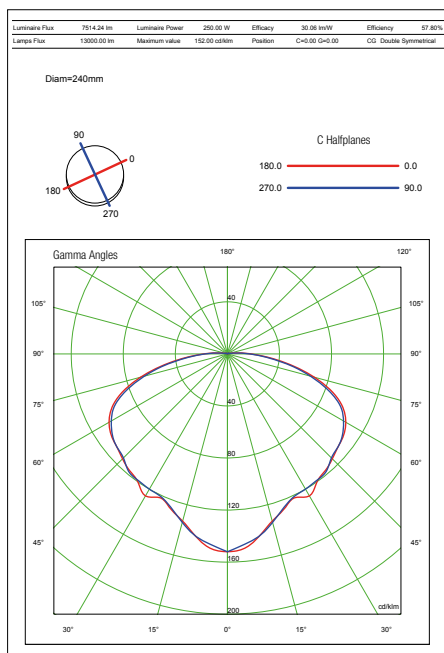
Universal mounting inst. with adjustable bracket

type 5

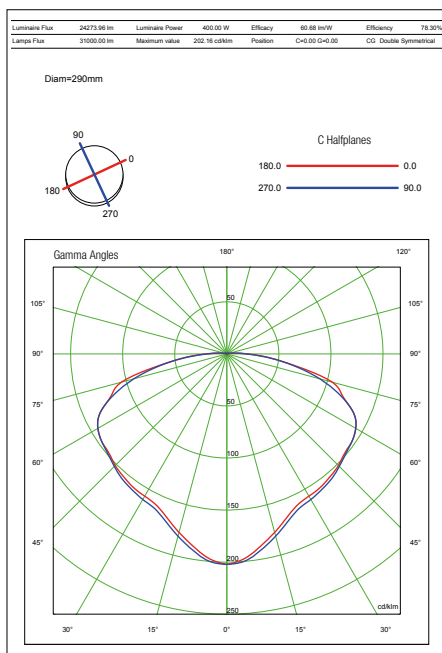


EW Polar diagrams - photometric data

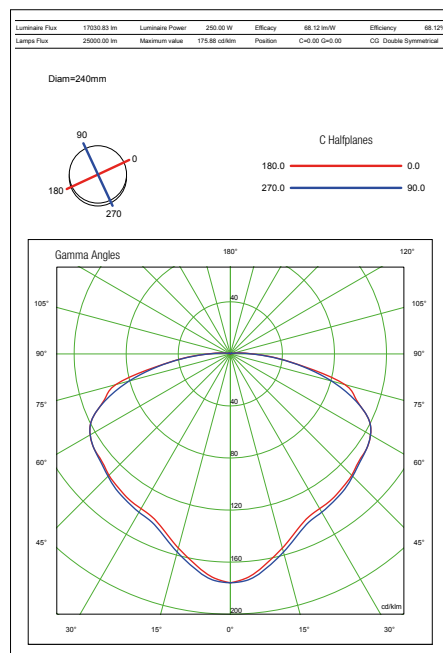
EW3-250HG



EW5-400MH



EW3-250NA



On request accessories

| CODE | DESCRIPTION | INSTALLATION | MATERIAL |
|--------------|---|--------------|-----------------------------|
| D200 | EVAC 200 / 201 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D300 | EVAC 300 / 301 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D500 | EVAC 500 / 501 SIZE STANDARD REFLECTOR | | WHITE STOVE ENAMELLED ALUM. |
| D200X | EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D300X | EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D500X | EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR | | STAINLESS STEEL AISI 316L |
| D200/45 | EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| D200/45 | EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| D200/45 | EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR INCLINED 45° | | WHITE STOVE ENAMELLED ALUM. |
| G200G | EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G300G | EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G500G | EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD | | GALVANIZED STEEL |
| G200X | EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| G300X | EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| G500X | EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD | | STAINLESS STEEL AISI 316L |
| KITEWNRTYPE1 | CEILING MOUNTING KIT C/W HARDWARE | TYPE 1 | ALUMININIUM |
| KITEWNRTYPE2 | PENDANT MOUNTING KIT | TYPE 2 | ALUMININIUM |
| KITEWNRTYPE4 | WALL / STRUCTURE MOUNTING KIT | TYPE 3 | ALUMININIUM |
| KITEWNRTYPE4 | 2" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMININIUM |
| KITEWNRTYPE4 | 1-1/2" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMININIUM |
| KITEWNRTYPE4 | 1" DIA.SIZE POLE MONTING KIT C/W HARDWARE | TYPE 4 | ALUMININIUM |
| KITEWNRTYPE5 | UNIVERSAL MOUNTING INST. WITH ADJUSTABLE BRACKET C/W HARDWARE | TYPE 5 | STAINLESS STEEL AISI 316L |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area
Insulation Class: I



LIGHTING FIXTURE

| | CEI / EN |
|---------------------------------|---|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1; EN 60598-2-3 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|------------------|--|
| Body | die casting aluminium |
| Wiring plate | reinforced nylon |
| Painting | thermosetting polyester powder (grey RAL-7039) |
| Protection glass | Tempered 4mm |
| Fixing holder | Suitable for ø60mm poles - adapter is required for ø42mm poles |

Electrical characteristics

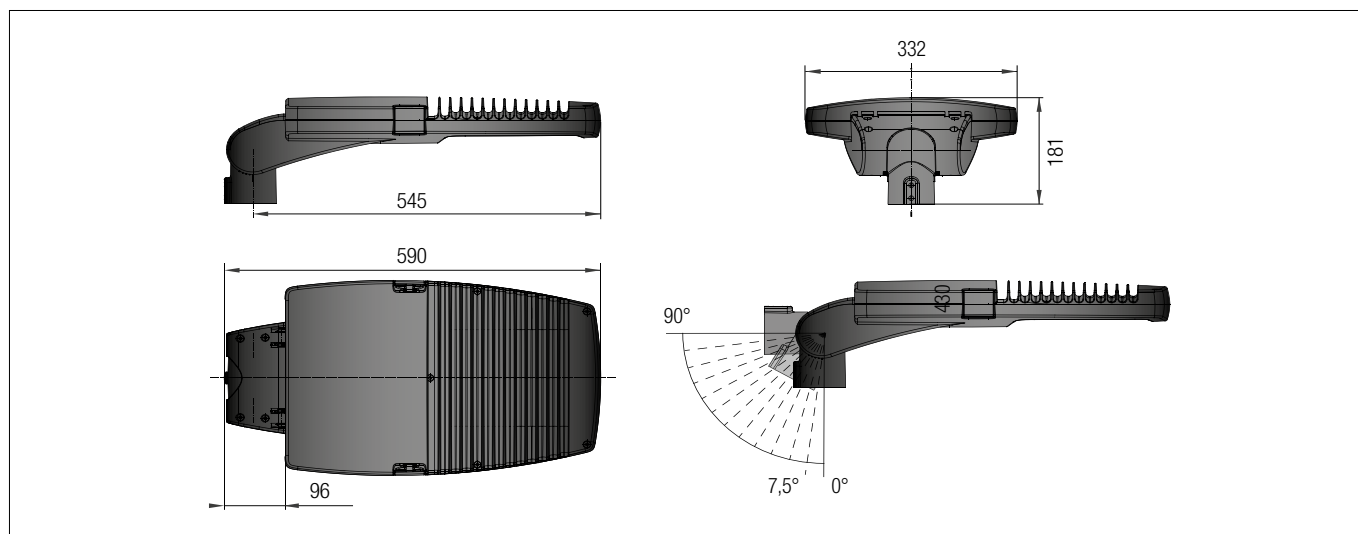
| | |
|-----------------|---|
| Power supply | electronic ballast 220 - 240 V 50/60 Hz, surge protection 6/8KV, NTC thermal sensor |
| Lamp type | Samsung LH 181B - CRI>80 CCT 4000K Lifetime: 80.000 hours L80 B10 @ta 25, 50.000 hours L80 B10 @tamax 30 deg vertex secondary lenses |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |



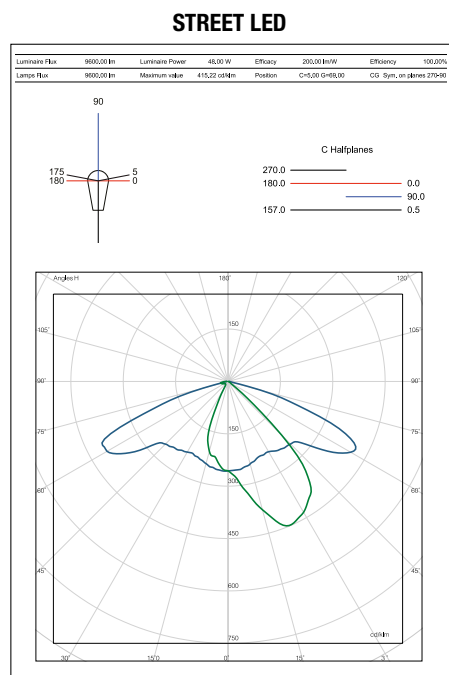
Technical data

| CODE | LED UNITS & POWER | NOMINAL OUTPUT | NET OUTPUT | weight [kg] | DETAIL |
|---|-------------------|----------------|------------|-------------|--------|
| LED LIGHTING FIXTURES - POWER SUPPLY 230V-50Hz | | | | | |
| CLC_STREET-LED-32 | 16 led - 35W | 5200 lm | 4475 lm | 8.97 | A |
| CLC_STREET-LED-64 | 32 led - 70W | 10400 lm | 8950 lm | 9.77 | A |
| CLC_STREET-LED-96 | 48 led - 105W | 15600 lm | 13420 lm | 9.77 | A |
| CLC_STREET-LED-128 | 64 led - 140W | 20800 lm | 17900 lm | 9.89 | A |

Reference details



STREET LED Polar diagrams – photometric data





Installation: Safe Area
Insulation Class: I



LIGHTING FIXTURE

| | CEI / EN |
|---------------------------------|---|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1; EN 60598-2-3 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|-------------|--|
| Body | die-cast aluminum |
| Diffuser | tempered glass 4mm thickness |
| Anchorage | cured poles Ø45-60mm (Ø40 with adapter) |
| Reflector | CUT-OFF optic - anodized and polished 99,85 pure aluminum |
| Painting | thermosetting polyester powder resistant to atmospheric agents and corrosion grey RAL 7038/7039 colour |
| Screws | stainless steel |
| Gaskets | silicon rubber gasket running around the body |
| Cable entry | from pole |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | conventional ballast 230V - 50Hz (P.F. CORRECTED - $\cos \rho \geq 0,95$) |
| Lampholders | porcelain E27 - E40 size |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

- Electronic ballast with voltage supply different than standard
- Insulation class II
- Angle/wall installation bracket
- Pole adapter - dia. 40 mm

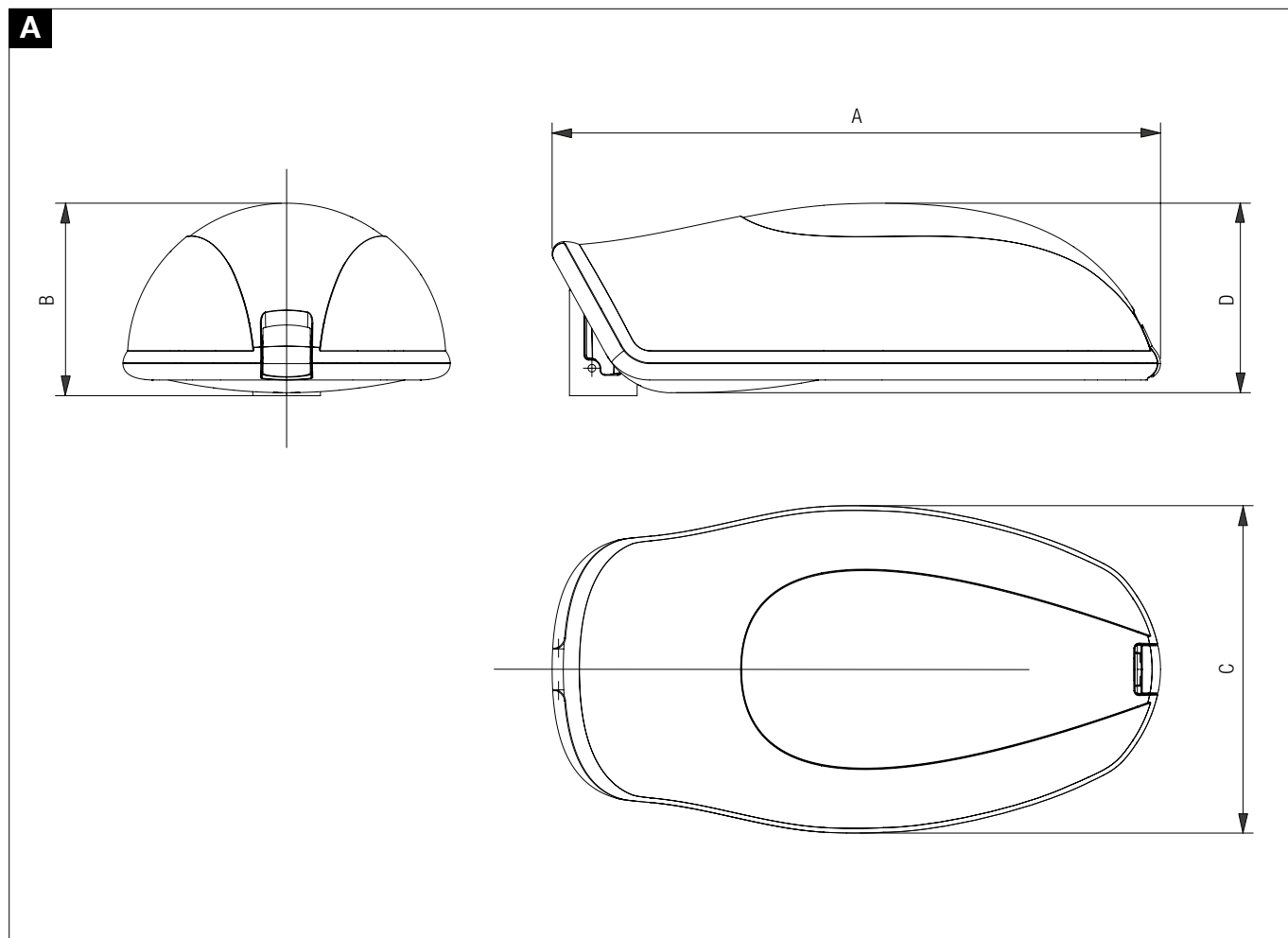
Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER SIZE | DETAIL |
|--|-----------|-------------------------|---------------------------|-----------------|--------|
| LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| AVANTGARDE PLUS-125HG | 125 W | - | - | E-27 | A |
| AVANTGARDE PLUS-250HG | 250 W | - | - | E-40 | A |
| AVANTGARDE XL-400HG | 400 W | - | - | E-40 | A |
| LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| AVANTGARDE PLUS-70MH | 70 W | - | - | E-27 | A |
| AVANTGARDE PLUS-100MH | 100 W | - | - | E-27 | A |
| AVANTGARDE PLUS-150MH | 150 W | - | - | E-27 | A |
| AVANTGARDE PLUS-250MH | 250 W | - | - | E-40 | A |
| AVANTGARDE XL-400MH | 400 W | - | - | E-40 | A |
| LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz | | | | | |
| AVANTGARDE PLUS-70NA | 70 W | - | - | E-27 | A |
| AVANTGARDE PLUS-100NA | 100 W | - | - | E-40 | A |
| AVANTGARDE PLUS-150NA | 150 W | - | - | E-40 | A |
| AVANTGARDE PLUS-250NA | 250 W | - | - | E-40 | A |
| AVANTGARDE XL-400NA | 400 W | - | - | E-40 | A |

M400 Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | DETAIL |
|-----------------------|--------|--------|--------|--------|-------------|--------|
| AVANTGARDE PLUS-125HG | 719 | 228 | 387 | 224 | 10,2 | A |
| AVANTGARDE PLUS-250HG | 719 | 228 | 387 | 224 | 11,5 | A |
| AVANTGARDE XL-400HG | 719 | 228 | 387 | 224 | 12,9 | A |
| AVANTGARDE PLUS-70MH | 719 | 228 | 387 | 224 | 10,4 | A |
| AVANTGARDE PLUS-100MH | 719 | 228 | 387 | 224 | 10,4 | A |
| AVANTGARDE PLUS-150MH | 719 | 228 | 387 | 224 | 11,7 | A |
| AVANTGARDE PLUS-250MH | 719 | 228 | 387 | 224 | 11,7 | A |
| AVANTGARDE XL-400MH | 719 | 228 | 387 | 224 | 13 | A |
| AVANTGARDE PLUS-70NA | 719 | 228 | 387 | 224 | 10,5 | A |
| AVANTGARDE PLUS-100NA | 719 | 228 | 387 | 224 | 10,5 | A |
| AVANTGARDE PLUS-150NA | 719 | 228 | 387 | 224 | 11,7 | A |
| AVANTGARDE PLUS-250NA | 719 | 228 | 387 | 224 | 13 | A |
| AVANTGARDE XL-400NA | 719 | 228 | 387 | 224 | 14,3 | A |

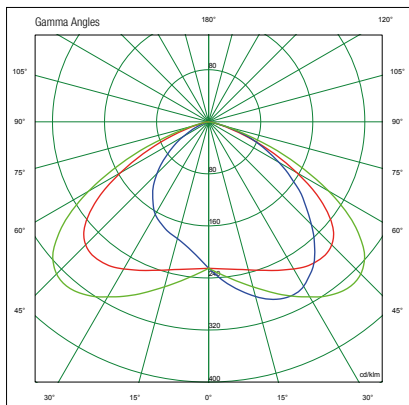
Reference details



AVANTGARDE Polar diagrams - photometric data

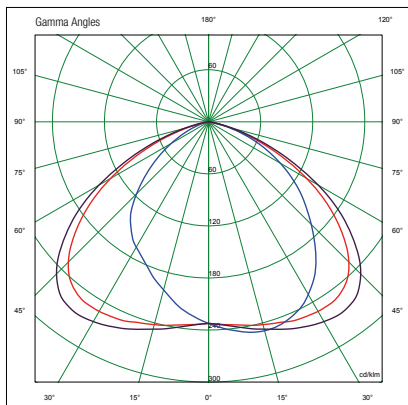
AVANTGARDE PLUS-250HG

| | | | | | | | |
|----------------|-------------|-----------------|---------------|----------|-----------------|------------|------------------|
| Luminaire Flux | 10185.50 lm | Luminaire Power | 250.00 W | Efficacy | 40.74 lm/W | Efficiency | 76.30% |
| Lamp Flux | 13000.00 lm | Maximum value | 353.80 cd/klm | Position | C=50.00 O=42.50 | CG Sym. | on planes 270.00 |



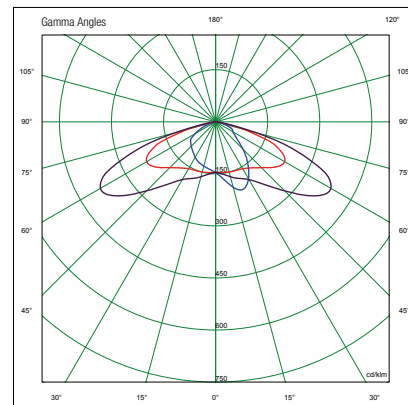
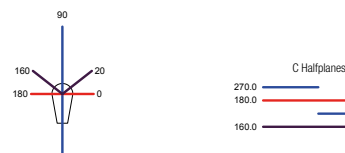
AVANTGARDE XL-400HG

| | | | | | | | |
|----------------|-------------|-----------------|---------------|----------|-----------------|------------|------------------|
| Luminaire Flux | 14984.50 lm | Luminaire Power | 400.00 W | Efficacy | 37.46 lm/W | Efficiency | 68.11% |
| Lamp Flux | 22000.00 lm | Maximum value | 268.38 cd/klm | Position | C=50.00 O=35.00 | CG Sym. | on planes 270.00 |

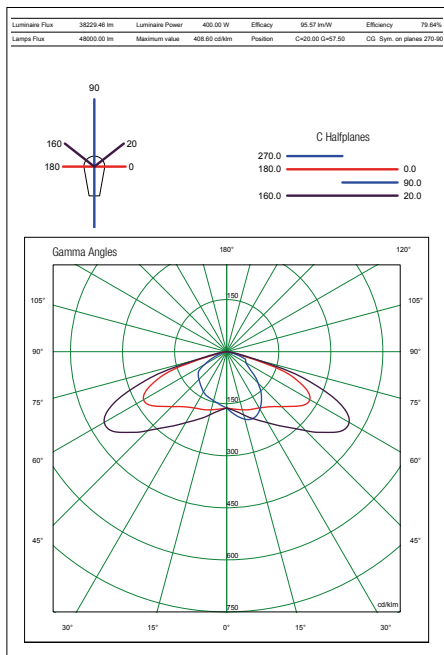


AVANTGARDE-250NA

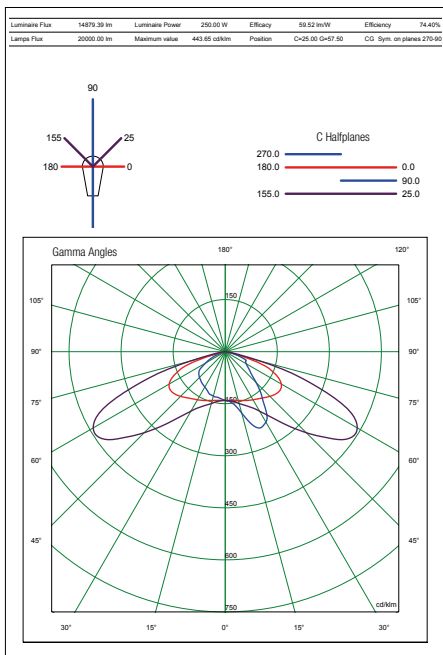
| | | | | | | | |
|----------------|-------------|-----------------|---------------|----------|-----------------|------------|------------------|
| Luminaire Flux | 18117.34 lm | Luminaire Power | 250.00 W | Efficacy | 76.47 lm/W | Efficiency | 70.80% |
| Lamp Flux | 27000.00 lm | Maximum value | 383.23 cd/klm | Position | C=30.00 O=40.00 | CG Sym. | on planes 270.00 |



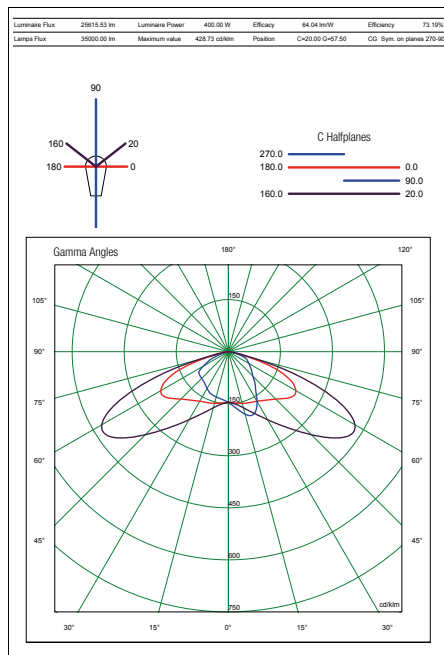
AVANTGARDE XL-400NA



AVANTGARDEPLUS-250MH



AVANTGARDE XL-400MH



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|-----------|---------------------------------|---------------|
| 950000000 | ANGLE/WALL INSTALLATION BRACKET | PAINTED STEEL |
| 950000003 | POLE ADAPTER - DIA. 40÷60MM | ALUMINIUM |
| 950000005 | POLE ADAPTER - DIA. 76 MM | PAINTED STEEL |

Angle/wall installation bracket

950000000



Pole adapter - dia. 40 mm

950000003



Pole adapter - dia. 76 mm

950000005



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Classification: I



LIGHTING FIXTURES

CEI / IEC

| | |
|---------------------------------|------------------|
| EXECUTION | INDOOR LIGHTING |
| RULES OF COMPLIANCE | EN 60598-1 + A1; |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP20 / IP40 |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|--------------|--|
| Body | sheet steel |
| Optical diff | transparent methacrilate diffuser - white painted metal sheet frame |
| Optical par | "Darklight" - preanodised 99.85 aluminium double parabolic with 4u oxidation layer antiglare and antiridescant |
| Painting | epoxy-polyester powder coated in white |
| Gasket | anti-age cellular structure |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | electronic ballast 220/240V 50/60Hz p.f. corrected (cos $\rho \geq 0,98$) |
| Lampholders | bi-pin G13 cap |
| Internal wiring | high temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

- Electronic ballast with voltage suppli different than standard
- Emergency unit with charger and battery pack
- Available with LED lamp

Technical data

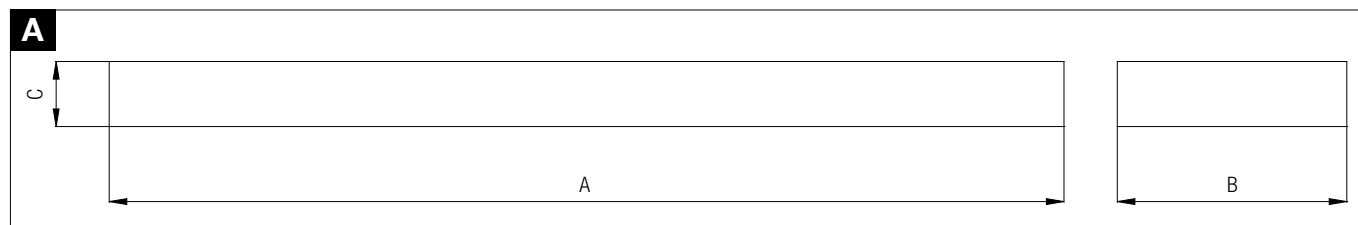
| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | CABLE ENTRY | DETAIL |
|--|-----------|-------------------------|---------------------------|------------|-------------------|--------|
| FLUORESCENT LIGHTING FIXTURES WITH DARKLIGHT OPTICAL - POWER SUPPLY 230V-50Hz | | | | | | |
| OFFICE-PAR-136 | 1 x 36W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-PAR-158 | 1 x 58W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-PAR-218 | 2 x 18W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-PAR-236 | 2 x 36W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-PAR-258 | 2 x 58W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-PAR-418 | 4 x 18W | - | - | G13 | CABLE GLAND Ø20mm | A |
| FLUORESCENT LIGHTING FIXTURES WITH METHACRILATE DIFFUSER - POWER SUPPLY 230V-50Hz | | | | | | |
| OFFICE-DIFF-218 | 2 x 18W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-DIFF-236 | 2 x 36W | - | - | G13 | CABLE GLAND Ø20mm | A |
| OFFICE-DIFF-418 | 4 x 18W | - | - | G13 | CABLE GLAND Ø20mm | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | FIXING [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|----------------|--------|--------|--------|-------------|-------------|-------------------|--------|
| OFFICE-(1)-136 | 1225 | 180 | 90 | 1023 x 90 | 3,8 | CABLE GLAND Ø20mm | A |
| OFFICE-(1)-158 | 1525 | 180 | 90 | 1323 x 90 | 4,9 | CABLE GLAND Ø20mm | A |
| OFFICE-(1)-218 | 618 | 306 | 90 | 414 x 130 | 3,3 | CABLE GLAND Ø20mm | A |
| OFFICE-(1)-236 | 1225 | 306 | 90 | 1023 x 130 | 6,2 | CABLE GLAND Ø20mm | A |
| OFFICE-(1)-258 | 1525 | 306 | 90 | 1323 x 130 | 8,0 | CABLE GLAND Ø20mm | A |
| OFFICE-(1)-418 | 618 | 610 | 90 | 414 x 496 | 5,7 | CABLE GLAND Ø20mm | A |

(1) OPTICAL / DIFFUSER: PAR = DARKLIGHT - DIFF= TRANSPARENT METHACRILATE

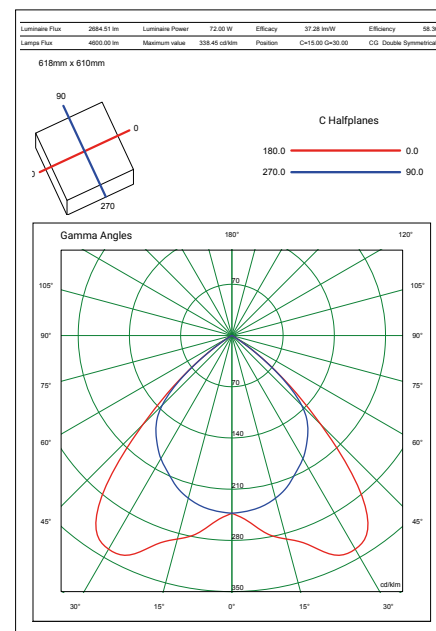
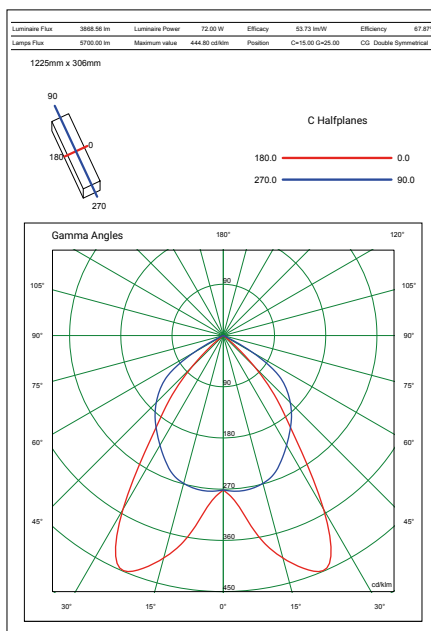
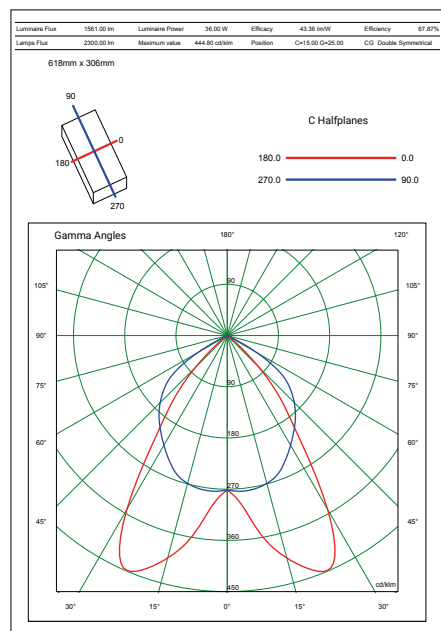
Reference details



OFFICE-PAR-218

OFFICE-PAR-236

OFFICE-PAR-418



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Classification: I



LIGHTING FIXTURES

| CEI / EN | |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-5 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP65 |
| AMBIENT TEMPERATURE | - |

Mechanical characteristics

| | |
|-------------|---|
| Housing | die-casting aluminium complete with stainless steel safety chains |
| Diffuser | plane tempered glass resistant to shocks and thermal shocks, coupled with stainless steel clips and secured with a security chain |
| Painting | thermosetting polyester powder resistant to atmospheric agents and corrosion |
| Reflector | anodized and polished 99,85 pure aluminum |
| Cable entry | cable gland M20 IP68 tear proof |

Electrical characteristics

| | |
|-----------------|---|
| Power supply | conventional ballast 230V - 50Hz p.f. corrected (cos $\rho \geq 0,95$) |
| Lampholders | ceramic E27 / E40 |
| Internal wiring | 1,5sq/mm silicon cables with glass sheath |



On Request Accessories:

- Galvanized steel wire protection guard
- Electronic device for aux halogen lamp
- Control gear with voltage supply different than standard

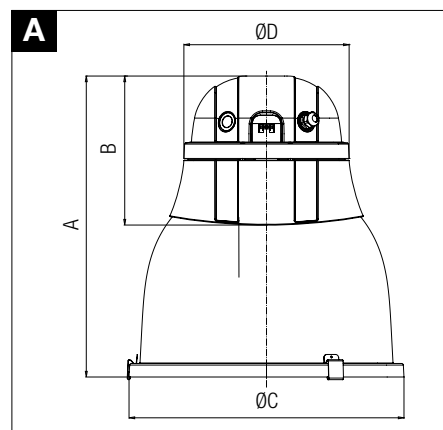
Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | CABLE GLAND | DETAIL |
|--|-----------|-------------------------|---------------------------|------------|-------------|--------|
| INDUSTRIAL REFLECTORS FOR MERCURY VAPOUR LAMPS - POWER SUPPLY 230V-50Hz | | | | | | |
| KRONOS-SAT125HG | 125 W | - | - | E-27 | M20 | A |
| KRONOS-SAT250HG | 250 W | - | - | E-40 | M20 | A |
| KRONOS-SAT400HG | 400 W | - | - | E-40 | M20 | A |
| INDUSTRIAL REFLECTORS FOR METAL HALIDE LAMPS - POWER SUPPLY 230V-50Hz | | | | | | |
| KRONOS-SAT150MH | 150 W | - | - | E-27 | M20 | A |
| KRONOS-SAT250MH | 250 W | - | - | E-40 | M20 | A |
| KRONOS-SAT400MH | 400 W | - | - | E-40 | M20 | A |
| INDUSTRIAL REFLECTORS FOR HIGH PRESSURE SODIUM LAMPS - POWER SUPPLY 230V-50Hz | | | | | | |
| KRONOS-SAT150NA | 150 W | - | - | E-40 | M20 | A |
| KRONOS-SAT250NA | 250 W | - | - | E-40 | M20 | A |
| KRONOS-SAT400NA | 400 W | - | - | E-40 | M20 | A |

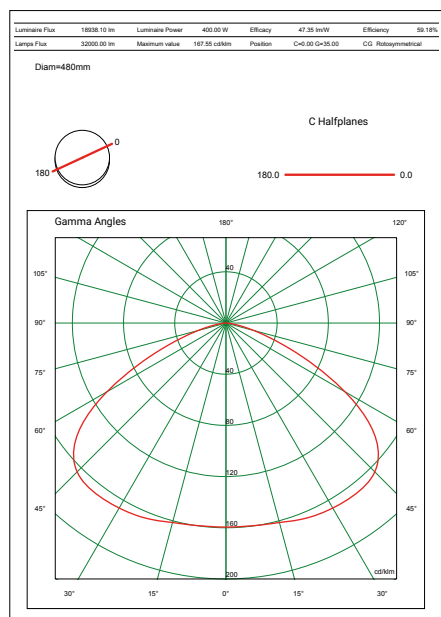
Technical features

| CODE | A [mm] | B [mm] | Ø C [mm] | Ø D [mm] | WEIGHT[Kg] | CABLE GLAND | DETAIL |
|-----------------|--------|--------|----------|----------|------------|-------------|--------|
| KRONOS-SAT125HG | 535 | 265 | 550 | 295 | 4,62 | M20 | A |
| KRONOS-SAT250HG | 535 | 265 | 550 | 295 | 5,03 | M20 | A |
| KRONOS-SAT400HG | 535 | 265 | 550 | 295 | 6,35 | M20 | A |
| KRONOS-SAT150MH | 535 | 265 | 550 | 295 | 5,22 | M20 | A |
| KRONOS-SAT250MH | 535 | 265 | 550 | 295 | 5,17 | M20 | A |
| KRONOS-SAT400MH | 535 | 265 | 550 | 295 | 6,50 | M20 | A |
| KRONOS-SAT150NA | 535 | 265 | 550 | 295 | 5,22 | M20 | A |
| KRONOS-SAT250NA | 535 | 265 | 550 | 295 | 6,57 | M20 | A |
| KRONOS-SAT400NA | 535 | 265 | 550 | 295 | 7,76 | M20 | A |

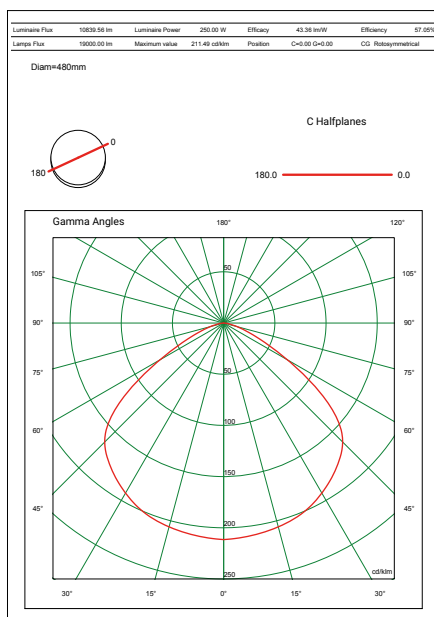
Reference details



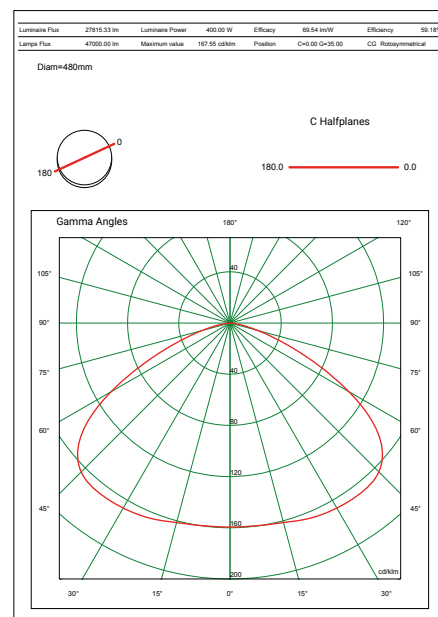
KRONOS-SAT400HG



KRONOS-SAT250NA



KRONOS-SAT400MH



On request accessories

| CODE | DESCRIPTION | MATERIAL |
|------------|--|------------------|
| 930000.480 | PROTECTION GRID Ø480 | GALVANIZED STEEL |
| CLA | ELECTRONIC SWITCHING DEVICE FOR AUXILIARY LAMP | - |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Classification: I



LIGHTING FIXTURES

CEI / EN

| | |
|---------------------------------|-------------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60598-1 + A1; EN 60598-2-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -40°C ÷ +70°C |

Mechanical characteristics

| | |
|---------------|---|
| Body & frame | stainless steel AISI-304 one piece deep drawn |
| Diffuser | transparent tempered flat glass 5mm thick. with silicon rubber gasket |
| Screws | stainless steel |
| Gaskets | EPDM rubber suitable for high temperatures and resistant to enviroments conditions |
| Reflector | internal in die-fold steel, epoxy powders white coloured coated equiped with security strings |
| Cable entry | PG 13,5 complete with poliamyde cable gland |
| Closing hooks | stainless steel with screw-held spring lock latches and anti-vandal device |

Electrical characteristics

| | |
|-----------------|--|
| Power supply | electronic ballast 230V - 50/60Hz p.f. corrected (cos $\rho \geq 0,98$) |
| Lampholders | bi-pin G13 cap |
| Internal wiring | high-temperature resistant silicon rubber insulation cables |
| Terminals | suitable up to 4sq/mm cables |



On Request Accessories:

- Pole mounting kit complete with stainless steel hardware
- Pendant mounting kit complete with stainless steel hardware
- Wall/structure mounting kit complete with stainless steel hardware
- Emergency unit complete with inverter charger and Ni-Cd 4,8V 4A/h battery pack
- Electronic ballast with voltage supply different than standard

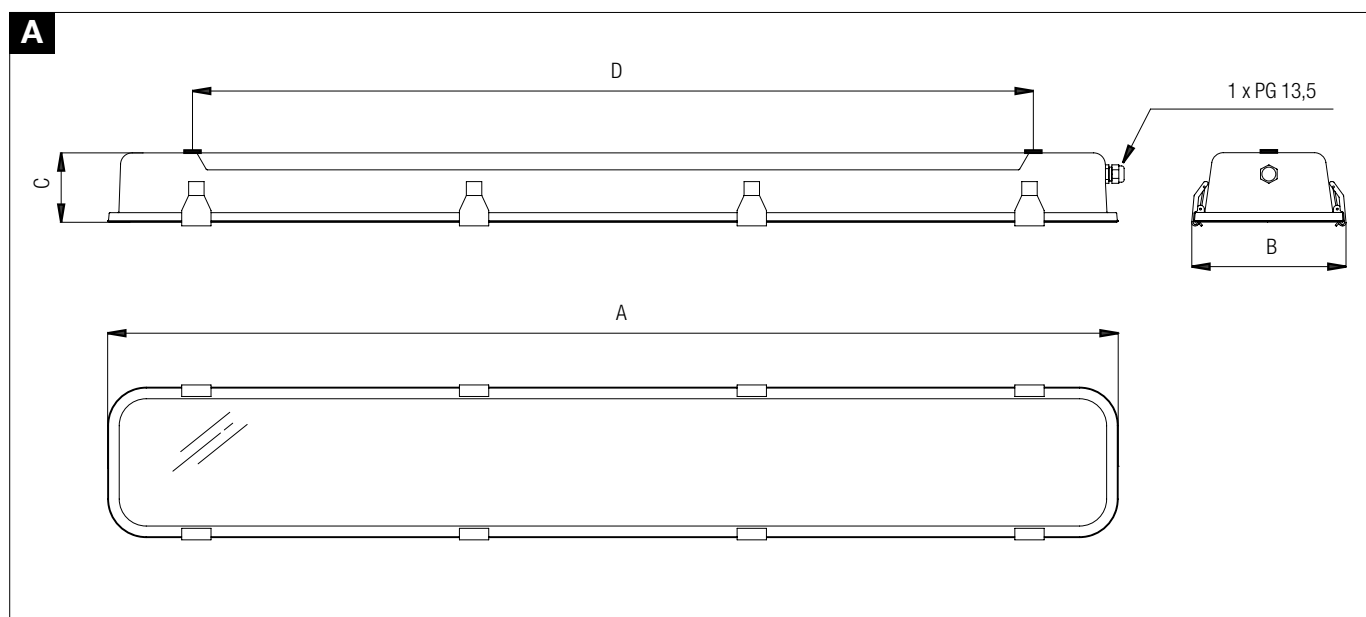
Technical data

| CODE | LAMP TYPE | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | LAMPHOLDER | CABLE ENTRY | EMERG.UNIT (ON REQUEST) | AUTONOMY (EMERG.UNIT) | DETAIL |
|--|-----------|-------------------------|---------------------------|------------|-------------|-------------------------|-----------------------|--------|
| FLUORESCENT LIGHTING FIXTURES FOR SINGLE, TWIN, AND THREE LAMPS - POWER SUPPLY 230V-50/60Hz | | | | | | | | |
| GENIUS118 | 1 x 18W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS136 | 1 x 36W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS158 | 1 x 58W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS218 | 1 x 18W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS236 | 2 x 36W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS258 | 2 x 58W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS318 | 3 x 18W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |
| GENIUS336 | 3 x 36W | - | - | G13 | 1 x PG 13.5 | 4,8V - 4A/h | 3h | A |

Technical features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | WEIGHT [Kg] | CABLE ENTRY | DETAIL |
|-----------|--------|--------|--------|--------|-------------|-------------|--------|
| GENIUS118 | 700 | 220 | 90 | 480 | 12,50 | 1 x PG 13,5 | A |
| GENIUS136 | 1310 | 220 | 90 | 1090 | 15,50 | 1 x PG 13,5 | A |
| GENIUS158 | 1610 | 220 | 90 | 1390 | 18,50 | 1 x PG 13,5 | A |
| GENIUS218 | 700 | 220 | 90 | 480 | 13,00 | 1 x PG 13,5 | A |
| GENIUS236 | 1310 | 220 | 90 | 1090 | 16,00 | 1 x PG 13,5 | A |
| GENIUS258 | 1610 | 220 | 90 | 1390 | 19,00 | 1 x PG 13,5 | A |
| GENIUS318 | 700 | 220 | 90 | 1090 | 13,50 | 1 x PG 13,5 | A |
| GENIUS336 | 1310 | 220 | 90 | 1390 | 16,50 | 1 x PG 13,5 | A |

Reference details



REMARK:

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Installation: hazardous areas - Zone 1/2 (Gases) - Zone 21/22 (Dusts) - Safe Area

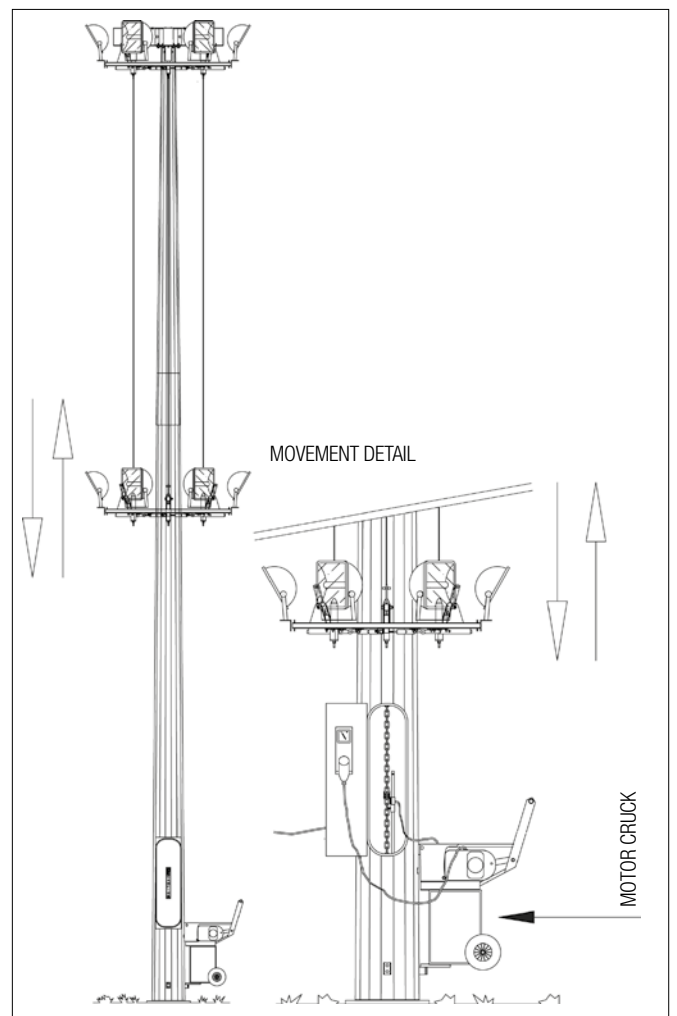


LIGHTING MASTS WITH MOBILE CROWN FOR EXPLOSION PROOF FLOODLIGHTS EEX D IIB T3 IP65

The utility of the high masts with mobile crown in lighting large areas, is universally recognised. It, in fact, represents the best answer either from the lighting environmental, maintenance point of view.

Lighting high masts undertakes an irreplaceable part in designing modern lighting plant of large areas, having the approval of engineers who consider more and more difficult to find personnel for carrying out maintenance, disposed to climb to a certain height. Furthermore, the possibility of lighting large areas (interchanges, parking areas etc....) with few lighting sources of considerable height, without particular maintenance costs, makes Nuova ASP high masts with mobile crown particularly profitable in the economy of the whole plant.. Our actual range, designed in standard elements suitable to guarantee maximum safety levels, with explosion proof floodlights for zone 1 and zone 2.

LIGHTING STUDY ON REQUEST



Installation: hazardous areas - Zone 1/2 (Gases) - Zone 21/22 (Dusts) - Safe Area



LIGHTING COLUMNS FOR EXPLOSION PROOF CONNECTION BOX, LIGHTING FIXTURES AND FLOODLIGHTS

Designed and manufactured according to national and European standard, Nuova ASP lighting columns, are manufactured in 3 different types:

- Conical columns with circular section
- Stepped columns from welded tubes
- Columns with octagonal and polygonal section

Normally provided with standard works for the electric wiring according to the standard, they may be personalised with particular works upon request. Furthermore a complete range of accessories such as brackets, cross arms, make them suitable to the most different needs. All columns are protected against corrosion by means of hot galvanisation.



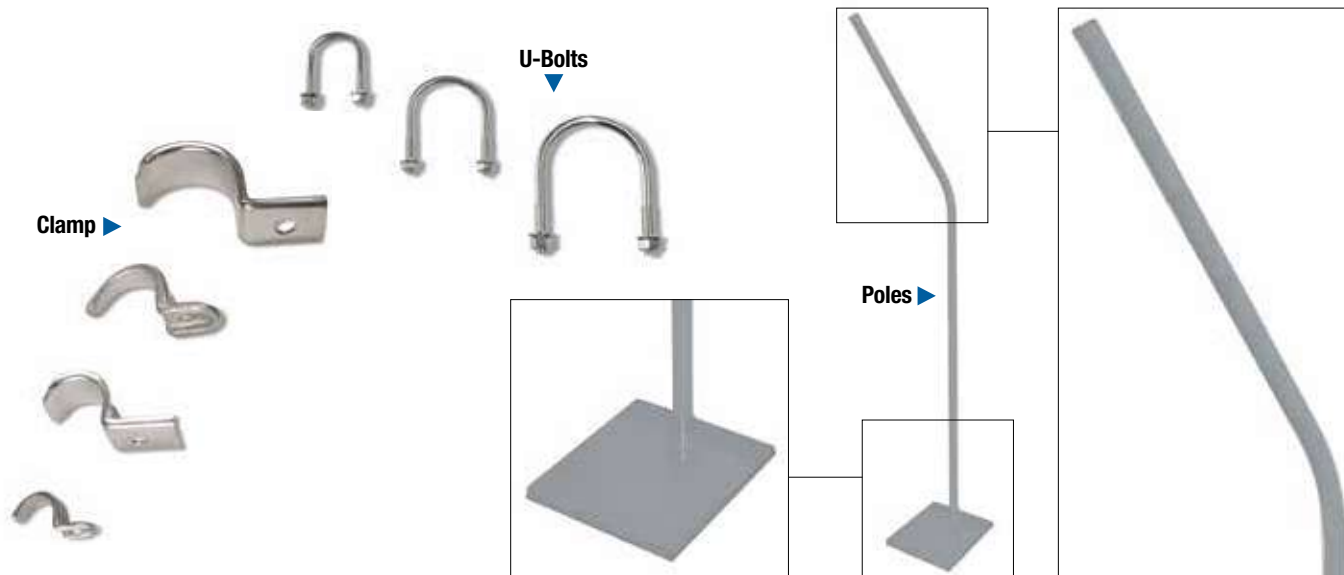
REMARK:

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Installation: hazardous areas - Zone 1 / 2 (Gases) Zone 21 / 22 (Dusts) - Safe Area

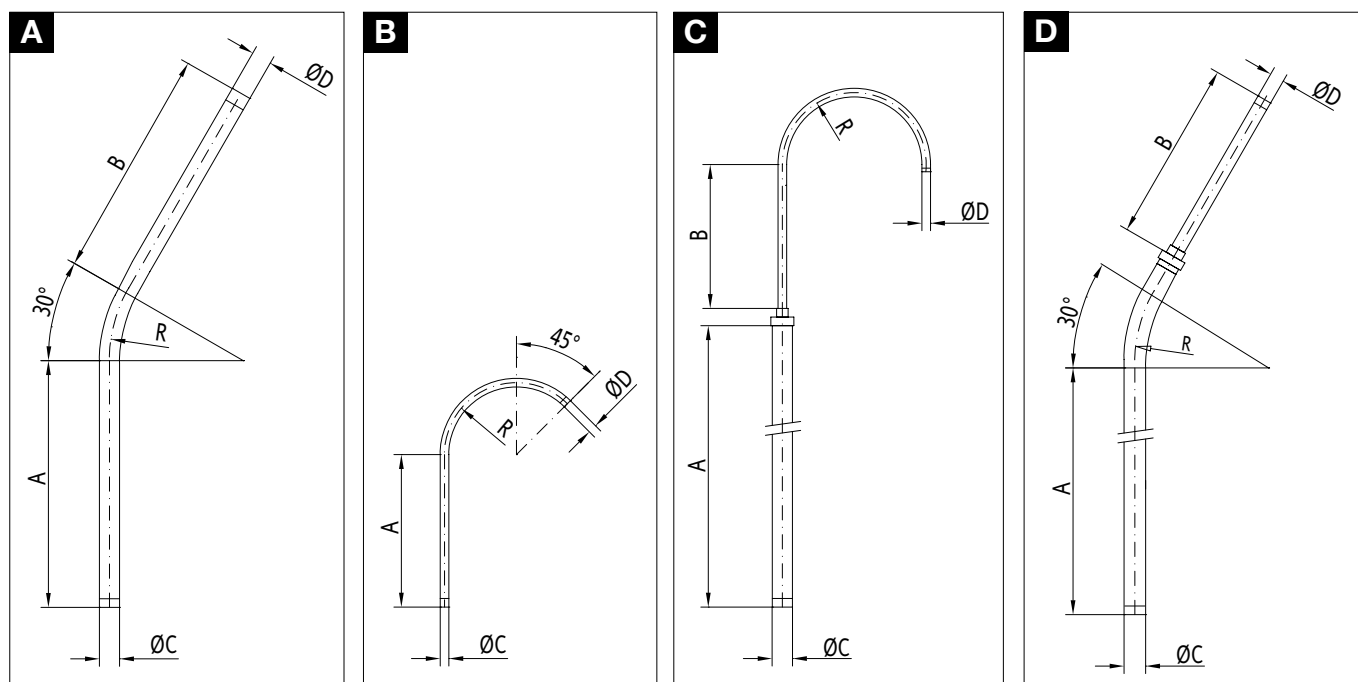


POLES Technical features

| CODE | A [mm] | B [mm] | Ø C [mm] | Ø D [mm] | R | MATERIAL | DETAIL |
|--------|--------|--------|----------|----------|-----|------------------|--------|
| PAL041 | 1900 | 1650 | 1-1/2" | - | 500 | GALVANIZED STEEL | A |
| PAL042 | 500 | 1650 | 1-1/2" | - | 500 | GALVANIZED STEEL | A |
| PAL855 | 2700 | 1650 | 2-1/2" | 1-1/2" | 500 | GALVANIZED STEEL | D |
| PAS043 | 700 | - | 1" | - | 250 | GALVANIZED STEEL | B |
| PAS856 | 3000 | 500 | 2-1/2" | 1" | 250 | GALVANIZED STEEL | C |
| PAS857 | 2000 | 700 | 1-1/2" | 1" | 250 | GALVANIZED STEEL | C |

Other poles are supplied according to customer's request
Materials: stainless steel on request

Reference details

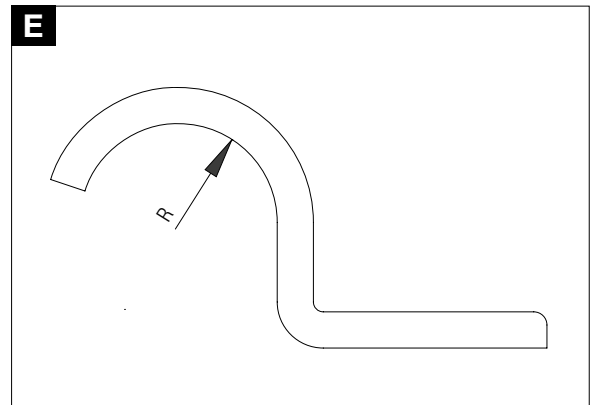


CLAMP Technical features

| CODE | Ø CONDUIT | R | MATERIAL | DETAIL |
|--------|-----------|------|------------------|--------|
| GF1A2 | 1/2" | 10 | GALVANIZED STEEL | E |
| GF2A2 | 3/4" | 12 | GALVANIZED STEEL | E |
| GF3A2 | 1" | 15 | GALVANIZED STEEL | E |
| GF4A2 | 1-1/4" | 20 | GALVANIZED STEEL | E |
| GF5A2 | 1-1/2" | 22,5 | GALVANIZED STEEL | E |
| GF6A2 | 2" | 27,5 | GALVANIZED STEEL | E |
| GF7AL | 2-1/2" | 35 | ALUMINUM | E |
| GF8AL | 3" | 45 | ALUMINUM | E |
| GF10AL | 4" | 60 | ALUMINUM | E |

Materials: stainless steel on request

Reference details



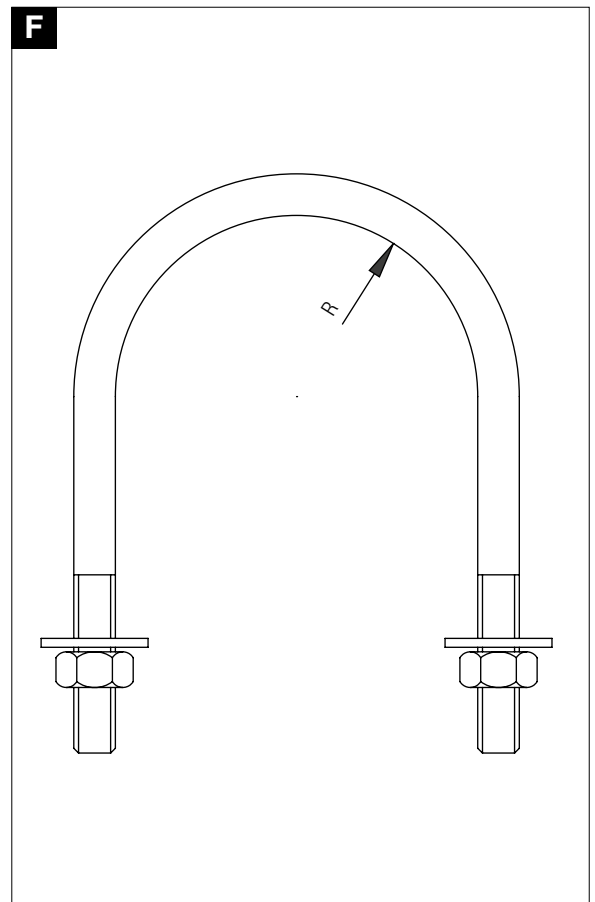
U-BOLTS Technical features

| CODE | Ø CONDUIT | R | MATERIAL | DETAIL |
|-------|-----------|------|------------------|--------|
| BU51 | 1/2" | 10 | GALVANIZED STEEL | F |
| BU52 | 3/4" | 12 | GALVANIZED STEEL | F |
| BU53 | 1" | 15 | GALVANIZED STEEL | F |
| BU54 | 1-1/4" | 20 | GALVANIZED STEEL | F |
| BU55 | 1-1/2" | 22,5 | GALVANIZED STEEL | F |
| BU56 | 2" | 27,5 | GALVANIZED STEEL | F |
| BU57 | 2-1/2" | 35 | GALVANIZED STEEL | F |
| BU58 | 3" | 45 | GALVANIZED STEEL | F |
| BU510 | 4" | 60 | GALVANIZED STEEL | F |

| CODE | Ø CONDUIT | R | MATERIAL | DETAIL |
|--------|-----------|------|-----------------|--------|
| BU51X | 1/2" | 10 | STAINLESS STEEL | F |
| BU52X | 3/4" | 12 | STAINLESS STEEL | F |
| BU53X | 1" | 15 | STAINLESS STEEL | F |
| BU54X | 1-1/4" | 20 | STAINLESS STEEL | F |
| BU55X | 1-1/2" | 22,5 | STAINLESS STEEL | F |
| BU56X | 2" | 27,5 | STAINLESS STEEL | F |
| BU57X | 2-1/2" | 35 | STAINLESS STEEL | F |
| BU58X | 3" | 45 | STAINLESS STEEL | F |
| BU510X | 4" | 60 | STAINLESS STEEL | F |

With nuts and washer

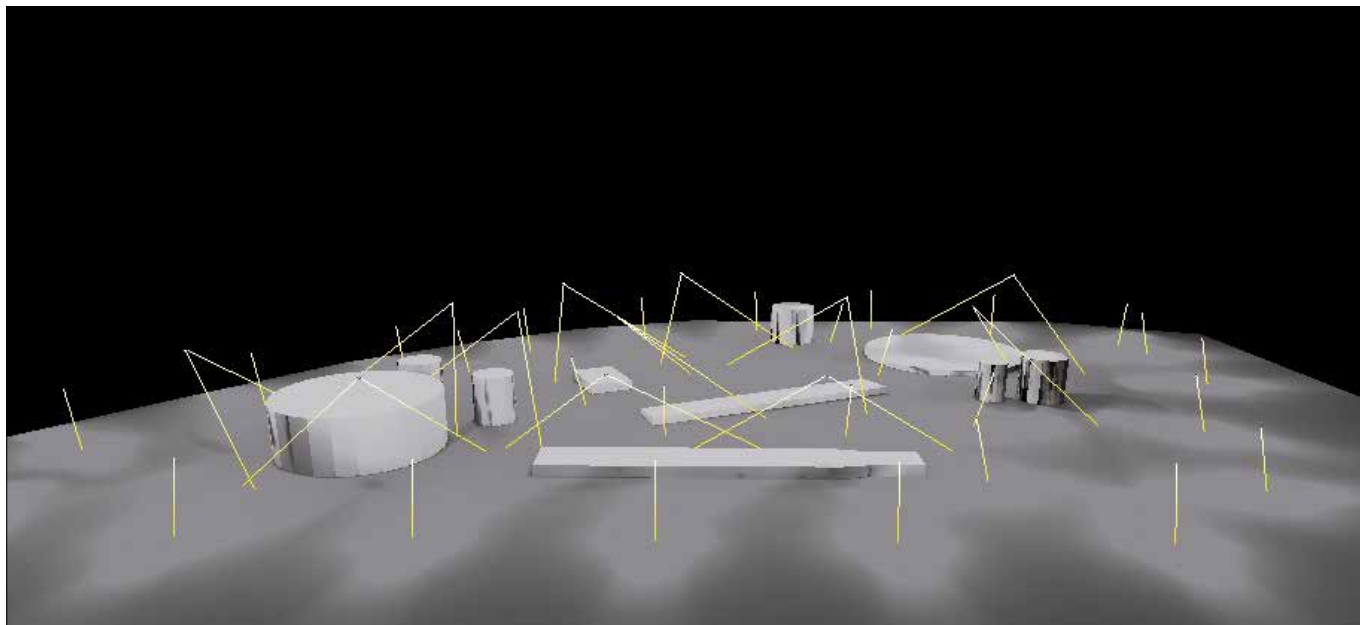
Reference details



REMARK:

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Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts) - Safe Area



Lighting layout software for internal and external areas available by our office lighting calculation service for lighting installation to right and best position of luminaires in your project.

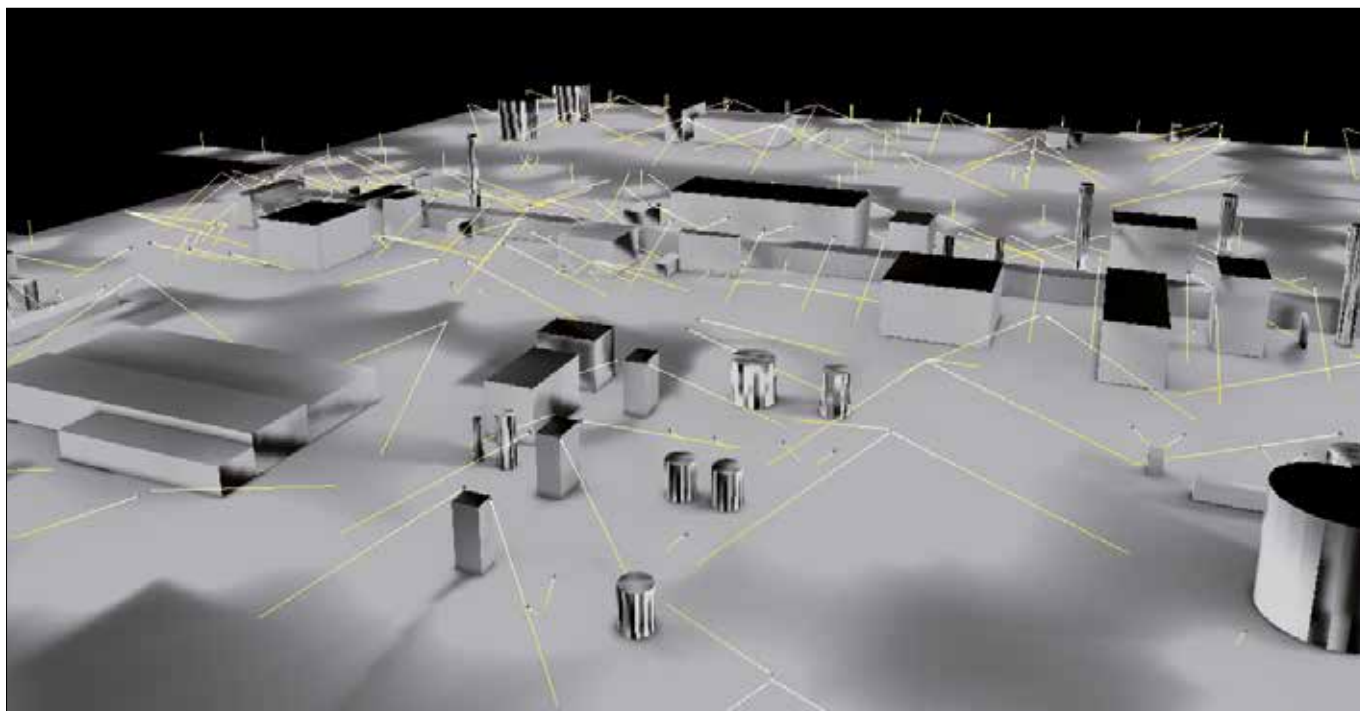
Our technical staff offers its services in planning lighting installation, with photometric graphs and lighting data outputs in full according to Customer requirements.

A well-organized software system is available to calculate the luminance level and the lighting distribution.

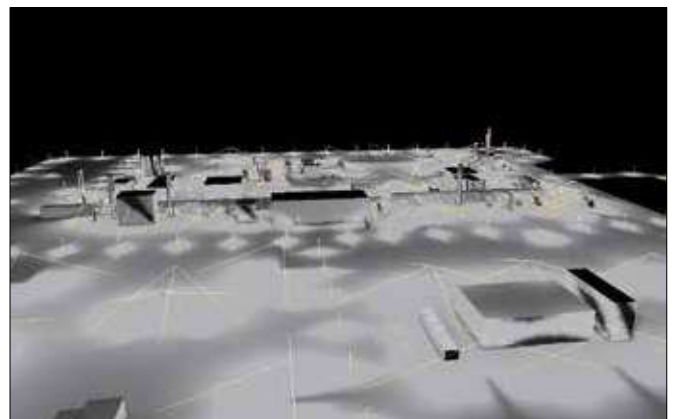
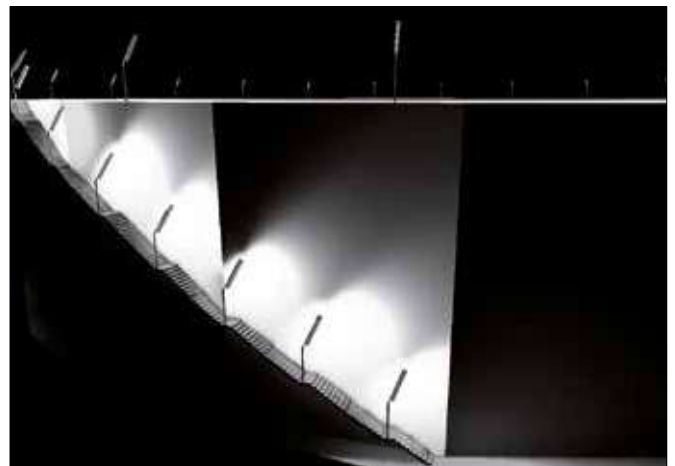
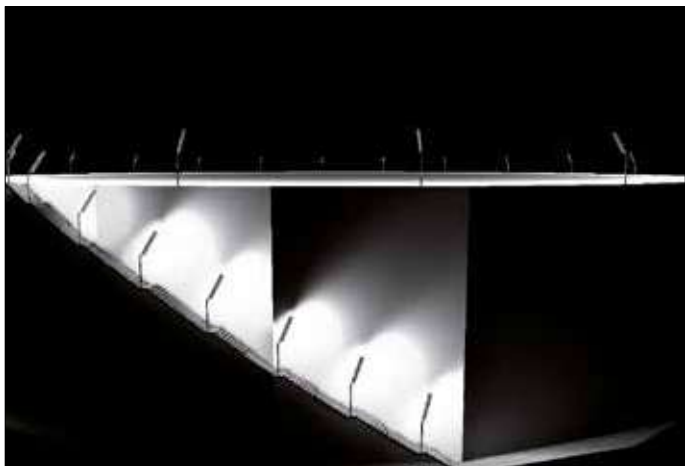
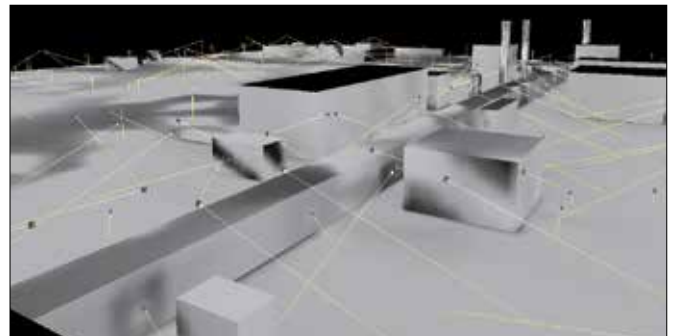
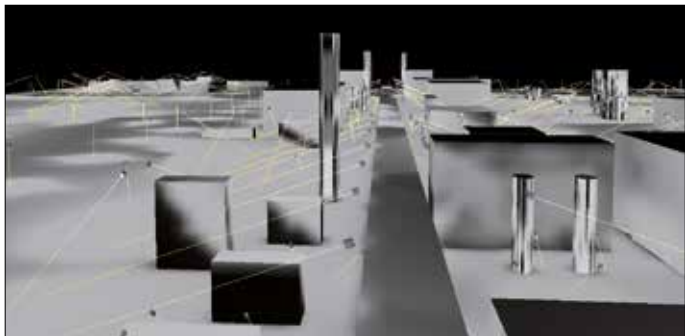
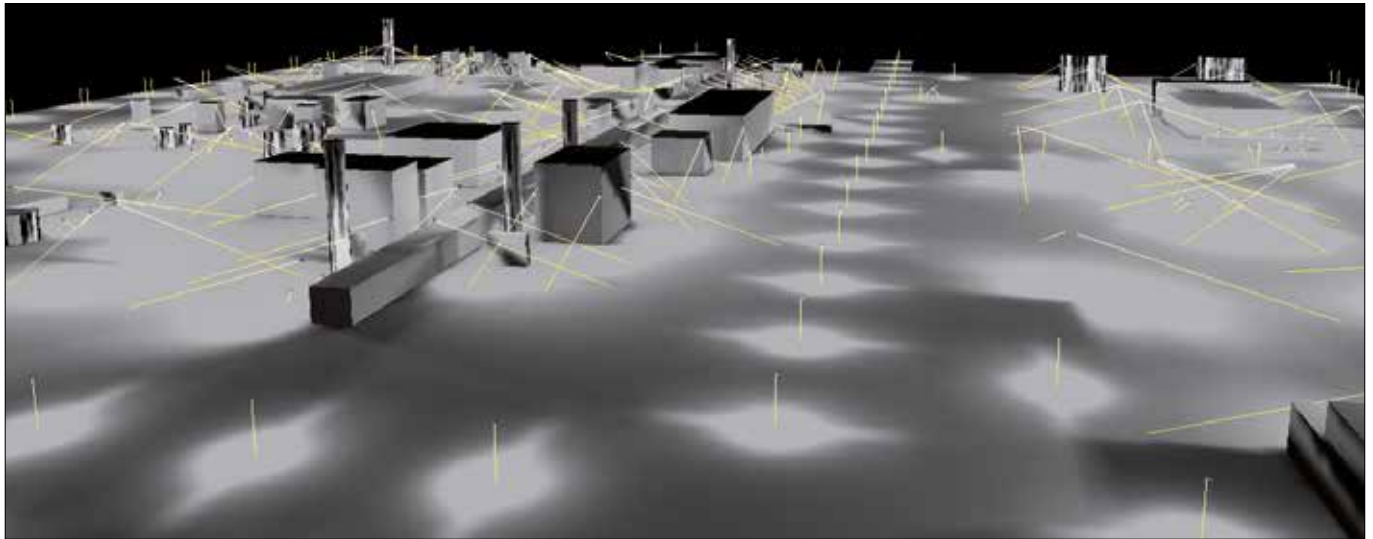
This system will help you to plan the right and best position of Nuova ASP luminaires in your project. It is enough you to inform us about the required illumination level: Nuova ASP will present you the lighting project quickly.

Using a proper software, our technical staff is able to insert Nuova ASP lighting fixtures into a project and produce a virtual image of the area, which shows the real illuminating effect.

Lighting calculation of example



Lighting calculation example



REMARK:

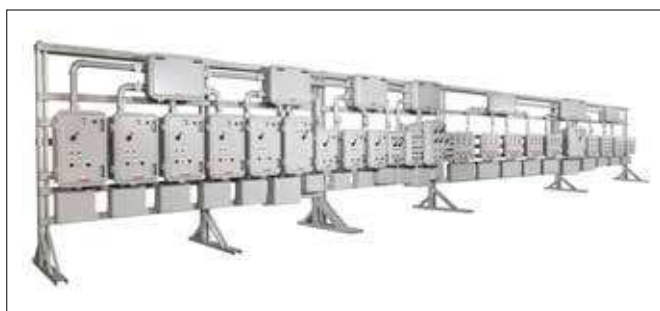
Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





EX ENCLOSURES





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|------------------------------|---|
| EXECUTION | (⊕ II 2 G) Ex db IIA or IIB or IIB+H2 T6...T3 (⊕ II 2 G) Ex db [ia/ib IIA or IIB or IIC Ga] IIA or IIB or IIB+H2 T6 (⊕ II 2 D) Ex tb IIIC T85°C...T200°C (⊕ II 2 D) Ex tb [ia Da/ib] IIIC T85°C ⊕ II 2 G Ex db IIC T6...T3 ⊕ II 2 G Ex db [ia/ib/ic IIA or IIB or IIC Ga/Gc] IIC T6...T3 ⊕ II 2 D Ex tb IIIC T85°C...T200°C ⊕ II 2 D Ex tb [ia Da/ib/ic Dc] IIIC T85°C...T200°C ⊕ II 2 G Ex d e ia/ib ia mb IIC T6, T5 or T4 Gb ⊕ II 2 D Ex tb IIIC T85°C or T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx INMETRO EAC RINA RUSSIAN MARINE CERTIFICATE (RMRS) UL NEC 505 |

NEC - NEMA 4, 7, 9

| | |
|-------------------------------|---|
| INSTALLATION | Class I - Groups B, C, e D Class II - Groups E, F, e G Class III |
| PROTECTION | 4, 7 BCD, 9 EFG |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +40°C |
| CERTIFICATION AND COMPLIANCES | - UL Standard 1203 - 4 th Ed. (15 Sett. 2006) - Explosion-Proof / Dust-Ignition-Proof - Electrical Equipment for Use in Hazardous (Classified) Locations |

Mechanical characteristics

| | |
|--------------------|---|
| Boxes | marine grade copper free aluminum - stainless steel AISI 316L |
| Painting | external epoxy powders grey RAL-9006 colour (standard) |
| Screws | external stainless steel |
| Gaskets | silicon rubber |
| Pipes and fittings | galvanized steel (standard) - stainless steel (optional) |
| Supporting rack | hot dip galvanized steel - stainless steel |
| Cable entry | 3/4" NPT size threaded |



On Request Accessories:

- Stainless steel pipes and fittings
- Galvanized steel epoxy painted supporting rack
- Stainless steel supporting rack
- Internal anticondensate painting orange RAL-2004
- External colours different from standard

Description:

“SWITCH-RACK” is a word usually adopted to indicate an ensemble of control units, signaling units, motor starters, switching units, and so on. Switch-racks are mechanically assembled on robust frame with various fixing solutions (ground, wall, etc.), electrically wired up on purpose. Nuova ASP since over 50 years, designs and manufacturers switch-racks according to its own diagram or according to customer’s specifications, in full compliance with European CENELEC standards.

INFORMATIONS:

Test and inspections:

All components and documents are tested and checked at the various working stages , according to Nuova ASP’s “Quality Plans”. The above mentioned Plans call for all test and checks necessary to ensure an execution “on purpose”. Whenever a strict, documented quality control execution is required please advise Nuova ASP Sales Department. When the switchrack is completed ,an effective working inspection is carried out, and an “inspection report” is written. Customer’s inspectors are allowed in Nuova ASP’s workshop to survey working evolution and to witness final inspection.

Standard Tests and Checks:

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • Visual and dimensional control • Working control • Equipment control | <ul style="list-style-type: none"> • Mechanical running control • Hydrostatic test • Insulation test | <ul style="list-style-type: none"> • Grinding check • Insulation resistance measuring • Insulation test / Electrical running test |
|--|---|--|

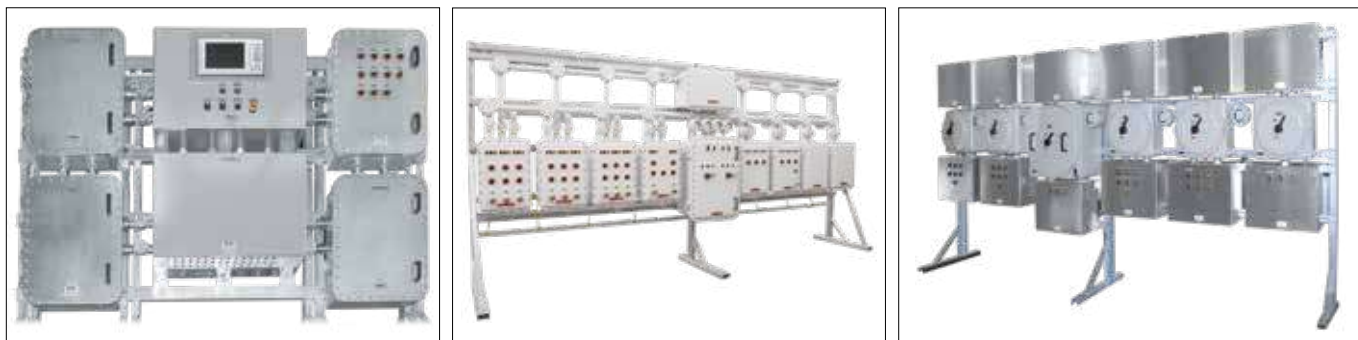
Ordering:

The following technical information are needed to work out a switchrack. A direct consult with Nuova ASP Sales Department is however advisable, especially when problems of space arise.

- A) Area classification and mode of protection.
- B) Applicable standards
- C) Power and auxiliary wiring diagrams or full, detailed description of switchrack’s work
- D) Maximum overall dimensions.
Possibility of double front execution
- E) Location of incoming and outgoing cable entries
- F) Threading, size and number of hubs
- G) Type of cable entries
- H) Painting cycle, type and color
- I) Switchrack’s location (indoor or outdoor)
- L) Request of protective canopy(if needed)
- N) “Vendor List” of components to be respected (if any)

Responsibility:

Once acknowledged the order, Nuova ASP Technical Dept. issues electrical and mechanical manufacturing drawings. These drawings are sent to customer “for approval” and whichever change has to be advised as soon as possible. We take full responsibility for engineering, purchasing and assembling of components ,wiring and erection of the ensemble ready for installation.



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | (⊕ II 2 G) Ex db IIA or IIB or IIB+H2 T6...T3 (⊕ II 2 G) Ex db [Ia/Ib IIA or IIB or IIC Ga] IIA or IIB or IIB+H2 T6 (⊕ II 2 D) Ex tb IIIC T85°C...T200°C (⊕ II 2 D) Ex tb [Ia Da/Ib] IIIC T85°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0058X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9022U IECEx: IECEx INE 13_0078X Component: IECEx INE 13_0079U INMETRO: CEPEL 12.2138 EAC: TC RU C-IT.ГБ08.B.01468 RINA: ELE137217CS003 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20141125-E344596 - Type rating NEMA 1, 12, 4 and 4X KC: 16-KA4BO- (from 119X to 0141X) KC (Component): 16-KA4BO- (from 0063U to 0084U) CCOE-PESO: P405708/10 |

Mechanical characteristics

| | |
|-------------------------|---|
| Body/cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal mounting plate | hot dip galvanized steel / aluminum |
| Fixing | fixing lugs AL UNI EN 1706:1999 - galvanized steel stirrups sp. 10mm (EJB71/73-91/93) |
| Hinges | On the long side - cast on enclosure body and cover |



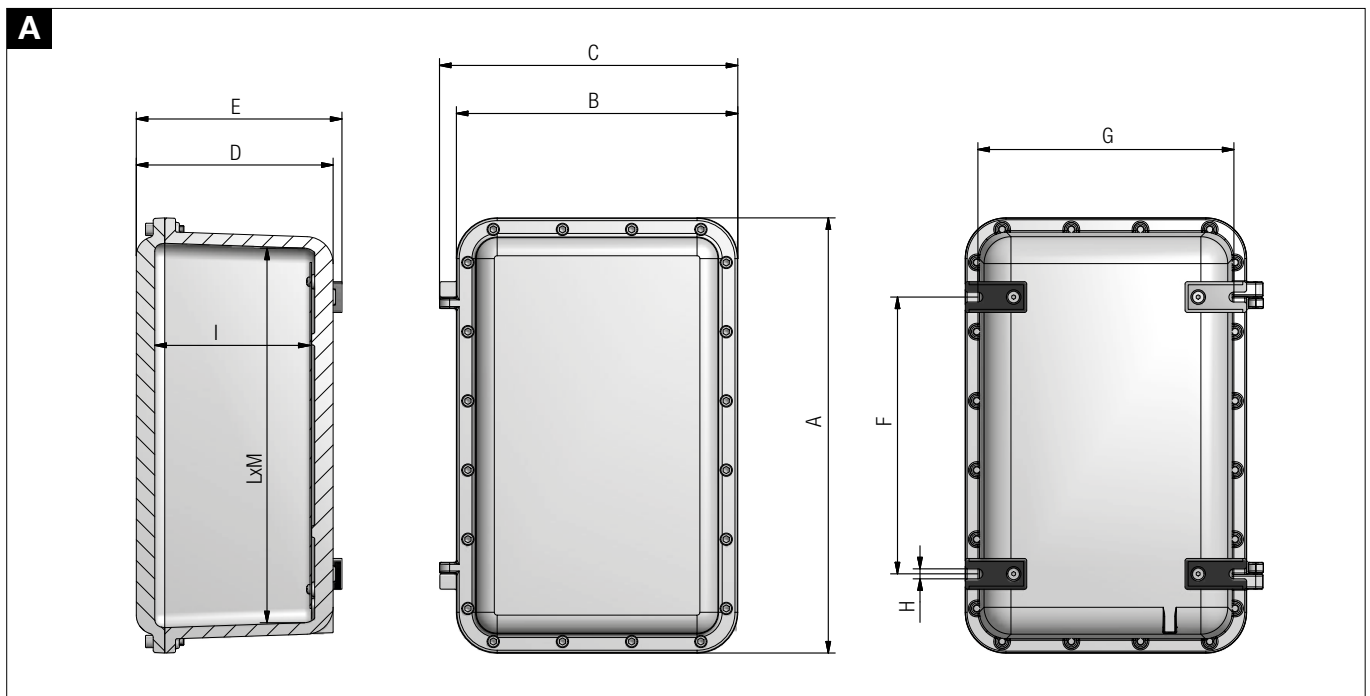
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Glass windows on cover
- Drain and breather valves
- Galvanized steel body & cover
- Cast iron body & cover

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | L [mm] | M [mm] | INT. PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|-------------|--------|
| EJB08 | 380 | 170 | 188 | 126 | 136 | 270 | 156 | 11 | 91 | 315 | 105 | 305 - 85 | 8,2 | A |
| EJB11A | 175 | 175 | 197 | 122 | 132 | 78 | 171 | 11 | 90 | 113 | 113 | 100 - 100 | 4,00 | A |
| EJB21A | 284 | 245 | 267 | 169 | 179 | 160 | 241 | 11 | 121 | 216 | 176 | 180 - 140 | 11,20 | A |
| EJB22A | 300 | 200 | 221 | 222 | 232 | 195 | 186 | 11 | 174 | 229 | 129 | 180 - 100 | 11,30 | A |
| EJB23A | 310 | 260 | 281 | 197 | 207 | 195 | 251 | 11 | 152 | 245 | 195 | 200 - 160 | 13,30 | A |
| EJB30A | 415 | 315 | 337 | 164 | 174 | 294 | 299 | 11 | 113 | 345 | 245 | 300 - 200 | 19,50 | A |
| EJB31A | 415 | 315 | 337 | 246 | 256 | 294 | 299 | 11 | 195 | 345 | 245 | 300 - 200 | 24,20 | A |
| EJB51A | 566 | 366 | 388 | 256 | 268 | 360 | 337 | 13 | 200 | 487 | 287 | 450 - 250 | 36,10 | A |
| EJB61A | 670 | 470 | 491 | 361 | 373 | 500 | 443 | 13 | 307 | 580 | 380 | 530 - 330 | 68,10 | A |
| EJB63A | 670 | 470 | 491 | 236 | 248 | 500 | 443 | 13 | 182 | 580 | 380 | 530 - 330 | 50,50 | A |
| EJB71 | 742 | 542 | 572 | 429 | 439 | 520 | 580 | 16 | 331 | 632 | 432 | 590 - 390 | 110,40 | A |
| EJB73 | 742 | 542 | 572 | 311 | 321 | 520 | 580 | 16 | 213 | 632 | 432 | 590 - 390 | 95,60 | A |
| EJB91S | 960 | 660 | 697 | 462 | 472 | 700 | 650 | 16 | 350 | 825 | 525 | 750 - 440 | 188,50 | A |
| EJB93S | 960 | 660 | 697 | 305 | 315 | 700 | 650 | 16 | 193 | 825 | 525 | 750 - 440 | 166,50 | A |

Reference details

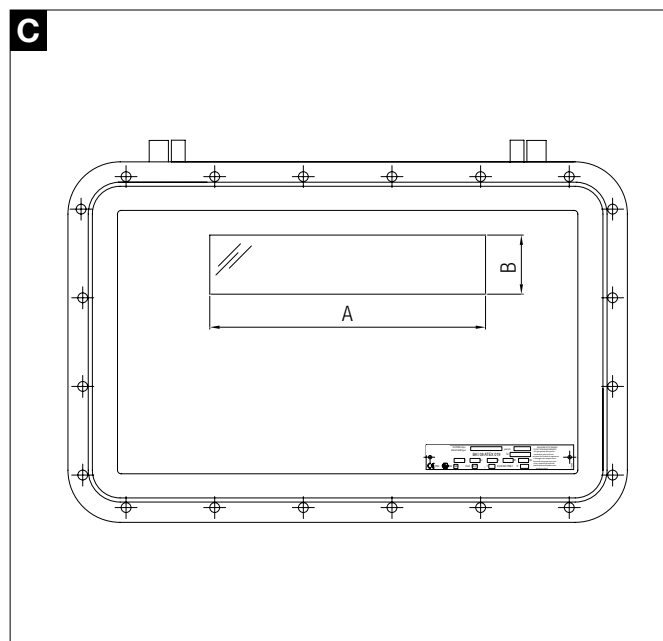


Glass windows on cover

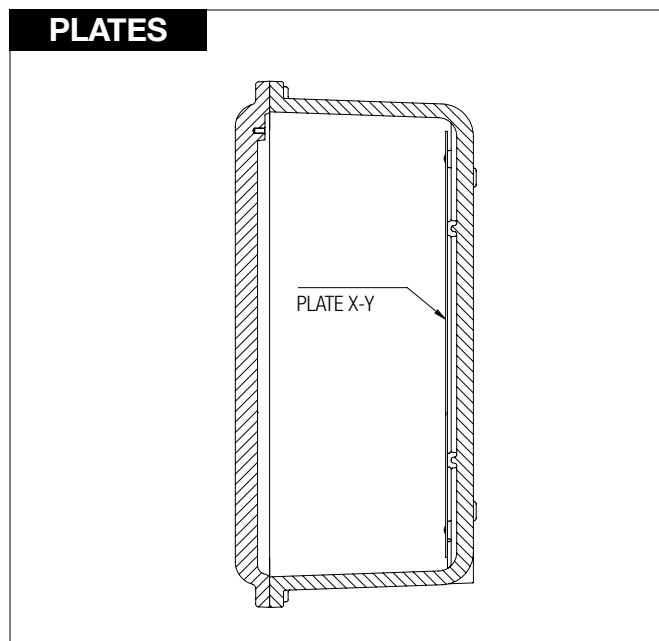
| WINDOW CODE | WINDOW TYPE | ENCLOSURE CODE | | | | | | | | | | | DIMENSIONS | | DETAIL |
|-------------|-------------|----------------|--------|--------|--------|--------|-----------|--------|-----------|-----------|-----------|--------|------------|-----|--------|
| | | EJB-08 | EJB-11 | EJB-21 | EJB-22 | EJB-23 | EJB-30/31 | EJB-51 | EJB-61/63 | EJB-71/73 | EJB-91/93 | A [mm] | B [mm] | | |
| KITF1ST | F1 | X | X | X | X | X | X | X | X | X | X | X | 60 | 60 | C |
| KITF2ST | F2 | - | - | X | X | X | X | X | X | X | X | X | 75 | 75 | C |
| KITF3ST | F3 | - | - | X | X | X | X | X | X | X | X | X | 110 | 75 | C |
| KITF4ST | F4 | - | - | X | X | X | X | X | X | X | X | - | 150 | 75 | C |
| KITF5ST | F5 | - | - | - | - | - | X | X | X | - | - | - | 150 | 150 | C |
| KITF6ST | F6 | - | - | - | - | - | X | X | X | - | - | - | 300 | 75 | C |
| KITF7ST | F7 | - | - | - | - | - | X | X | X | - | - | - | 300 | 150 | C |
| KITF8 | F8 | - | - | - | - | - | - | - | X | - | - | - | 300 | 300 | C |
| KITF9 | F9 | - | - | - | - | - | - | - | - | X | - | - | 450 | 300 | C |



Reference details



Reference details



Indicative quantity of terminals and relevant section

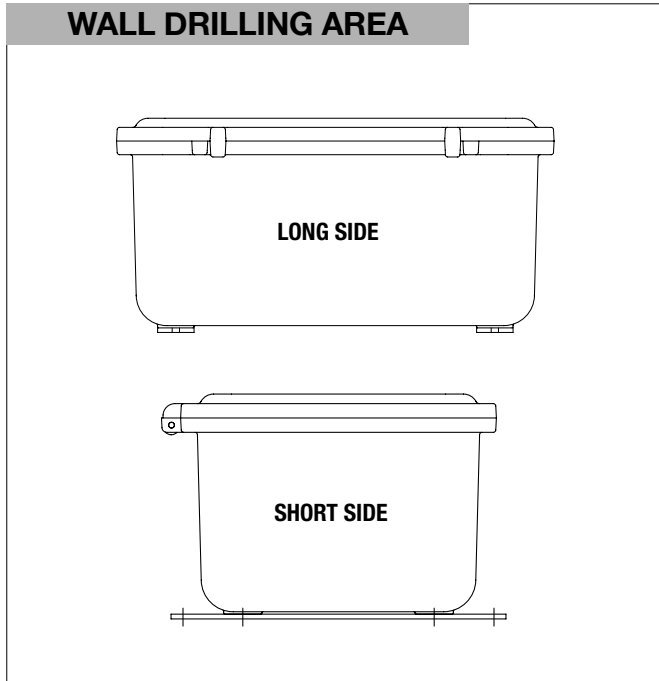
| CODE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT. PLATE X - Y [mm] |
|------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|-----------------------|
| EJB08 | 24 x 1 | 18 x 1 | 10 x 1 | - | - | - | - | - | 305 - 85 |
| EJB11A | 12 x 1 | 8 x 1 | 6 x 1 | - | - | - | - | - | 100 - 100 |
| EJB21A | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 7 x 1 | 5 x 1 | 1 x 1 | 180 - 140 |
| EJB22A | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 7 x 1 | 5 x 1 | 1 x 1 | 180 - 100 |
| EJB23A | 35 x 1 | 22 x 1 | 16 x 1 | 14 x 1 | 11 x 1 | 9 x 1 | 7 x 1 | 2 x 1 | 200 - 160 |
| EJB30A | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 - 200 |
| EJB31A | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 - 200 |
| EJB51A | 80 x 2 | 46 x 2 | 36 x 2 | 30 x 2 | 22 x 2 | 18 x 2 | 16 x 1 | 6 x 1 | 450 - 250 |
| EJB61A/63A | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 530 - 330 |
| EJB71/73 | 110 x 3 | 70 x 3 | 56 x 3 | 46 x 3 | 34 x 3 | 28 x 2 | 24 x 2 | 12 x 1 | 590 - 390 |
| EJB91S/93S | 140 x 3 | 90 x 3 | 70 x 3 | 60 x 3 | 44 x 3 | 36 x 3 | 32 x 2 | 14 x 2 | 750 - 440 |

Body and cover enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|----|----|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJB08 | 9 | 6 | 5 | 4 | 4 | - | - | - |
| EJB11A | 3 | 2 | 2 | 1 | 1 | - | - | - |
| EJB21A | 10 | 7 | 5 | 3 | 2 | 2 | 1 | - |
| EJB22A | 15 | 11 | 8 | 6 | 6 | 3 | 2 | 1 |
| EJB23A | 11 | 8 | 6 | 4 | 3 | 3 | 2 | 1 |
| EJB30A | 13 | 7 | 5 | 5 | 4 | 3 | - | - |
| EJB31A | 28 | 18 | 14 | 11 | 8 | 6 | 3 | 2 |
| EJB51A | 44 | 27 | 24 | 20 | 12 | 10 | 6 | 3 |
| EJB61A | 72 | 50 | 36 | 32 | 21 | 21 | 14 | 8 |
| EJB63A | 36 | 29 | 18 | 16 | 14 | 7 | 5 | 4 |
| EJB71 | 90 | 55 | 46 | 39 | 32 | 21 | 15 | 10 |
| EJB73 | 40 | 26 | 22 | 18 | 14 | 12 | 7 | 4 |
| EJB91S | 112 | 84 | 65 | 55 | 40 | 28 | 23 | 14 |
| EJB93S | 48 | 42 | 29 | 22 | 10 | 11 | 9 | 5 |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|----|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJB08 | 2 | 2 | 1 | 1 | - | - | - | - |
| EJB11A | 3 | 2 | 2 | 1 | 1 | - | - | - |
| EJB21A | 8 | 5 | 4 | 3 | 2 | 1 | 1 | - |
| EJB22A | 9 | 5 | 5 | 4 | 2 | 1 | 1 | 1 |
| EJB23A | 9 | 6 | 6 | 5 | 2 | 2 | 1 | 1 |
| EJB30A | 9 | 5 | 4 | 3 | 3 | 2 | - | - |
| EJB31A | 20 | 12 | 9 | 8 | 6 | 5 | 2 | 1 |
| EJB51A | 24 | 15 | 12 | 11 | 6 | 6 | 3 | 2 |
| EJB61A | 48 | 30 | 24 | 20 | 12 | 12 | 8 | 6 |
| EJB63A | 24 | 17 | 12 | 10 | 8 | 4 | 3 | 3 |
| EJB71 | 59 | 35 | 28 | 25 | 21 | 12 | 10 | 6 |
| EJB73 | 26 | 18 | 14 | 12 | 8 | 11 | 4 | 2 |
| EJB91S | 70 | 42 | 35 | 35 | 24 | 18 | 13 | 8 |
| EJB93S | 30 | 24 | 21 | 14 | 12 | 7 | 5 | 3 |

Body and cover enclosures indicative maximum quantity of holes of the same size
Reference details



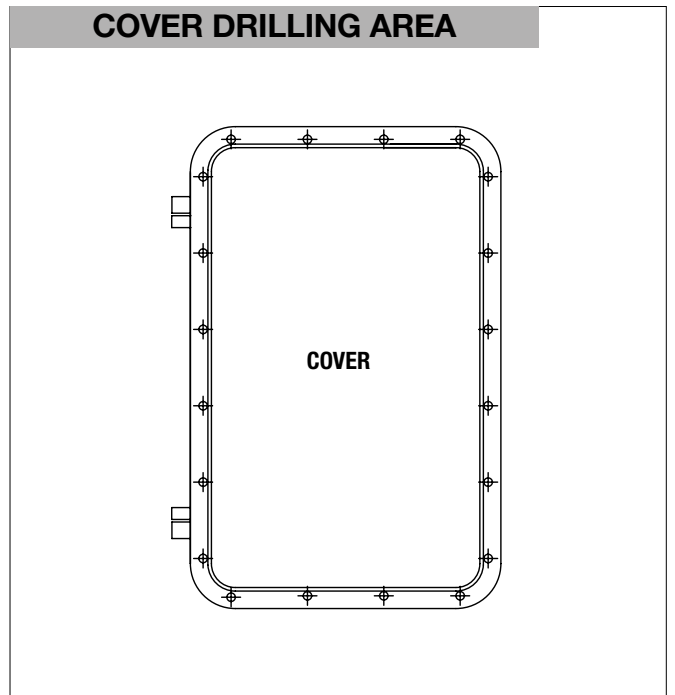
Threads comparison table

| SIZE | EN10226-2 | ISO 228-1 | B1.20.1 | ISO 262 |
|------|-------------|-----------|------------|---------|
| 0 | R-Rc 1/8" | G 1/8" | 1/8" NPT | M10 |
| 1 | R-Rc 1/2" | G 1/2" | 1/2" NPT | M20 |
| 2 | R-Rc 3/4" | G 3/4" | 3/4" NPT | M25 |
| 3 | R-Rc 1" | G 1" | 1" NPT | M32 |
| 4 | R-Rc 1-1/4" | G 1-1/4" | 1-1/4" NPT | M40 |
| 5 | R-Rc 1-1/2" | G 1-1/2" | 1-1/2" NPT | M50 |
| 6 | R-Rc 2" | G 2" | 2" NPT | M63 |
| 7 | R-Rc 2-1/2" | G 2-1/2" | 2-1/2" NPT | M75 |
| 8 | R-Rc 3" | G 3" | 3" NPT | M85 |
| 9 | - | G 3-1/2" | 3-1/2" NPT | M100 |
| 10 | R-Rc 4" | G 4" | 4" NPT | M115 |

Max allowed quantity of push button and pilot light

| COVER DRILLING AREA | |
|---------------------|-------------------------|
| ENCLOSURE CODE | MAX OPERATORS PERMITTED |
| EJB08 | 10 |
| EJB11A | 4 |
| EJB21A | 12 |
| EJB22A | 12 |
| EJB23A | 16 |
| EJB30A | 30 |
| EJB31A | 30 |
| EJB51A | 54 |
| EJB61A | 56 |
| EJB63A | 56 |
| EJB71 | 48 |
| EJB73 | 48 |
| EJB91S | 54 |
| EJB93S | 54 |

Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | (⊕ II 2 G) Ex db IIA or IIB or IIB+H2 T6...T3 (⊕ II 2 G) Ex db [ja/ib IIA or IIB or IIC Ga] IIA or IIB or IIB+H2 T6 (⊕ II 2 D) Ex tb IIIC T85°C...T200°C (⊕ II 2 D) Ex tb [ja Da/ib] IIIC T85°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0058X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9022U IECEX: IECEX INE 13_0078X Component: IECEX INE 13_0079U INMETRO: CEPEL 12.2138 EAC: TC RU C-IT.ГБ08.B.01468 RINA: ELE137217CS003 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20141125-E344596 Type rating NEMA 1, 12, 4 and 4X KC: 16-KA4BO- (from 0119X to 0141X) KC (Component): 16-KA4BO- (from 0063U to 0084U) |

Mechanical characteristics

| | |
|-------------------------|--|
| Body/cover | stainless steel AISI-316 L |
| Screws | stainless steel AISI-316 L |
| Internal mounting plate | stainless steel AISI-316 L |
| Fixing | fixing lugs stainless steel AISI-316 L - stainless steel stirrups sp.10mm (EJB71/73 and EJB91/93) |
| Hinges | welded on cover and body |
| Opening handle | insulating material fixed on cover by stainless steel screws |



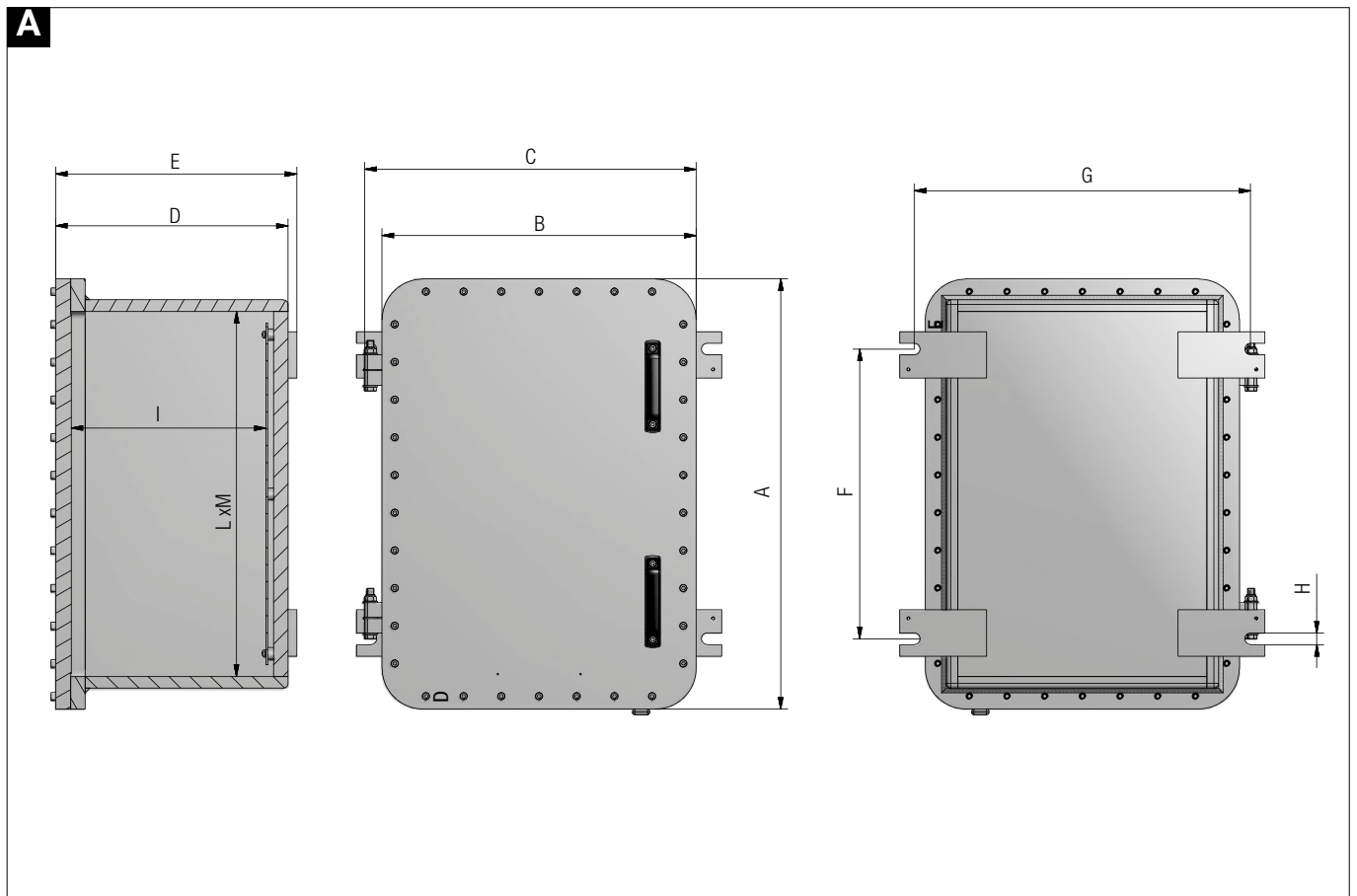
On Request Accessories:

- External epoxy painting (any colours)
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Glass windows on cover
- Drain and breather valves

Technical Features

| CODICE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | L [mm] | M [mm] | INT. PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|-------------|--------|
| EJB11X | 175 | 175 | 197 | 122 | 132 | 78 | 171 | 11 | 90 | 113 | 113 | 100 - 100 | 11,00 | A |
| EJB21X | 284 | 245 | 267 | 169 | 179 | 160 | 241 | 11 | 121 | 216 | 176 | 180 - 140 | 32,00 | A |
| EJB22X | 300 | 200 | 221 | 222 | 232 | 195 | 186 | 11 | 174 | 229 | 129 | 180 - 100 | 38,00 | A |
| EJB23X | 310 | 260 | 281 | 197 | 207 | 195 | 251 | 11 | 152 | 245 | 195 | 200 - 160 | 40,00 | A |
| EJB30X | 415 | 315 | 337 | 164 | 174 | 294 | 299 | 11 | 113 | 345 | 245 | 300 - 200 | 53,00 | A |
| EJB31X | 415 | 315 | 337 | 246 | 256 | 294 | 299 | 11 | 195 | 345 | 245 | 300 - 200 | 62,00 | A |
| EJB51X | 566 | 366 | 388 | 256 | 268 | 360 | 337 | 13 | 200 | 487 | 287 | 450 - 250 | 110,00 | A |
| EJB61X | 670 | 470 | 491 | 361 | 373 | 500 | 443 | 13 | 307 | 580 | 380 | 530 - 330 | 152,00 | A |
| EJB63X | 670 | 470 | 491 | 236 | 248 | 500 | 443 | 13 | 182 | 580 | 380 | 530 - 330 | 140,00 | A |
| EJB71X | 742 | 542 | 572 | 429 | 439 | 520 | 580 | 16 | 331 | 632 | 432 | 590 - 390 | 222,00 | A |
| EJB73X | 742 | 542 | 572 | 311 | 321 | 520 | 580 | 16 | 213 | 632 | 432 | 590 - 390 | 190,00 | A |
| EJB91X | 960 | 660 | 697 | 462 | 472 | 700 | 650 | 16 | 350 | 825 | 525 | 750 - 440 | 419,00 | A |
| EJB93X | 960 | 660 | 697 | 305 | 315 | 700 | 650 | 16 | 193 | 825 | 525 | 750 - 440 | 350,00 | A |

Reference details



Indicative quantity of terminals and relevant section

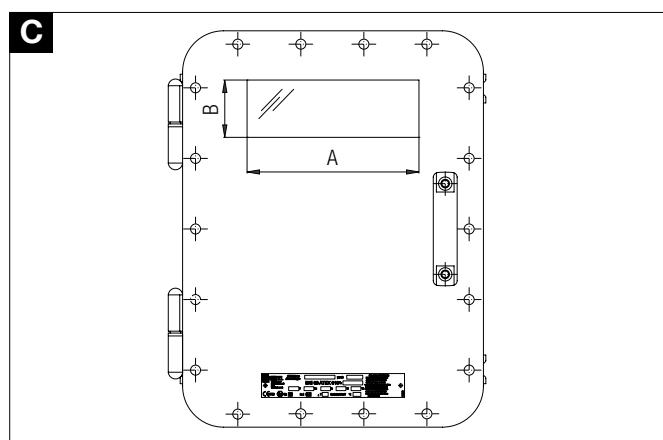
| CODE | SEZ. 2,5 [sq/mm] | SEZ. 6,0 [sq/mm] | SEZ. 10,0 [sq/mm] | SEZ. 16,0 [sq/mm] | SEZ. 35,0 [sq/mm] | SEZ. 50,0 [sq/mm] | SEZ. 70,0 [sq/mm] | SEZ. 240,0 [sq/mm] | INT. PLATE X - Y [mm] |
|------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-----------------------|
| EJB11X | 12 x 1 | 8 x 1 | 6 x 1 | 4 x 1 | 2 x 1 | - | - | - | 100 - 100 |
| EJB21X | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 7 x 1 | 5 x 1 | 1 x 1 | 180 - 140 |
| EJB22X | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 7 x 1 | 5 x 1 | 1 x 1 | 180 - 100 |
| EJB23X | 35 x 1 | 22 x 1 | 16 x 1 | 14 x 1 | 11 x 1 | 9 x 1 | 7 x 1 | 2 x 1 | 200 - 160 |
| EJB30X | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 - 200 |
| EJB31X | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 - 200 |
| EJB51X | 80 x 2 | 46 x 2 | 36 x 2 | 30 x 2 | 22 x 2 | 18 x 2 | 16 x 1 | 6 x 1 | 450 - 250 |
| EJB61X/63X | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 530 - 330 |
| EJB71X/73X | 110 x 3 | 70 x 3 | 56 x 3 | 46 x 3 | 34 x 3 | 28 x 2 | 24 x 2 | 12 x 1 | 590 - 390 |
| EJB91X/93X | 140 x 3 | 90 x 3 | 70 x 3 | 60 x 3 | 44 x 3 | 36 x 3 | 32 x 2 | 14 x 2 | 750 - 440 |



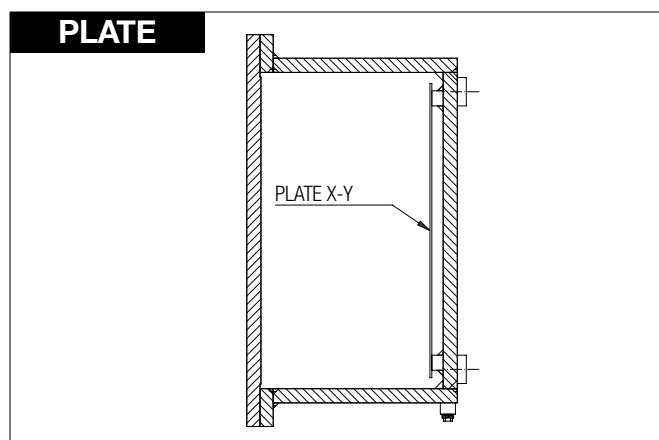
Glass Windows on Cover

| WINDOW CODE | WINDOW TYPE | ENCLOSURE CODE | | | | | | | | | DIMENSIONS | | DETAIL |
|-------------|-------------|----------------|--------|--------|--------|-----------|--------|-----------|-----------|-----------|------------|--------|--------|
| | | EJB11X | EJB21X | EJB22X | EJB23X | EJB30/31X | EJB51X | EJB61/63X | EJB71/73X | EJB91/93X | A [mm] | B [mm] | |
| KITF1ST | F1 | X | X | X | X | X | X | X | X | X | 60 | 60 | C |
| KITF2ST | F2 | - | X | X | X | X | X | X | X | X | 75 | 75 | C |
| KITF3ST | F3 | - | X | X | X | X | X | X | X | X | 110 | 75 | C |
| KITF4ST | F4 | - | X | X | X | X | X | X | X | - | 150 | 75 | C |
| KITF5ST | F5 | - | - | - | - | X | X | X | - | - | 150 | 150 | C |
| KITF6ST | F6 | - | - | - | - | X | X | X | - | - | 300 | 75 | C |
| KITF7ST | F7 | - | - | - | - | X | X | X | - | - | 300 | 150 | C |
| KITF8X | F8 | - | - | - | - | - | - | X | - | - | 300 | 300 | C |
| KITF9X | F9 | - | - | - | - | - | - | X | - | - | 450 | 300 | C |

Reference details



Reference details

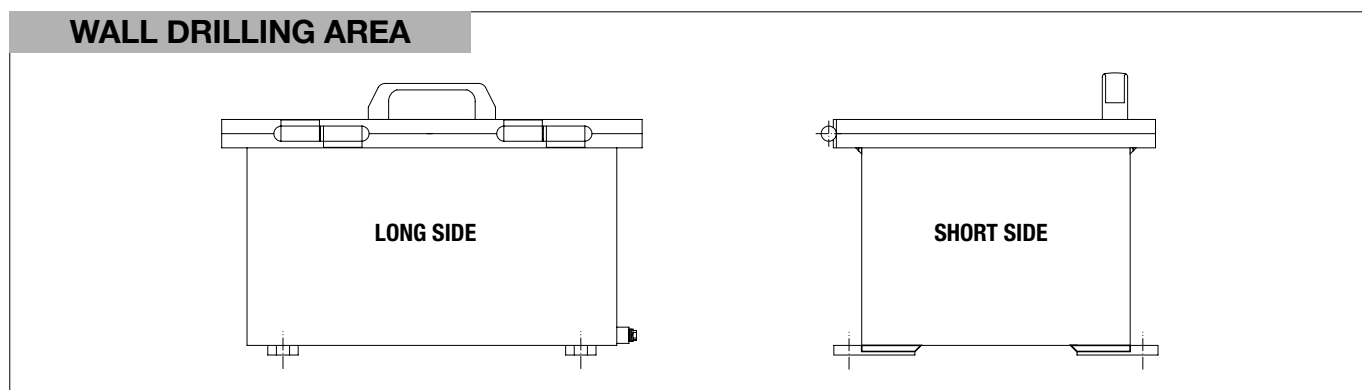


Body and cover enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|----|----|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJB11X | 3 | 2 | 2 | 1 | 1 | - | - | - |
| EJB21X | 10 | 7 | 5 | 3 | 2 | 2 | 1 | - |
| EJB22X | 15 | 11 | 8 | 6 | 6 | 3 | 2 | 1 |
| EJB23X | 11 | 8 | 6 | 4 | 3 | 3 | 2 | 1 |
| EJB30X | 13 | 7 | 5 | 5 | 4 | 3 | - | - |
| EJB31X | 28 | 18 | 14 | 11 | 8 | 6 | 3 | 2 |
| EJB51X | 44 | 27 | 24 | 20 | 12 | 10 | 6 | 3 |
| EJB61X | 72 | 50 | 36 | 32 | 21 | 21 | 14 | 8 |
| EJB63X | 36 | 29 | 18 | 16 | 14 | 7 | 5 | 4 |
| EJB71X | 90 | 55 | 46 | 39 | 32 | 21 | 15 | 10 |
| EJB73X | 40 | 26 | 22 | 18 | 14 | 12 | 7 | 4 |
| EJB91X | 112 | 84 | 65 | 55 | 40 | 28 | 23 | 14 |
| EJB93X | 48 | 42 | 29 | 22 | 10 | 11 | 9 | 5 |

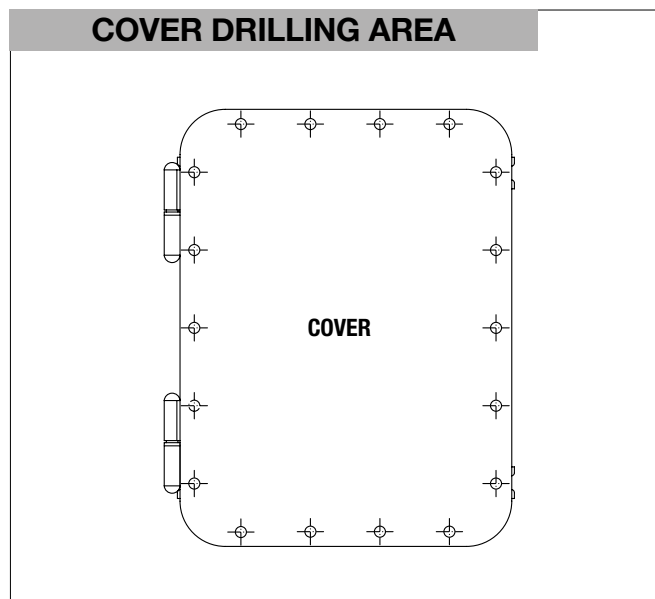
| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|----|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJB11X | 3 | 2 | 2 | 1 | 1 | - | - | - |
| EJB21X | 8 | 5 | 4 | 3 | 2 | 1 | 1 | - |
| EJB22X | 9 | 5 | 5 | 4 | 2 | 1 | 1 | 1 |
| EJB23X | 9 | 6 | 6 | 5 | 2 | 2 | 1 | 1 |
| EJB30X | 9 | 5 | 4 | 3 | 3 | 2 | - | - |
| EJB31X | 20 | 12 | 9 | 8 | 6 | 5 | 2 | 1 |
| EJB51X | 24 | 15 | 12 | 11 | 6 | 6 | 3 | 2 |
| EJB61X | 48 | 30 | 24 | 20 | 12 | 12 | 8 | 6 |
| EJB63X | 24 | 17 | 12 | 10 | 8 | 4 | 3 | 3 |
| EJB71X | 59 | 35 | 28 | 25 | 21 | 12 | 10 | 6 |
| EJB73X | 26 | 18 | 14 | 12 | 8 | 11 | 4 | 2 |
| EJB91X | 70 | 42 | 35 | 35 | 24 | 18 | 13 | 8 |
| EJB93X | 30 | 24 | 21 | 14 | 12 | 7 | 5 | 3 |

Reference details



Max allowed q.ty of push button and pilot light

| COVER DRILLING AREA | |
|---------------------|-------------------------|
| ENCLOSURE CODE | MAX OPERATORS PERMITTED |
| EJB11X | 4 |
| EJB21X | 12 |
| EJB22X | 12 |
| EJB23X | 16 |
| EJB30X | 30 |
| EJB31X | 30 |
| EJB51X | 54 |
| EJB61X | 56 |
| EJB63X | 56 |
| EJB71X | 48 |
| EJB73X | 48 |
| EJB91X | 54 |
| EJB93X | 54 |

**Threads comparison table**

| SIZE | EN10226-2 | ISO 228-1 | B1.20.1 | ISO 262 |
|------|-------------|-----------|------------|---------|
| 0 | R-Rc 1/8" | G 1/8" | 1/8" NPT | M10 |
| 1 | R-Rc 1/2" | G 1/2" | 1/2" NPT | M20 |
| 2 | R-Rc 3/4" | G 3/4" | 3/4" NPT | M25 |
| 3 | R-Rc 1" | G 1" | 1" NPT | M32 |
| 4 | R-Rc 1-1/4" | G 1-1/4" | 1-1/4" NPT | M40 |
| 5 | R-Rc 1-1/2" | G 1-1/2" | 1-1/2" NPT | M50 |
| 6 | R-Rc 2" | G 2" | 2" NPT | M63 |
| 7 | R-Rc 2-1/2" | G 2-1/2" | 2-1/2" NPT | M75 |
| 8 | R-Rc 3" | G 3" | 3" NPT | M85 |
| 9 | - | G 3-1/2" | 3-1/2" NPT | M100 |
| 10 | R-Rc 4" | G 4" | 4" NPT | M115 |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



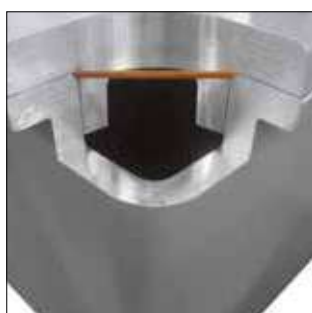
REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex db IIC T6...T3 ⊗ II 2 G Ex db [ja/ib/ic IIA or IIB or IIC Ga/Gc] IIC T6...T3 ⊗ II 2 D Ex tb IIC T85°C...T200°C ⊗ II 2 D Ex tb [ja Da/ib/ic Dc] IIC T85°C...T200°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0059X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9023U IECEx: IECEx INE 13.0080X IECEx (Component): IECEx INE 13.0081U INMETRO: CEPEL 12.2136 EAC: TC RU C-IT.ГБ08.B.01468 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 CCOE-PESO: P405708/9 |

Mechanical characteristics

| | |
|-------------------------|--|
| Body/cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal mounting plate | hot dip galvanized steel |
| Fixing | fixing lugs al uni 4514 |
| Opening handle | insulating material fixed on cover by stainless steel screws |
| Valves | Drain and breather stainless steel AISI-316L |



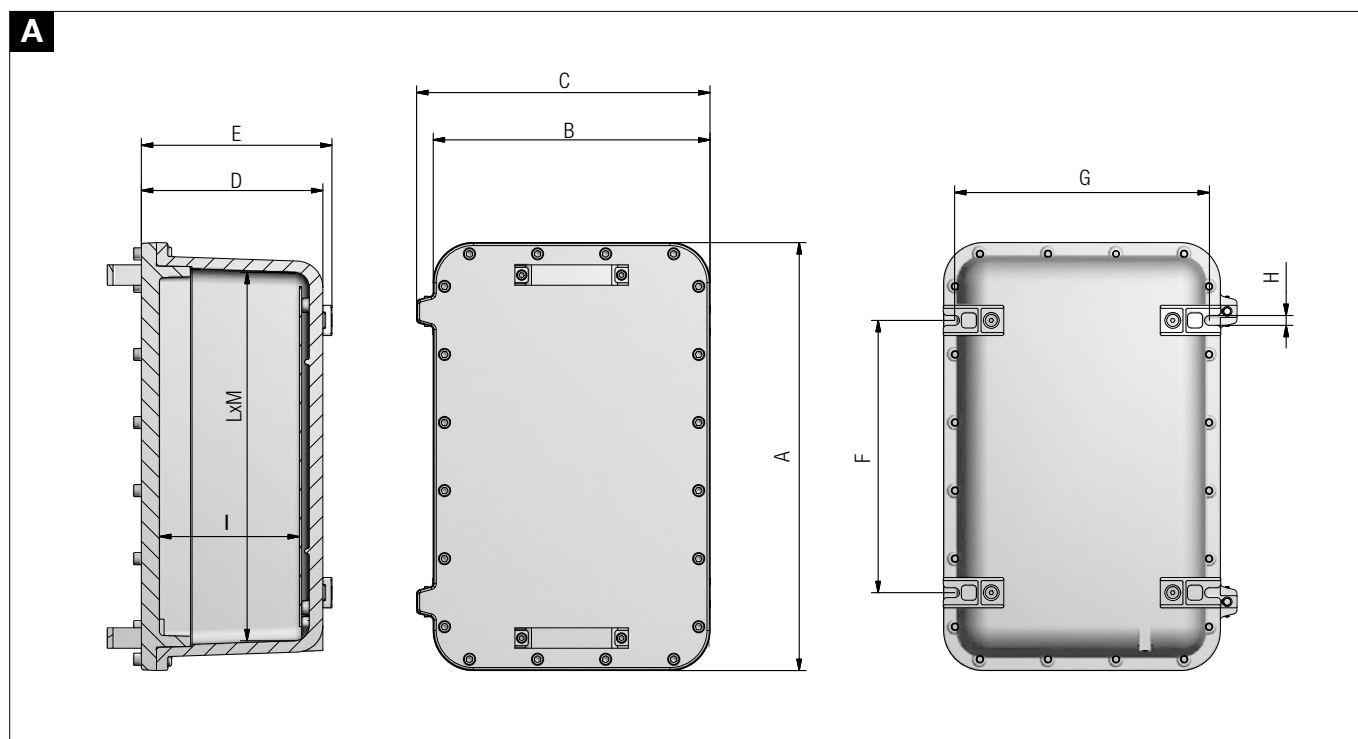
On Request Accessories:

- External epoxy painting (any colours)
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Glass windows on cover

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | L [mm] | M [mm] | INT. PLATE X-Y [mm] | WEIGHT [Kg] | DETAIL |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|-------------|--------|
| EJC21 | 285 | 245 | 267 | 161 | 171 | 160 | 241 | 11 | 113 | 216 | 176 | 180 x 140 | 12,00 | A |
| EJC30 | 415 | 315 | 338 | 146 | 156 | 294 | 285 | 11 | 94 | 344 | 244 | 300 x 200 | 21,00 | A |
| EJC31 | 415 | 315 | 338 | 228 | 238 | 294 | 285 | 11 | 176 | 344 | 244 | 300 x 200 | 25,00 | A |
| EJC51 | 566 | 366 | 388 | 240 | 252 | 360 | 337 | 13 | 185 | 487 | 287 | 450 x 250 | 40,00 | A |
| EJC61 | 668 | 468 | 490 | 343 | 355 | 500 | 443 | 13 | 277 | 580 | 380 | 530 x 330 | 80,00 | A |
| EJC63 | 668 | 468 | 490 | 217 | 229 | 500 | 443 | 13 | 151 | 580 | 380 | 530 x 330 | 66,00 | A |

Reference details

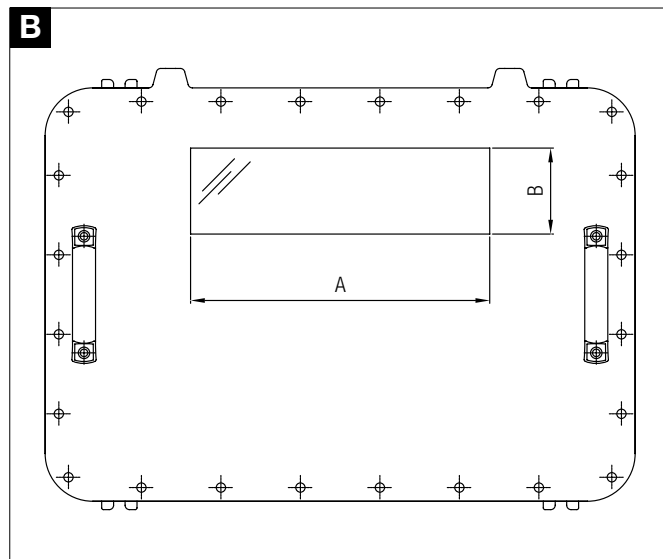


Glass windows on cover

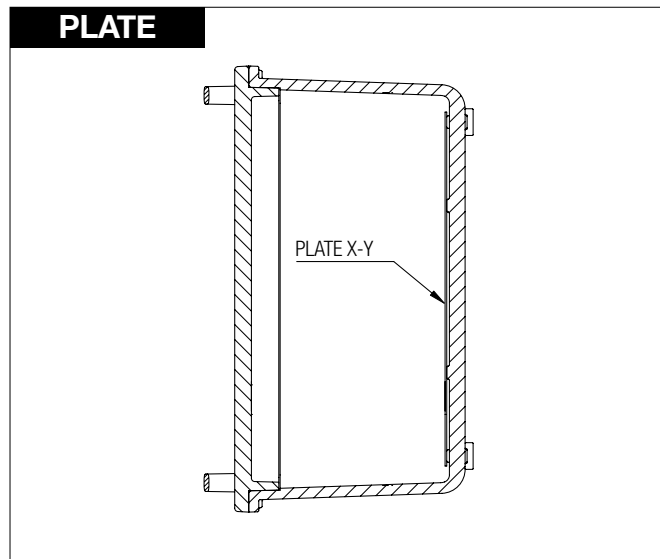
| WINDOW CODE | WINDOW TYPE | ENCLOSURE CODE | | | | WINDOW DIMENSIONS | | DETAIL |
|-------------|-------------|----------------|-----------|--------|-----------|-------------------|--------|--------|
| | | EJC-21 | EJC-30/31 | EJC-51 | EJC-61/63 | A [mm] | B [mm] | |
| KITF1ST | F1 | X | X | X | X | 60 | 60 | B |
| KITF2ST | F2 | X | X | X | X | 75 | 75 | B |
| KITF3ST | F3 | X | X | X | X | 110 | 75 | B |
| KITF4ST | F4 | X | X | X | X | 150 | 75 | B |
| KITF5ST | F5 | - | X | X | X | 150 | 150 | B |
| KITF6ST | F6 | - | - | X | X | 300 | 75 | B |
| KITF7ST | F7 | - | - | X | X | 300 | 150 | B |



Reference details

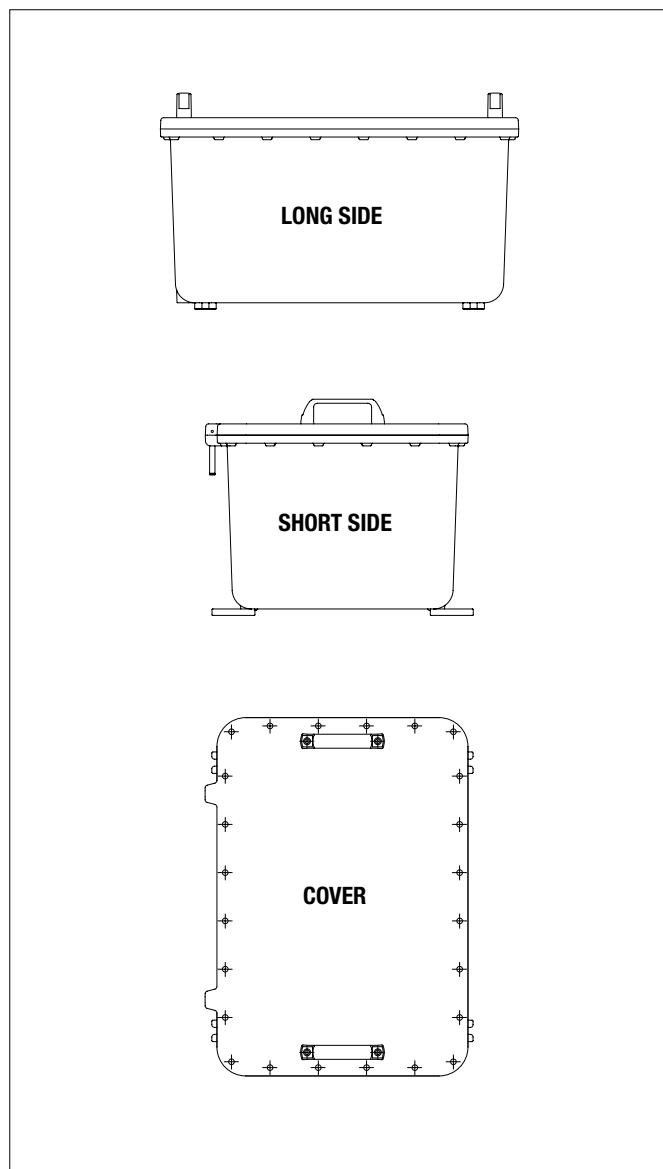


Reference details



Body and cover enclosures indicative maximum quantity of holes of the same size

Reference details



| DRILLING AREA LONG SIDE | | | | | | | | |
|-------------------------|--|----|----|----|----|----|----|---|
| ENCLOSURE CODE | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJC21 | 8 | 4 | 3 | 3 | 2 | 2 | 2 | / |
| EJC30 | 7 | 6 | 5 | 5 | / | / | / | / |
| EJC31 | 21 | 18 | 14 | 11 | 8 | 6 | 3 | 2 |
| EJC51 | 33 | 26 | 16 | 14 | 12 | 7 | 4 | 3 |
| EJC61 | 60 | 40 | 27 | 24 | 14 | 14 | 10 | 8 |
| EJC63 | 35 | 20 | 18 | 15 | 10 | 7 | 5 | 4 |

| DRILLING AREA SHORT SIDE | | | | | | | | |
|--------------------------|--|----|----|----|---|---|---|---|
| ENCLOSURE CODE | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| EJC21 | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| EJC30 | 5 | 4 | 4 | 3 | / | / | / | / |
| EJC31 | 15 | 12 | 9 | 8 | 6 | 4 | 2 | 1 |
| EJC51 | 18 | 14 | 8 | 8 | 6 | 4 | 2 | 2 |
| EJC61 | 40 | 24 | 18 | 15 | 8 | 8 | 6 | 6 |
| EJC63 | 23 | 12 | 12 | 9 | 6 | 4 | 3 | 3 |

| COVER DRILLING AREA | |
|---------------------|-------------------------|
| ENCLOSURE CODE | MAX OPERATORS PERMITTED |
| EJC21 | 12 |
| EJC30 | 30 |
| EJC31 | 30 |
| EJC51 | 54 |
| EJC61 | 56 |
| EJC63 | 56 |

Indicative quantity of terminals and relevant section

| CODE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT.35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT. PLATE X - Y [mm] |
|-------|----------------------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|
| | | | | | | | | | |
| EJC21 | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 8 x 1 | 6 x 1 | 2 x 1 | 1 x 1 | 180 x 140 |
| EJC30 | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 x 200 |
| EJC31 | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 300 x 200 |
| EJC51 | 80 x 2 | 46 x 2 | 36 x 2 | 30 x 2 | 22 x 2 | 18 x 2 | 16 x 1 | 6 x 1 | 450 x 250 |
| EJC61 | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 530 x 330 |
| EJC63 | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 530 - 330 |

Flamepath detail



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D

Certificate
NEMA Type 4X



REFERENCE STANDARDS

TERMINAL BOARD / POWER UNITS CONTROL AND SIGNALLING UNITS

NEC - NEMA 4, 7, 9

| | |
|-------------------------------|---|
| INSTALLATION | Class I - Groups B, C, e D Class II - Groups E, F, e G Class III |
| PROTECTION | 4, 7 BCD, 9 EFG |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +40°C |
| CERTIFICATION AND COMPLIANCES | UL Standard 1203 - 4 ^o Ed. (15 Sett. 2006) Explosion-Proof / Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations |

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | (e) II 2 G) Ex db IIA or IIB+H2 T6...T3 (e) II 2 G) Ex db [ia/ib IIA or IIB or IIC Ga] IIA or IIB or IIB+H2 T6 (e) II 2 D) Ex tb IIIC T85°C...T200°C (e) II 2 D) Ex tb [ia Da/ib] IIIC T85°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0058X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 13_0078X NEC 505: UL 20141125-E344596 - Type rating NEMA 1, 12, 4 and 4X |

Mechanical characteristics

| | |
|----------------|--|
| Body and cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel - internal / external |
| Internal plate | hot dip galvanized steel / aluminium |
| Fixing | galvanized steel stirrups th.10mm |
| Gaskets | O-RING silicon rubber on cover |



On Request Accessories:

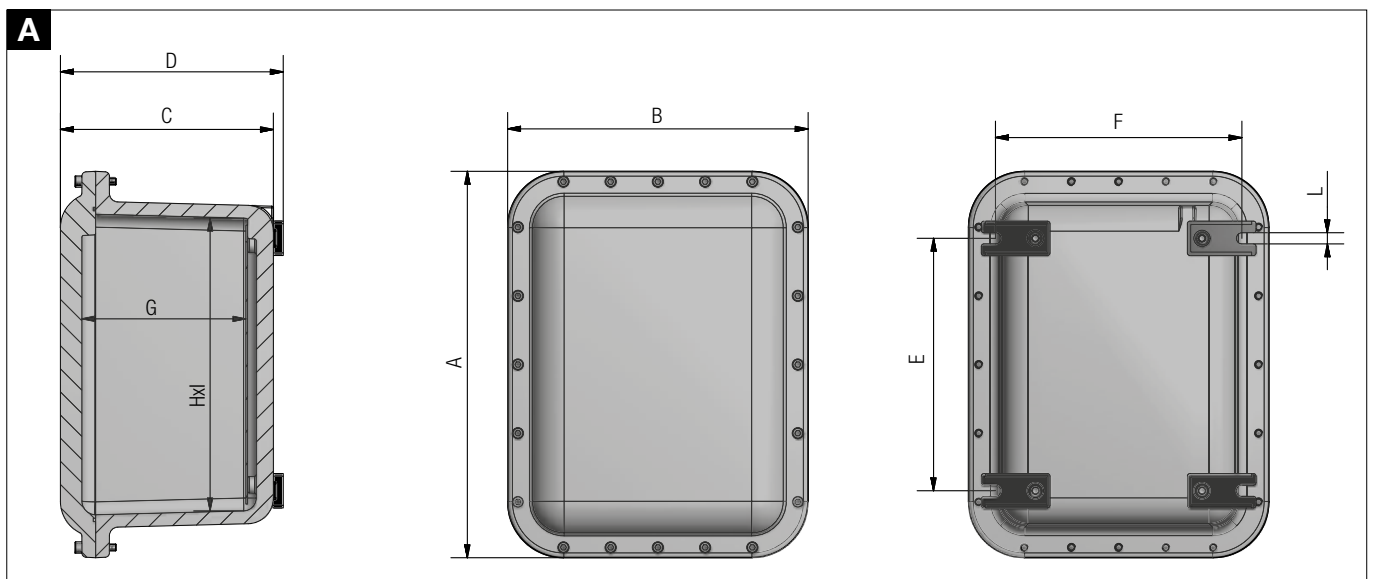
- External epoxy painting (any colours)
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Drain and breather valves
- Stainless steel AISI-316L hinges

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | L [mm] | INT. PLATE X-Y [mm] | WEIGHT [Kg] | DETAIL |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|-------------|--------|
| EJB21-UL | 320 | 280 | 177 | 189 | 180 | 233 | 121 | 214 | 174 | 13 | 180 - 140 | 13,50 | A |
| EJB31-UL | 450 | 350 | 248 | 260 | 294 | 287 | 191 | 341 | 241 | 13 | 325 - 225 | 27,00 | A |
| EJB51-UL | 600 | 400 | 266 | 278 | 360 | 333 | 195 | 481 | 281 | 13 | 460 - 260 | 52,50 | A |
| EJB61-UL | 710 | 500 | 389 | 397 | 500 | 460 | 277 | 566 | 356 | 12 | 560 - 360 | 114,00 | A |
| EJB63-UL | 710 | 500 | 259 | 267 | 500 | 460 | 147 | 571 | 362 | 12 | 560 - 360 | 92,00 | A |

| CODE | A [Inch] | B [Inch] | C [Inch] | D [Inch] | E [Inch] | F [Inch] | G [Inch] | H [Inch] | I [Inch] | L [Inch] | INT. PLATE X-Y [Inch] | LIBRE [Lbs] | DETAIL |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------------|-------------|--------|
| EJB21-UL | 12,60 | 11,10 | 7,00 | 7,50 | 7,10 | 9,20 | 4,80 | 8,50 | 6,90 | 0,60 | 7.10 - 5.60 | 31,00 | A |
| EJB31-UL | 17,80 | 13,80 | 9,80 | 10,30 | 11,60 | 11,30 | 7,60 | 13,50 | 9,50 | 0,60 | 12.80 - 8.90 | 62,00 | A |
| EJB51-UL | 23,70 | 15,80 | 10,50 | 11,00 | 14,20 | 13,20 | 7,70 | 19,00 | 11,10 | 0,60 | 18.20 - 10.30 | 121,00 | A |
| EJB61-UL | 28,00 | 19,70 | 15,40 | 15,70 | 19,70 | 18,20 | 11,00 | 22,30 | 14,10 | 0,50 | 22.10 - 14.20 | 262,00 | A |
| EJB63-UL | 28,00 | 19,70 | 10,20 | 10,60 | 19,70 | 18,20 | 5,80 | 22,50 | 14,30 | 0,50 | 22.10 - 14.20 | 212,00 | A |

Reference details



Body enclosures drilling layout

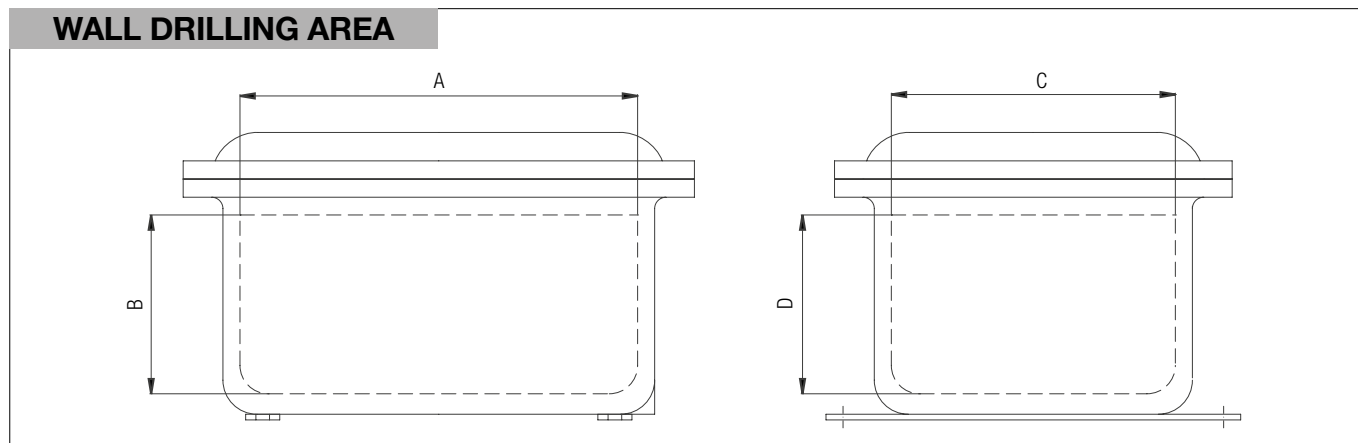
| ENCLOSURE CODE | AREA FOR ENTRY INSTALLATION (LONG WALL SIDES) | | | | AREA FOR ENTRY INSTALLATION (SHORT WALL SIDES) | | | |
|----------------|---|--------|-----------|-----------|--|--------|-----------|-----------|
| | A [mm] | B [mm] | A [inch.] | B [inch.] | C [mm] | D [mm] | C [inch.] | D [inch.] |
| EJB21-UL | 190 | 80 | 7,50 | 3,20 | 150 | 80 | 6,00 | 3,20 |
| EJB31-UL | 320 | 140 | 12,60 | 5,60 | 230 | 140 | 9,10 | 5,60 |
| EJB51-UL | 450 | 120 | 17,80 | 4,80 | 250 | 120 | 9,90 | 4,80 |
| EJB61-UL | 550 | 260 | 21,70 | 10,30 | 350 | 260 | 13,80 | 10,30 |
| EJB63-UL | 550 | 150 | 21,70 | 6,00 | 350 | 150 | 13,80 | 6,00 |



Body enclosures minimum distance between wall entries

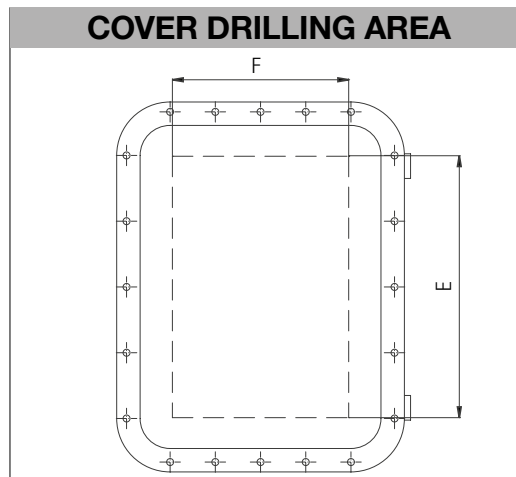
| MINIMUM DISTANCE BETWEEN WALL ENTRIES (CENTER TO CENTER) | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1st ROW [mm] - 2nd ROW [inch.] | | | | | | | | | |
| 4" | - | - | - | - | - | - | - | - | 139 |
| - | - | - | - | - | - | - | - | - | (5.47) |
| 3" | - | - | - | - | - | - | - | 115 | 126 |
| M90 | - | - | - | - | - | - | - | (4.53) | (4.96) |
| 2 1/2" | - | - | - | - | - | - | 101 | 108 | 120 |
| M75 | - | - | - | - | - | - | (3.98) | (4.25) | (4.72) |
| 2" | - | - | - | - | - | 88 | 94 | 102 | 112 |
| M63 | - | - | - | - | - | (3.46) | (3.70) | (4.02) | (4.41) |
| 1 1/2" | - | - | - | - | 75 | 82 | 88 | 95 | 106 |
| M50 | - | - | - | - | (2.95) | (3.23) | (3.46) | (3.74) | (4.17) |
| 1 1/4" | - | - | - | 67 | 70 | 77 | 84 | 91 | 103 |
| M40 | - | - | - | (2.64) | (2.76) | (3.03) | (3.31) | (3.58) | (4.06) |
| 1" | - | - | 58 | 63 | 66 | 73 | 80 | 86 | 99 |
| M32 | - | - | (2.28) | (2.48) | (2.60) | (2.87) | (3.15) | (3.39) | (3.90) |
| 3/4" | - | 52 | 55 | 59 | 63 | 69 | 79 | 83 | 95 |
| M25 | - | (2.05) | (2.17) | (2.32) | (2.48) | (2.72) | (2.99) | (3.27) | (3.74) |
| 1/2" | 46 | 49 | 52 | 57 | 60 | 67 | 73 | 80 | 93 |
| M20 | (1.81) | (1.93) | (2.05) | (2.24) | (2.36) | (2.64) | (2.87) | (3.15) | (3.66) |
| NPT | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
| Metric | M20 | M25 | M32 | M40 | M50 | M63 | M75 | M90 | - |

Reference details



Cover enclosures drilling layout

| ENCLOSURE CODE | AREA FOR OPERATORS INSTALLATION ENCLOSURE COVER | | | | MINIMUM DISTANCE BETWEEN OPENINGS (CENTER TO CENTER) | |
|----------------|---|--------|-----------|-----------|--|---------|
| | E [mm] | F [mm] | E [inch.] | F [inch.] | [mm] | [inch.] |
| EJB21-UL | 200 | 150 | 7,90 | 6,00 | 50 | 2,00 |
| EJB31-UL | 300 | 200 | 11,90 | 7,90 | 50 | 2,00 |
| EJB51-UL | 460 | 260 | 18,20 | 10,30 | 50 | 2,00 |
| EJB61-UL | 570 | 370 | 22,50 | 14,60 | 50 | 2,00 |
| EJB63-UL | 570 | 370 | 22,50 | 14,60 | 50 | 2,00 |



Indicative quantity of terminals and relevant section

| CODE | SEZ. 2,5 [sq/mm] | SEZ. 6,0 [sq/mm] | SEZ. 10,0 [sq/mm] | SEZ. 16,0 [sq/mm] | SEZ. 35,0 [sq/mm] | SEZ. 50,0 [sq/mm] | SEZ. 70,0 [sq/mm] | SEZ. 240,0 [sq/mm] | INT. PLATE X - Y | |
|----------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|------------------|---------------|
| | | | | | | | | | [mm] | [inch.] |
| EJB21-UL | 30 x 1 | 20 x 1 | 14 x 1 | 12 x 1 | 8 x 1 | 6 x 1 | 2 x 1 | 1 x 1 | 180 -140 | 7.10 - 5.60 |
| EJB31-UL | 52 x 2 | 32 x 2 | 24 x 2 | 20 x 2 | 14 x 2 | 12 x 1 | 8 x 1 | 4 x 1 | 325 -225 | 12.80 - 8.90 |
| EJB51-UL | 80 x 2 | 46 x 2 | 36 x 2 | 30 x 2 | 22 x 2 | 18 x 2 | 16 x 1 | 6 x 1 | 460 -260 | 18.20 - 10.30 |
| EJB61-UL | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 560 -350 | 22.10 - 14.20 |
| EJB63-UL | 92 x 3 | 58 x 3 | 46 x 3 | 38 x 3 | 28 x 3 | 26 x 2 | 22 x 2 | 12 x 1 | 560 -350 | 22.10 - 14.20 |

Additional Technical features for NEC 500 only

PRODUCT COVERED

Explosion-proof enclosures for use in Hazardous Locations, Class I, Groups B, C, and D; Class II, Groups E, F, and G; Class III. These enclosures are Classified as to explosion and fire hazards only in according to Standard UL1203 4th ed. The explosion-proof enclosures are suitable for Class I, Group B Hazardous Locations only when provided with from M20 to M90, 1/2 in. to 3 in., supply connection openings. If other supply connection openings are provided, then the enclosures are suitable for Class I, Groups C & D Hazardous Locations only. The 1/2 in. NPSM operator openings are only suitable for enclosures marked for Class I, Groups B, C & D Hazardous Locations. The enclosures covered by this Certification may have electrical components installed inside. The installation of electrical components shall not reduce the mechanical integrity of the enclosures. The enclosures may or may not be provided with hinges for service of the enclosures only.

PROTECTION AGAINST CORROSION

All ferrous-metal other than stainless steel shall be protected against corrosion, except at joint surfaces and conduit threads. There shall be no materials applied to joint surfaces.

GROUNDING

Internal Ground Screw – Hexagon head screw M6 x 10 with a stainless steel flat and lock washer provided on the base of the enclosure body.
External Ground – Terminal colored green, marked with the letter or word “G”, “GROUND”, or marked with a grounding symbol.

SUPPLY CONNECTIONS

NPT and Metric Supply Connections - The side walls of the enclosure are provided with conduit openings or none may be supplied, in which case field drilling and tapping instructions are provided with each enclosure. The entry is drilled and tapped completely through the enclosure wall, and the inside edge is smoothed and well-rounded such that the conductor insulation will not be damaged when installed. All unused openings are closed with plated steel, plated cast iron or aluminum close-up plugs which are threaded to match the opening. Closer-up Plugs have to be Listed for the same Class, Group and Division as marked on Enclosure nameplate.

OPERATOR OPENINGS

The cover of the enclosure may be provided with operator openings in the cover only and located only as given in drilling and tapping instructions provided with each Classified enclosure. All unused openings are closed with plated steel, plated cast iron or aluminum close-up plugs which are threaded to match the opening. Closer-up Plugs have to be Listed for the same Class, Group and Division as marked on Enclosure nameplate.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex db IIC T6...T3 ⊗ II 2 G Ex db [ja/ib/ic IIA or IIB or IIC Ga/Gc] IIC T6...T3 ⊗ II 2 D Ex tb IIIC T85°C...T200°C ⊗ II 2 D Ex tb [ia Da/ib/ic Dc] IIIC T85°C...T200°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0057X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9021U IECEx: IECEx INE 13.0076X Component: IECEx INE 13.0077U INMETRO: CEPEL 12.2140 EAC: TC RU C-IT.ГБ08.B.01468 RINA: ELE137217CS005 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC-505: 20141126-E356725 - Type rating NEMA 1, 12, 4 and 4X (GUB series only, GUBW not included) KC: 16-KA4B0- (from 0111X to 0016X and 0243X) KC (component): 16-KA4B0- (from 0103U to 0109U) |

Mechanical characteristics

| | |
|----------------|---|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | hot dip galvanized steel / aluminium |
| Fixing | fixing lugs AL UNI 4514 casting on enclosure body |



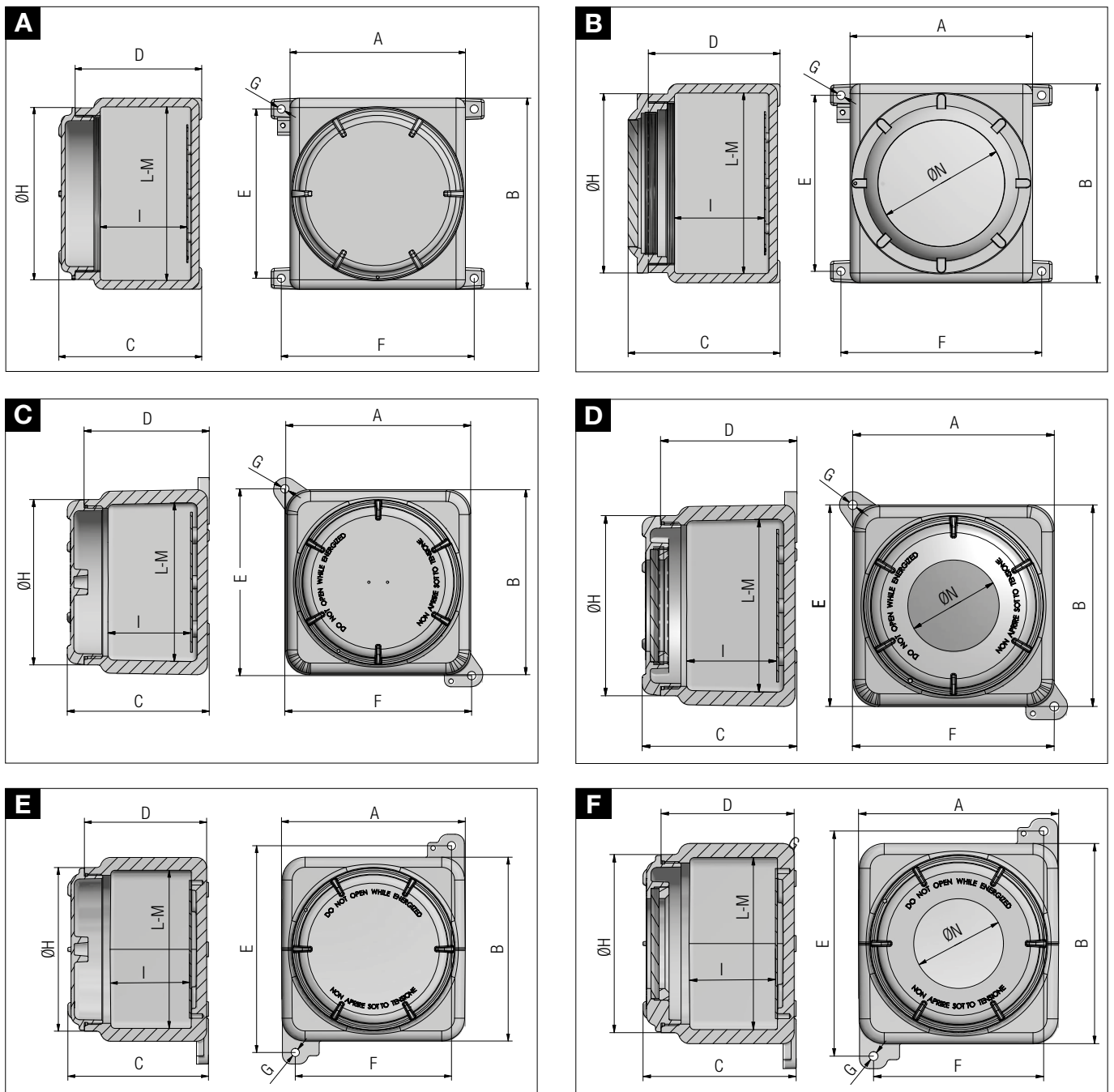
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Glass windows on cover
- Drain and breather valves
- Galvanized steel body & cover
- Cast iron body & cover

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | Ø G [mm] | H [mm] | I [mm] | L [mm] | M [mm] | Ø N [mm] | INT.PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|----------|----------------------|-------------|--------|
| GUB00 | 135 | 135 | 111 | 96 | 110 | 150 | 7 | 113 | 50 | 110 | 110 | - | - | 2,00 | C |
| GUB0 | 168 | 168 | 145 | 125 | 172 | 172 | 9 | 154 | 97 | 137 | 137 | - | 110 - 110 | 4,00 | C |
| GUB1 | 200 | 200 | 153 | 133 | 225 | 170 | 9 | 178 | 86 | 172 | 172 | - | 150 - 150 | 5,00 | E |
| GUB3 | 280 | 305 | 228 | 202 | 270 | 308 | 13 | 275 | 133 | 248 | 270 | - | 200 - 220 | 13,50 | A |
| GUB23 | 310 | 270 | 175 | 153 | 235 | 335 | 12 | 244 | 100 | 243 | 283 | - | 180 - 180 | 9,80 | A |
| GUB4 | 420 | 420 | 281 | 230 | 380 | 460 | 14 | 410 | 147 | 384 | 384 | - | 280 - 280 | 31,70 | A |
| GUB5 | 600 | 600 | 382 | 313 | 545 | 460 | 14 | 580 | 208 | 550 | 550 | - | 490 - 490 | 105,60 | A |
| GUBW1 | 200 | 200 | 153 | 133 | 225 | 170 | 9 | 178 | 86 | 172 | 172 | 90 | 150 - 150 | 5,10 | F |
| GUBW3 | 280 | 305 | 228 | 202 | 270 | 308 | 13 | 275 | 133 | 248 | 270 | 195 | 200 - 220 | 14,20 | B |
| GUBW23 | 310 | 270 | 175 | 153 | 235 | 335 | 12 | 244 | 100 | 243 | 283 | 150 | 180 - 180 | 10,30 | B |
| GUBW4 | 420 | 420 | 281 | 230 | 380 | 460 | 14 | 410 | 147 | 384 | 384 | 230 | 280 - 280 | 30,00 | B |

Reference details



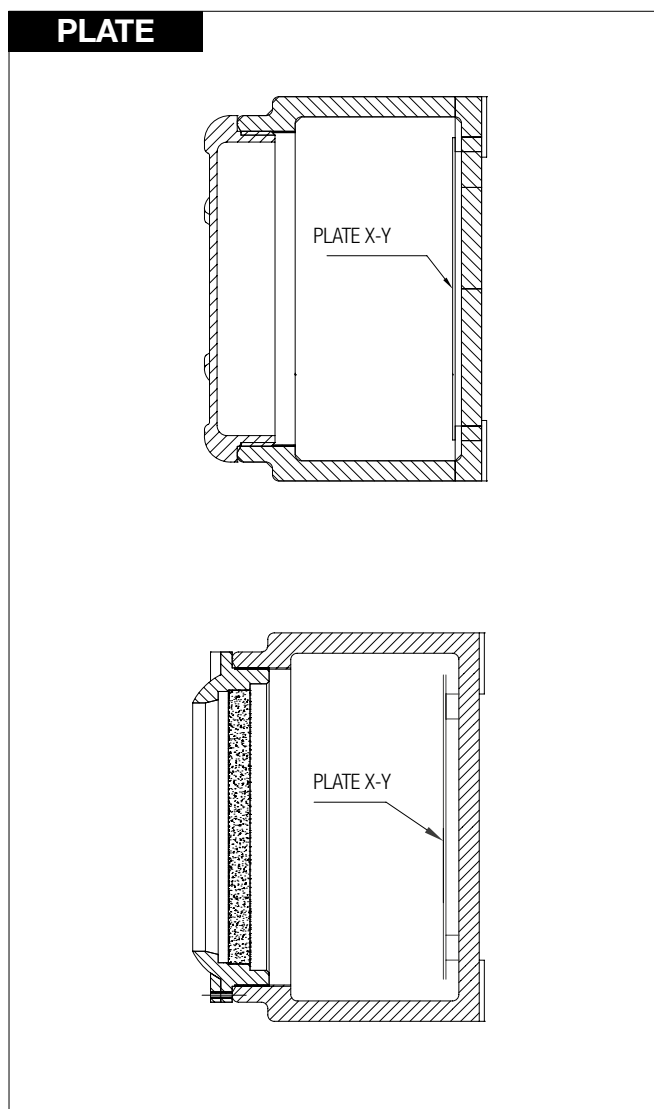
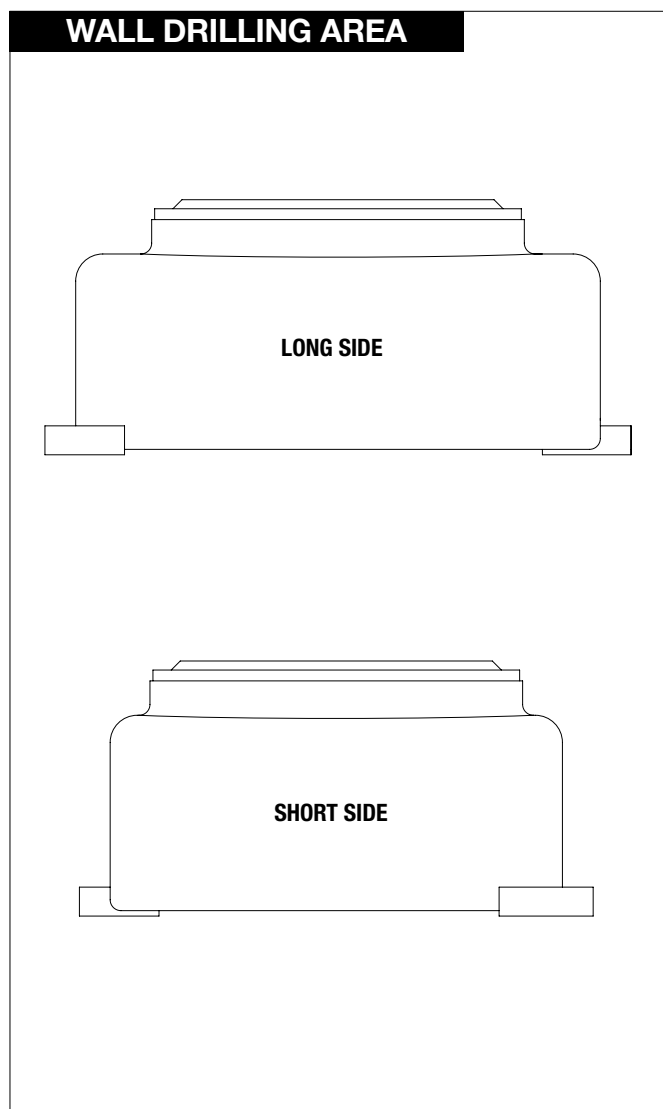


Body enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR size (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| GUB00 | 2 | 1 | 1 | 1 | / | / | / | / |
| GUB0 | 6 | 3 | 2 | 2 | 1 | 1 | 1 | / |
| GUB1 | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUB3 | 15 | 11 | 9 | 8 | 6 | 4 | 2 | 2 |
| GUB23 | 11 | 10 | 8 | 6 | 4 | 3 | 2 | / |
| GUB4 | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |
| GUB5 | 45 | 36 | 27 | 24 | 18 | 12 | 6 | 3 |
| GUBW1 | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUBW3 | 15 | 11 | 9 | 8 | 6 | 4 | 2 | 2 |
| GUBW23 | 11 | 10 | 8 | 6 | 4 | 3 | 2 | / |
| GUBW4 | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR size (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| GUB00 | 2 | 1 | 1 | 1 | / | / | / | / |
| GUB0 | 6 | 3 | 2 | 2 | 1 | 1 | 1 | / |
| GUB1 | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUB3 | 12 | 9 | 8 | 6 | 6 | 3 | 2 | 2 |
| GUB23 | 9 | 8 | 8 | 5 | 3 | 3 | 2 | / |
| GUB4 | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |
| GUB5 | 45 | 36 | 27 | 24 | 18 | 12 | 6 | 3 |
| GUBW1 | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUBW3 | 12 | 9 | 8 | 6 | 6 | 3 | 2 | 2 |
| GUBW23 | 9 | 8 | 8 | 5 | 3 | 3 | 2 | / |
| GUBW4 | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |

Reference details



Indicative quantity of terminals and relevant section

| CODE ENCLOSURE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT.PLATE X - Y [mm] |
|----------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------------------|
| GUB00 | 8x1 | 4x1 | 4x1 | 2x1 | 2x1 | / | / | / | Ø90 |
| GUB0 | 12x1 | 6x1 | 6x1 | 4x1 | 4x1 | 2x1 | 1x1 | / | 110 - 110 |
| GUB1 | 20x1 | 10x1 | 10x1 | 6x1 | 6x1 | 4x1 | 2x1 | 1x1 | 150 - 150 |
| GUB3 | 34x1 | 20x1 | 18x1 | 14x1 | 10x1 | 8x1 | 6x1 | 4x1 | 220 - 200 |
| GUB23 | 26x1 | 16x1 | 14x1 | 12x1 | 8x1 | 6x1 | 4x1 | 1x1 | 180 - 180 |
| GUB4 | 48x2 | 28x2 | 24x2 | 20x2 | 12x2 | 10x2 | 8x1 | 4x1 | 280 - 280 |
| GUB5 | 64x3 | 40x3 | 36x3 | 30x3 | 11x3 | 16x3 | 16x1 | 6x2 | 490 - 490 |
| GUBW1 | 20x1 | 10x1 | 10x1 | 6x1 | 6x1 | 4x1 | 2x1 | 1x1 | 150 - 150 |
| GUBW3 | 34x1 | 20x1 | 18x1 | 14x1 | 10x1 | 8x1 | 6x1 | 4x1 | 220 - 200 |
| GUBW23 | 26x1 | 16x1 | 14x1 | 12x1 | 8x1 | 6x1 | 4x1 | 1x1 | 180 - 180 |
| GUBW4 | 48x2 | 28x2 | 24x2 | 20x2 | 12x2 | 10x2 | 8x1 | 4x1 | 280 - 280 |

Threads comparison table

| size | EN10226-2 | ISO 228-1 | B1.20.1 | ISO 262 |
|------|-------------|-----------|------------|---------|
| 0 | R-Rc 1/8" | G 1/8" | 1/8" NPT | M10 |
| 1 | R-Rc 1/2" | G 1/2" | 1/2" NPT | M20 |
| 2 | R-Rc 3/4" | G 3/4" | 3/4" NPT | M25 |
| 3 | R-Rc 1" | G 1" | 1" NPT | M32 |
| 4 | R-Rc 1-1/4" | G 1-1/4" | 1-1/4" NPT | M40 |
| 5 | R-Rc 1-1/2" | G 1-1/2" | 1-1/2" NPT | M50 |
| 6 | R-Rc 2" | G 2" | 2" NPT | M63 |
| 7 | R-Rc 2-1/2" | G 2-1/2" | 2-1/2" NPT | M75 |
| 8 | R-Rc 3" | G 3" | 3" NPT | M85 |
| 9 | - | G 3-1/2" | 3-1/2" NPT | M100 |
| 10 | R-Rc 4" | G 4" | 4" NPT | - |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex db IIC T6...T3 |
| | ⊗ II 2 G Ex db [ia/ib/ic IIA or IIB or IIC Ga/Gc] IIC T6...T3 |
| RULES OF COMPLIANCE | ⊗ II 2 D Ex tb IIIC T85°C...T200°C |
| | ⊗ II 2 D Ex tb [ia Da/ib/ic Dc] IIIC T85°C...T200°C |
| EC Type-Examination Certificate | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | INERIS 13 ATEX 0057X |
| | Component: INERIS 13 ATEX 9021U |
| | IECEX: IECEX INE 13.0076X |
| | Component: IECEX INE 13.0077U |
| | INMETRO: CEPEL 12.2140 |
| | EAC: TC RU C-IT.ГБ08.B.01468 |
| | RINA: ELE137217CS005 |
| | RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 |
| | UL NEC-505: 20141126-E356725 - Type rating NEMA 1, 12, 4 and 4X (GUBX series only, GUBXW not included) |
| | KC: 16-KA4B0-(from 0111X to 0116X and 0243X) |
| | KC (component): 16-KA4B0-(from 0103U TO 0109U) |

Mechanical characteristics

| | |
|----------------|--|
| Body | stainless steel AISI-316L |
| Cover | stainless steel AISI-316L |
| Internal plate | stainless steel AISI-316L |
| Fixing | fixing lugs stainless steel AISI-316L welded on enclosure body |



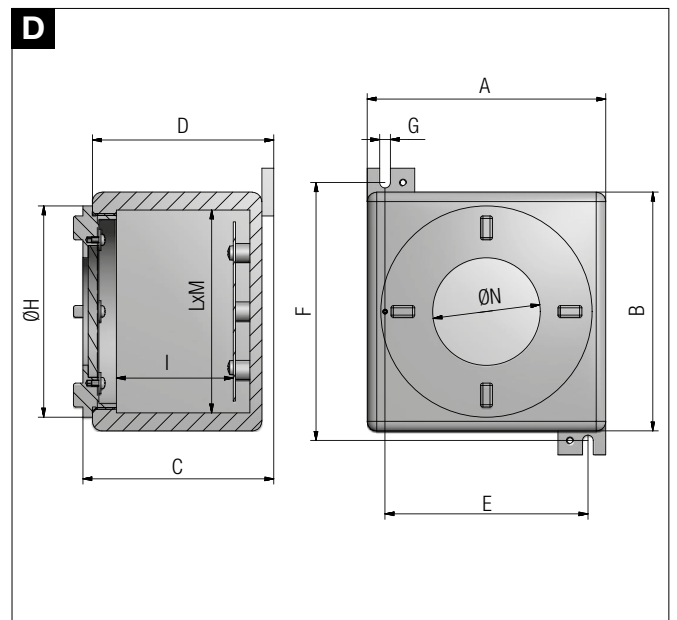
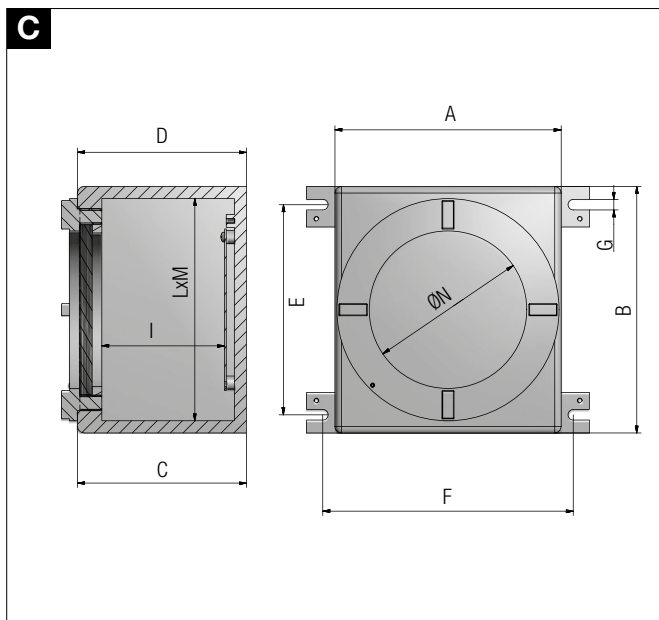
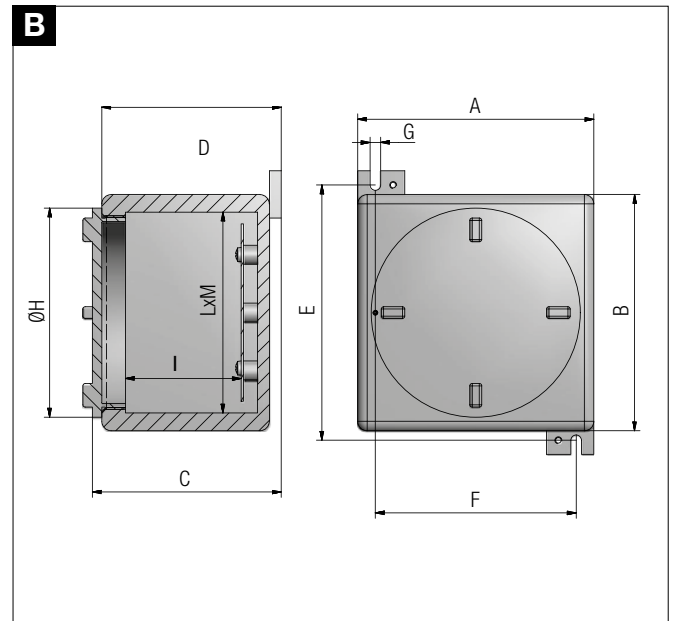
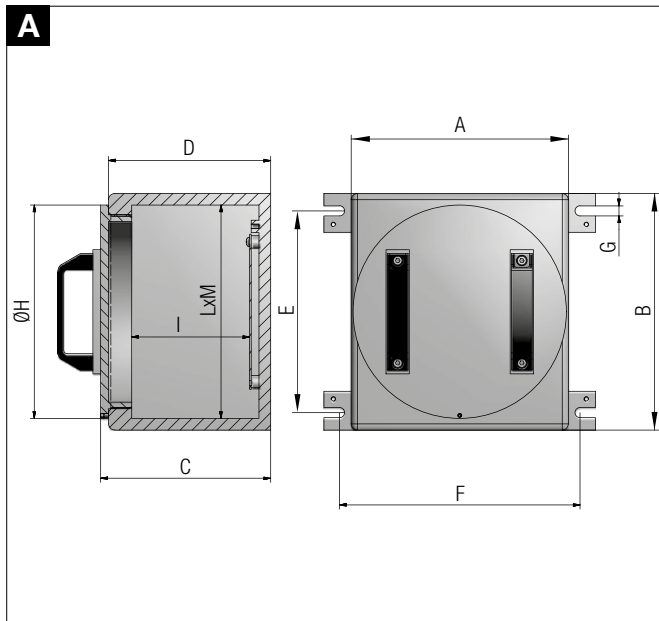
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Glass windows on cover
- Drain and breather valves

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | Ø G [mm] | H [mm] | I [mm] | L [mm] | Ø M [mm] | Ø N [mm] | INT.PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|---------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|----------|----------|----------------------|-------------|--------|
| GUB00X | 135 | 135 | 100 | 92 | 152 | 105 | 7 | 113 | 47 | 111 | 111 | - | - | 7,00 | B |
| GUB0X | 170 | 170 | 141 | 133 | 185 | 145 | 9 | 154 | 82 | 140 | 140 | - | 110 - 110 | 13,00 | B |
| GUB1X | 200 | 200 | 160 | 152 | 216 | 170 | 9 | 177 | 98 | 170 | 170 | - | 150 - 150 | 19,00 | B |
| GUB3X | 280 | 310 | 219 | 209 | 260 | 310 | 13 | 275 | 152 | 250 | 280 | - | 220 - 220 | 50,00 | A |
| GUB23X | 310 | 270 | 165 | 157 | 235 | 350 | 12 | 224 | 110 | 290 | 250 | - | 180 - 180 | 32,00 | B |
| GUB4X | 420 | 420 | 234 | 226 | 380 | 460 | 13 | 405 | 148 | 390 | 390 | - | 280 - 280 | 83,00 | A |
| GUB5X | 600 | 600 | 320 | 310 | 550 | 630 | 13 | 600 | 203 | 550 | 550 | - | 490 - 490 | 280,00 | A |
| GUBW1X | 200 | 200 | 160 | 152 | 216 | 170 | 9 | 177 | 98 | 170 | 170 | 90 | 150 - 150 | 19,00 | D |
| GUBW3X | 280 | 310 | 219 | 209 | 260 | 310 | 13 | 275 | 152 | 250 | 280 | 195 | 220 - 220 | 50,00 | C |
| GUBW23X | 310 | 270 | 165 | 157 | 235 | 350 | 12 | 224 | 110 | 290 | 250 | 150 | 180 - 180 | 32,00 | D |
| GUBW4X | 420 | 420 | 234 | 226 | 380 | 460 | 13 | 405 | 148 | 390 | 390 | 230 | 280 - 280 | 83,00 | C |

Reference details



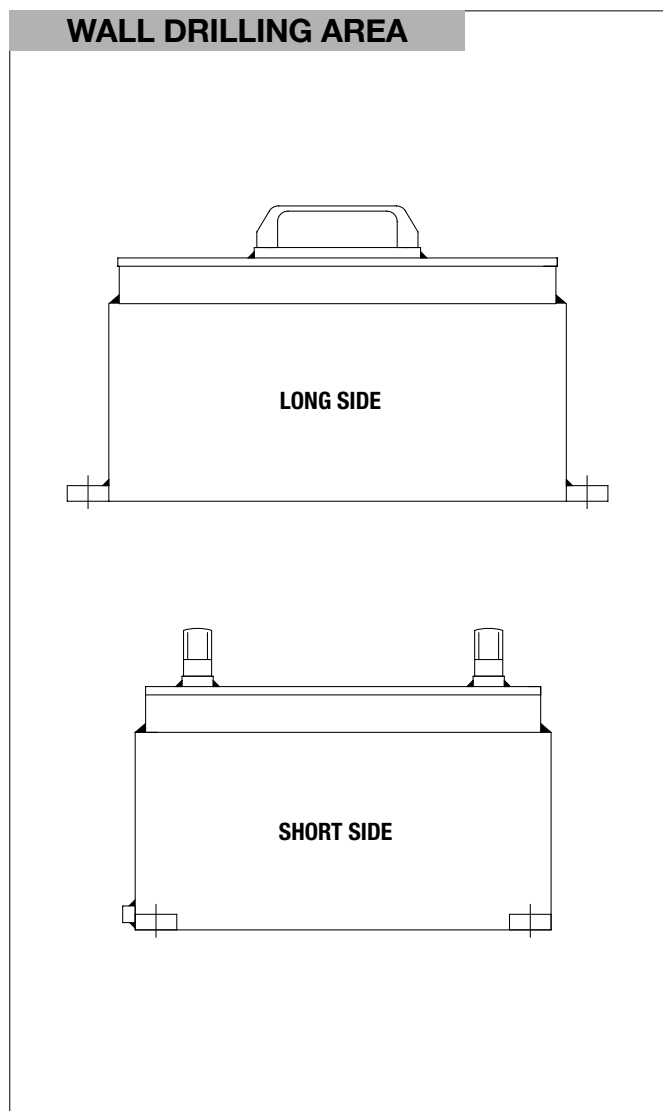


Body enclosures indicative maximum quantity of holes of the same size

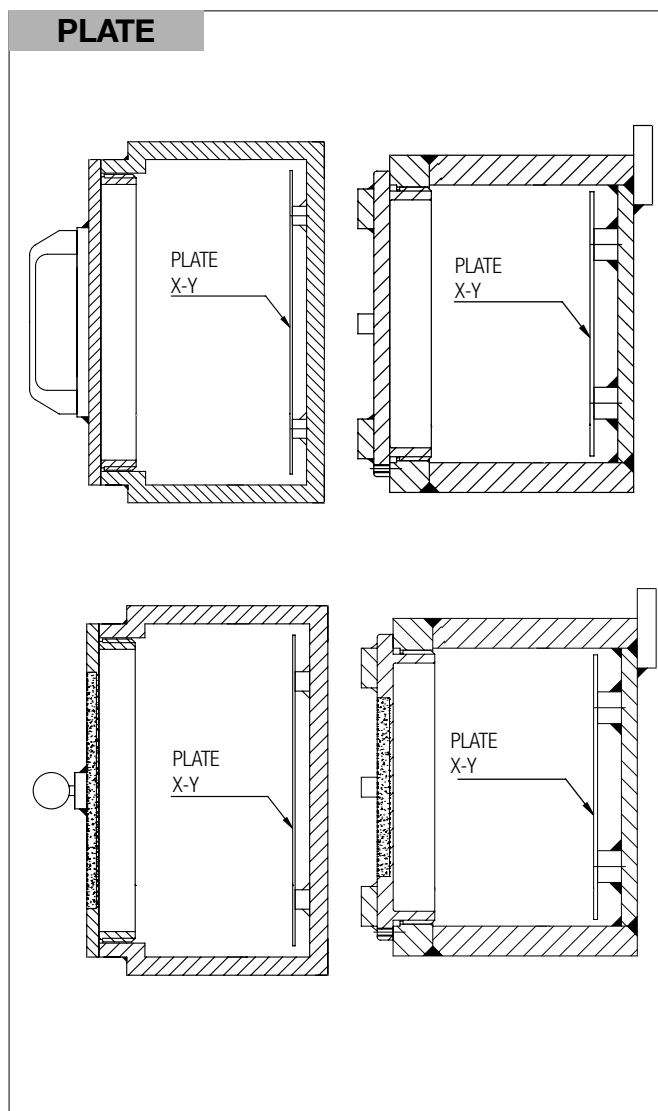
| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR size (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| GUB00X | 2 | 1 | 1 | 1 | / | / | / | / |
| GUB0X | 6 | 3 | 2 | 2 | 1 | 1 | 1 | / |
| GUB1X | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUB3X | 15 | 11 | 9 | 8 | 6 | 4 | 2 | 2 |
| GUB23X | 11 | 10 | 8 | 6 | 4 | 3 | 2 | / |
| GUB4X | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |
| GUB5X | 45 | 36 | 27 | 24 | 18 | 12 | 6 | 3 |
| GUBW1X | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUBW3X | 15 | 11 | 9 | 8 | 6 | 4 | 2 | 2 |
| GUBW23X | 11 | 10 | 8 | 6 | 4 | 3 | 2 | / |
| GUBW4X | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR size (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| GUB00X | 2 | 1 | 1 | 1 | / | / | / | / |
| GUB0X | 6 | 3 | 2 | 2 | 1 | 1 | 1 | / |
| GUB1X | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUB3X | 12 | 9 | 8 | 6 | 6 | 3 | 2 | 2 |
| GUB23X | 9 | 8 | 8 | 5 | 3 | 3 | 2 | / |
| GUB4X | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |
| GUB5X | 45 | 36 | 27 | 24 | 18 | 12 | 6 | 3 |
| GUBW1X | 6 | 3 | 3 | 2 | 2 | 1 | 1 | / |
| GUBW3X | 12 | 9 | 8 | 6 | 6 | 3 | 2 | 2 |
| GUBW23X | 9 | 8 | 8 | 5 | 3 | 3 | 2 | / |
| GUBW4X | 23 | 18 | 14 | 11 | 10 | 7 | 4 | 3 |

Reference details



Reference details



Indicative quantity of terminals and relevant section

| CODE ENCLOSURE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT.PLATE X - Y [mm] |
|----------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------------------|
| GUB00X | 8x1 | 4x1 | 4x1 | 2x1 | 2x1 | / | / | / | Ø90 |
| GUB0X | 12x1 | 6x1 | 6x1 | 4x1 | 4x1 | 2x1 | 1x1 | / | 110 - 110 |
| GUB1X | 20x1 | 10x1 | 10x1 | 6x1 | 6x1 | 4x1 | 2x1 | 1x1 | 150 - 150 |
| GUB3X | 34x1 | 20x1 | 18x1 | 14x1 | 10x1 | 8x1 | 6x1 | 4x1 | 220 - 200 |
| GUB23X | 26x1 | 16x1 | 14x1 | 12x1 | 8x1 | 6x1 | 4x1 | 1x1 | 180 - 180 |
| GUB4X | 48x2 | 28x2 | 24x2 | 20x2 | 12x2 | 10x2 | 8x1 | 4x1 | 280 - 280 |
| GUB5X | 64x3 | 40x3 | 36x3 | 30x3 | 11x3 | 16x3 | 16x1 | 6x2 | 490 - 490 |
| GUBW1X | 20x1 | 10x1 | 10x1 | 6x1 | 6x1 | 4x1 | 2x1 | 1x1 | 150 - 150 |
| GUBW3X | 34x1 | 20x1 | 18x1 | 14x1 | 10x1 | 8x1 | 6x1 | 4x1 | 220 - 200 |
| GUBW23X | 26x1 | 16x1 | 14x1 | 12x1 | 8x1 | 6x1 | 4x1 | 1x1 | 180 - 180 |
| GUBW4X | 48x2 | 28x2 | 24x2 | 20x2 | 12x2 | 10x2 | 8x1 | 4x1 | 280 - 280 |

Threads comparison table

| size | EN10226-2 | ISO 228-1 | B1.20.1 | ISO 262 |
|------|-------------|-----------|------------|---------|
| 0 | R-Rc 1/8" | G 1/8" | 1/8" NPT | M10 |
| 1 | R-Rc 1/2" | G 1/2" | 1/2" NPT | M20 |
| 2 | R-Rc 3/4" | G 3/4" | 3/4" NPT | M25 |
| 3 | R-Rc 1" | G 1" | 1" NPT | M32 |
| 4 | R-Rc 1-1/4" | G 1-1/4" | 1-1/4" NPT | M40 |
| 5 | R-Rc 1-1/2" | G 1-1/2" | 1-1/2" NPT | M50 |
| 6 | R-Rc 2" | G 2" | 2" NPT | M63 |
| 7 | R-Rc 2-1/2" | G 2-1/2" | 2-1/2" NPT | M75 |
| 8 | R-Rc 3" | G 3" | 3" NPT | M85 |
| 9 | - | G 3-1/2" | 3-1/2" NPT | M100 |
| 10 | R-Rc 4" | G 4" | 4" NPT | - |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | Ⓢ II 2 G Ex db IIC T6...T3 Gb Ⓢ II 2 G Ex eb IIC T5...T3 Gb Ⓢ II 2 D Ex tb IIIC T85°C...T200°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS ATEX 0050X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +130°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 05 ATEX 9010U IECEx: IECEx INE 12.0020X Component: IECEx INE 12.0022U INMETRO: CEPEL 12.2192 Component INMETRO: CEPEL 12.2190U EAC: TC RU C-IT.Г508.B.01468 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC-505: 20130808-E353501 (GUB-S / GUB-SY Series) KC: 16-KA4B0- (from 0085X to 0093X) KC (component): 16-KA4B0- (from 0094U to 0102U) CCOE-PESO: P405708/6 |

Mechanical characteristics

| | |
|---------|---|
| Body | marine grade copper free aluminum - stainless steel AISI316L (size 17/27/37 only) |
| Cover | marine grade copper free aluminum - stainless steel AISI316L (size 17/27/37 only) |
| Screws | stainless steel |
| Gaskets | O-Ring sealing NBR |



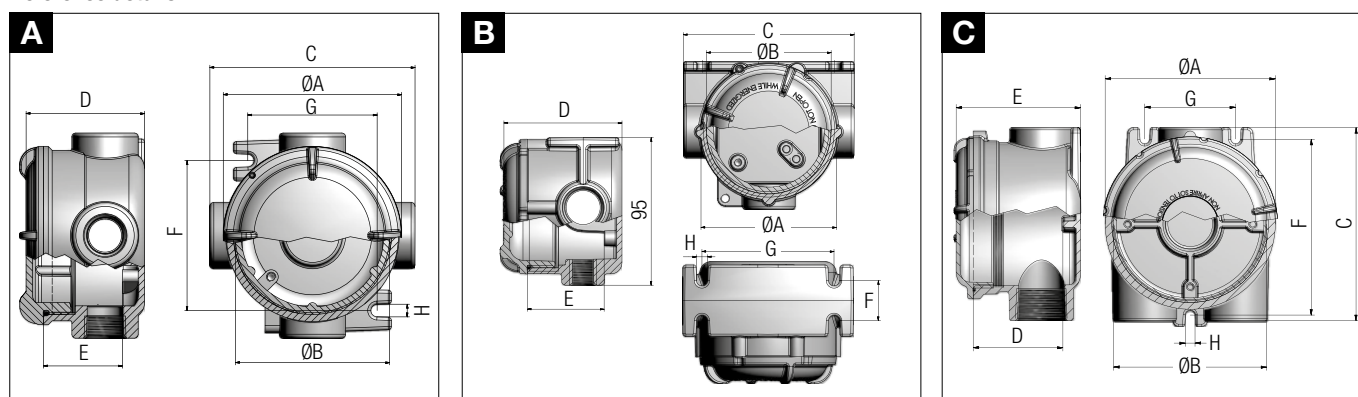
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- Cast Iron on request

Technical Features

| CODE | Ø A [mm] | Ø B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | WEIGHT [Kg] | DETAIL |
|--------|----------|----------|--------|--------|--------|--------|--------|--------|-------------|--------|
| S...16 | 87 | 77 | 100 | 75 | 40 | 70 | 70 | 7 | 0,60 | A |
| S...17 | 113 | 100 | 130 | 79 | 50 | 95 | 82 | 9 | 0,90 | A |
| S...26 | 87 | 77 | 100 | 75 | 40 | 70 | 70 | 7 | 0,60 | A |
| S...27 | 113 | 100 | 130 | 79 | 50 | 95 | 82 | 9 | 0,90 | A |
| S...36 | 87 | 77 | 100 | 75 | 40 | 70 | 70 | 7 | 0,60 | A |
| S...37 | 113 | 100 | 130 | 79 | 50 | 95 | 82 | 9 | 0,90 | A |
| S...59 | 154 | 135 | 169 | 110 | 75 | 100 | 130 | 7,5 | 1,30 | A |
| S...69 | 154 | 135 | 169 | 110 | 75 | 100 | 130 | 7,5 | 1,30 | A |
| SY59 | 154 | 135 | 169 | 110 | 75 | 155 | 80 | 9 | 1,30 | C |
| HEVF26 | 87 | 77 | 110 | 76 | 50 | 26 | 85 | 7 | 0,50 | B |

Reference details



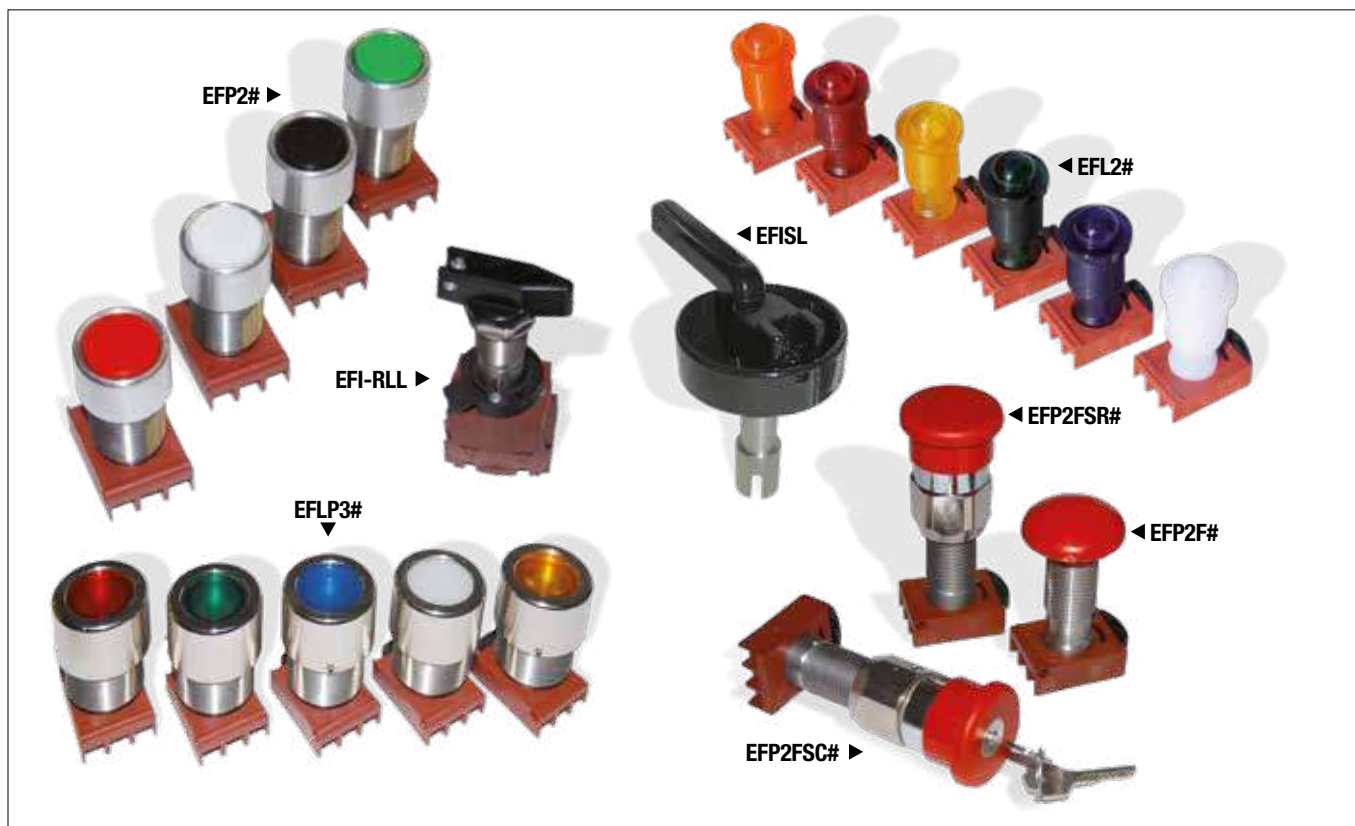
Hubs arrangement

| REFERENCE DETAILS | COMPLETE CODE | HUBS SIZE | REFERENCE DETAILS | COMPLETE CODE | HUBS SIZE |
|-------------------|---------------|------------|-------------------|---------------|------------|
| | SB16 | 2 x 1/2" | | SW16 | 4 x 1/2" |
| | SB17 | 2 x 1/2" | | SW17 | 4 x 1/2" |
| | SB26 | 2 x 3/4" | | SW26 | 4 x 3/4" |
| | SB27 | 2 x 3/4" | | SW27 | 4 x 3/4" |
| | SB36 | 2 x 1" | | SW36 | 4 x 1" |
| | SB37 | 2 x 1" | | SW37 | 4 x 1" |
| | SB59 | 2 x 1-1/2" | | SW59 | 4 x 1-1/2" |
| | SB69 | 2 x 2" | | SW69 | 4 x 2" |
| | | SL16 | | 2 x 1/2" | |
| SL17 | | 2 x 1/2" | SD17 | 3 x 1/2" | |
| SL26 | | 2 x 3/4" | SD26 | 3 x 3/4" | |
| SL27 | | 2 x 3/4" | SD27 | 3 x 3/4" | |
| SL36 | | 2 x 1" | SD36 | 3 x 1" | |
| SL37 | | 2 x 1" | SD37 | 3 x 1" | |
| SL59 | | 2 x 1-1/2" | SD59 | 3 x 1-1/2" | |
| SL69 | | 2 x 2" | SD69 | 3 x 2" | |
| | | SC16 | 2 x 1/2" | | |
| | SC17 | 2 x 1/2" | | | |
| | SC26 | 2 x 3/4" | | | |
| | SC27 | 2 x 3/4" | | | |
| | SC36 | 2 x 1" | | | |
| | SC37 | 2 x 1" | | | |
| | SC59 | 2 x 1-1/2" | | | |
| | SC69 | 2 x 2" | | | |
| | | ST16 | 3 x 1/2" | | |
| ST17 | | 3 x 1/2" | SM17 | 3 x 1/2" | |
| ST26 | | 3 x 3/4" | SM26 | 3 x 3/4" | |
| ST27 | | 3 x 3/4" | SM27 | 3 x 3/4" | |
| ST36 | | 3 x 1" | SM36 | 3 x 1" | |
| ST37 | | 3 x 1" | SM37 | 3 x 1" | |
| ST59 | | 3 x 1-1/2" | SM59 | 3 x 1-1/2" | |
| ST69 | | 3 x 2" | SM69 | 3 x 2" | |
| HEVF26 | | 3 x 3/4" | | | |
| | SX16 | 4 x 1/2" | | SJ16 | 5 x 1/2" |
| | SX17 | 4 x 1/2" | | SJ17 | 5 x 1/2" |
| | SX26 | 4 x 3/4" | | SJ26 | 5 x 3/4" |
| | SX27 | 4 x 3/4" | | SJ27 | 5 x 3/4" |
| | SX36 | 4 x 1" | | SJ36 | 5 x 1" |
| | SX37 | 4 x 1" | | SJ37 | 5 x 1" |
| | SX59 | 4 x 1-1/2" | | SJ59 | 5 x 1-1/2" |
| | SX69 | 4 x 2" | | SJ69 | 5 x 2" |



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

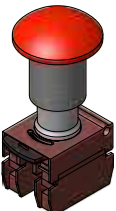
| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIB+H2 Gb or IIC Gb ⊗ II 2 D Ex tb IIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 9016U |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +200°C -60°C ÷ +95°C (pilot lights) |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 13.0072U INMETRO: CEPPEL 13.2256U EAC: TC RU C-IT.ГБ08.В.01324 (-60°C ÷ +60°C) NEC 505: UL 20140207-E465153 CCOE-PESO: P405708/8 |

Mechanical characteristics

| PILOT LIGHTS | |
|---------------------------------|--|
| Body | polycarbonate |
| Diffuser | polycarbonate |
| ILLUMINATED PUSH BUTTONS | |
| Body | stainless steel |
| Protection ring | nickel plated brass |
| Diffuser | polycarbonate |
| Transmission | stainless steel |
| HANDLES | |
| Body | marine grade copper free aluminium light alloy |
| Transmission parts | stainless steel |
| PUSH BUTTONS | |
| Body | stainless steel |
| Protection ring | nickel plated brass |
| Button | aluminium light alloy / polycarbonate |
| Transmission | stainless steel |



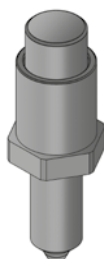
Technical data

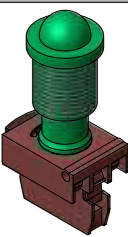
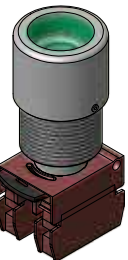
| HANDLES-D | NORMAL PUSH BUTTON CODE | PADLOCKABLE PUSH BUTTON CODE | CONTACTS | PUSH BUTTON COLOUR | THREAD SIZE |
|---|-------------------------|------------------------------|-------------|--------------------|-------------|
| NORMAL AND PADLOCKABLE TYPE SPRING RETURN PUSH BUTTON - CONTACTS 10AMP | | | | | |
|  <p>EFP2#</p>  <p>EFP2L#</p> | EFP2#AZ1 | EFP2L#AZ1 | 1 NO | LIGHT BLUE | ISO-M25 |
| | EFP2#AZ2 | EFP2L#AZ2 | 1 NC | LIGHT BLUE | ISO-M25 |
| | EFP2#AZ3 | EFP2L#AZ3 | 1 NO + 1 NC | LIGHT BLUE | ISO-M25 |
| | EFP2#AZ4 | EFP2L#AZ4 | 2 NO | LIGHT BLUE | ISO-M25 |
| | EFP2#AZ5 | EFP2L#AZ5 | 2 NC | LIGHT BLUE | ISO-M25 |
| | EFP2#BI1 | EFP2L#BI1 | 1 NO | WHITE | ISO-M25 |
| | EFP2#BI2 | EFP2L#BI2 | 1 NC | WHITE | ISO-M25 |
| | EFP2#BI3 | EFP2L#BI3 | 1 NO + 1 NC | WHITE | ISO-M25 |
| | EFP2#BI4 | EFP2L#BI4 | 2 NO | WHITE | ISO-M25 |
| | EFP2#BI5 | EFP2L#BI5 | 2 NC | WHITE | ISO-M25 |
| | EFP2#BL1 | EFP2L#BL1 | 1 NO | BLUE | ISO-M25 |
| | EFP2#BL2 | EFP2L#BL2 | 1 NC | BLUE | ISO-M25 |
| | EFP2#BL3 | EFP2L#BL3 | 1 NO + 1 NC | BLUE | ISO-M25 |
| | EFP2#BL4 | EFP2L#BL4 | 2 NO | BLUE | ISO-M25 |
| | EFP2#BL5 | EFP2L#BL5 | 2 NC | BLUE | ISO-M25 |
| | EFP2#GI1 | EFP2L#GI1 | 1 NO | YELLOW | ISO-M25 |
| | EFP2#GI2 | EFP2L#GI2 | 1 NC | YELLOW | ISO-M25 |
| | EFP2#GI3 | EFP2L#GI3 | 1 NO + 1 NC | YELLOW | ISO-M25 |
| | EFP2#GI4 | EFP2L#GI4 | 2 NO | YELLOW | ISO-M25 |
| | EFP2#GI5 | EFP2L#GI5 | 2 NC | YELLOW | ISO-M25 |
| | EFP2#NE1 | EFP2L#NE1 | 1 NO | BLACK | ISO-M25 |
| | EFP2#NE2 | EFP2L#NE2 | 1 NC | BLACK | ISO-M25 |
| | EFP2#NE3 | EFP2L#NE3 | 1 NO + 1 NC | BLACK | ISO-M25 |
| | EFP2#NE4 | EFP2L#NE4 | 2 NO | BLACK | ISO-M25 |
| | EFP2#NE5 | EFP2L#NE5 | 2 NC | BLACK | ISO-M25 |
| | EFP2#R01 | EFP2L#R01 | 1 NO | RED | ISO-M25 |
| | EFP2#R02 | EFP2L#R02 | 1 NC | RED | ISO-M25 |
| | EFP2#R03 | EFP2L#R03 | 1 NO + 1 NC | RED | ISO-M25 |
| | EFP2#R04 | EFP2L#R04 | 2 NO | RED | ISO-M25 |
| | EFP2#R05 | EFP2L#R05 | 2 NC | RED | ISO-M25 |
| EFP2#VE1 | EFP2L#VE1 | 1 NO | GREEN | ISO-M25 | |
| EFP2#VE2 | EFP2L#VE2 | 1 NC | GREEN | ISO-M25 | |
| EFP2#VE3 | EFP2L#VE3 | 1 NO + 1 NC | GREEN | ISO-M25 | |
| EFP2#VE4 | EFP2L#VE4 | 2 NO | GREEN | ISO-M25 | |
| EFP2#VE5 | EFP2L#VE5 | 2 NC | GREEN | ISO-M25 | |

| SPRING RETURN MUSHROOM PUSH BUTTON - CONTACTS 10AMP | | | | | |
|---|---------|--|-------------|-----|---------|
|  | EFP2F#1 | | 1 NO | RED | ISO-M25 |
| | EFP2F#2 | | 1 NC | RED | ISO-M25 |
| | EFP2F#3 | | 1 NO + 1 NC | RED | ISO-M25 |
| | EFP2F#4 | | 2 NO | RED | ISO-M25 |
| | EFP2F#5 | | 2 NC | RED | ISO-M25 |






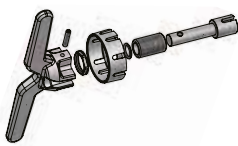
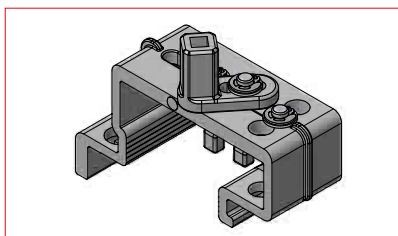


Technical data

| HANDLES-D | CODE | CONTACTS | PUSH BUTTON COLOUR | THREAD SIZE |
|--|-------------|-------------|--------------------|-------------|
| RELEASE BY KEY STAY-PUT MUSHROOM PUSH BUTTON - CONTACTS 10AMP | | | | |
|  | EFP2FSC#NE1 | 1 NO | BLACK | ISO-M25 |
| | EFP2FSC#NE2 | 1 NC | BLACK | ISO-M25 |
| | EFP2FSC#NE3 | 1 NO + 1 NC | BLACK | ISO-M25 |
| | EFP2FSC#NE4 | 2 NO | BLACK | ISO-M25 |
| | EFP2FSC#NE5 | 2 NC | BLACK | ISO-M25 |
| | EFP2FSC#RO1 | 1 NO | RED | ISO-M25 |
| | EFP2FSC#RO2 | 1 NC | RED | ISO-M25 |
| | EFP2FSC#RO3 | 1 NO + 1 NC | RED | ISO-M25 |
| | EFP2FSC#RO4 | 2 NO | RED | ISO-M25 |
| | EFP2FSC#RO5 | 2 NC | RED | ISO-M25 |
| TURN TO RELEASE STAY-PUT MUSHROOM PUSH BUTTON - CONTACTS 10AMP | | | | |
|  | EFP2FSR#GI1 | 1 NO | YELLOW | ISO-M25 |
| | EFP2FSR#GI2 | 1 NC | YELLOW | ISO-M25 |
| | EFP2FSR#GI3 | 1 NO + 1 NC | YELLOW | ISO-M25 |
| | EFP2FSR#GI4 | 2 NO | YELLOW | ISO-M25 |
| | EFP2FSR#GI5 | 2 NC | YELLOW | ISO-M25 |
| | EFP2FSR#NE1 | 1 NO | BLACK | ISO-M25 |
| | EFP2FSR#NE2 | 1 NC | BLACK | ISO-M25 |
| | EFP2FSR#NE3 | 1 NO + 1 NC | BLACK | ISO-M25 |
| | EFP2FSR#NE4 | 2 NO | BLACK | ISO-M25 |
| | EFP2FSR#NE5 | 2 NC | BLACK | ISO-M25 |
| | EFP2FSR#RO1 | 1 NO | RED | ISO-M25 |
| | EFP2FSR#RO2 | 1 NC | RED | ISO-M25 |
| | EFP2FSR#RO3 | 1 NO + 1 NC | RED | ISO-M25 |
| | EFP2FSR#RO4 | 2 NO | RED | ISO-M25 |
| | EFP2FSR#RO5 | 2 NC | RED | ISO-M25 |
| PUSHBUTTON KIT IN STAINLESS STEEL FOR SPECIAL APPLICATIONS (WITH/WITHOUT CONTACT) | | | | |
|  | KITPM10X | - | - | ISOM10 |
| | KITPM10XF | - | - | ISOM10 |

| HANDLES-D | CODE | CONTACTS DIAGRAM | SUPPLY | LAMPHOLDER | LAMP COLOUR | SIZE |
|---|-----------|------------------|------------------|------------|-------------|---------|
| PILOT LIGHT FOR BACK COVER INSTALLATION | | | | | | |
|  | EFL2#AZ | - | 12V ÷ 380V ac/dc | Ba-9s | LIGHT BLUE | ISO-M25 |
| | EFL2#BI | - | 12V ÷ 380V ac/dc | Ba-9s | WHITE | ISO-M25 |
| | EFL2#AZ | - | 12V ÷ 380V ac/dc | Ba-9s | BLUE | ISO-M25 |
| | EFL2#GI | - | 12V ÷ 380V ac/dc | Ba-9s | YELLOW | ISO-M25 |
| | EFL2#RO | - | 12V ÷ 380V ac/dc | Ba-9s | RED | ISO-M25 |
| | EFL2#VE | - | 12V ÷ 380V ac/dc | Ba-9s | GREEN | ISO-M25 |
| | EFL2#AR | - | 12V ÷ 380V ac/dc | Ba-9s | ORANGE | ISO-M25 |
| SPRING RETURN ILLUMINATED PUSH BUTTON FOR BACK COVER INSTALLATION | | | | | | |
|  | EFLP3#BL1 | 1NO | 12V ÷ 380V ac/dc | Ba-9s | BLUE | ISO-M32 |
| | EFLP3#BL3 | 1NO + 1NC | 12V ÷ 380V ac/dc | Ba-9s | BLUE | ISO-M32 |
| | EFLP3#GI2 | 1NC | 12V ÷ 380V ac/dc | Ba-9s | YELLOW | ISO-M32 |
| | EFLP3#GI3 | 1NO + 1NC | 12V ÷ 380V ac/dc | Ba-9s | YELLOW | ISO-M32 |
| | EFLP3#RO1 | 1NO | 12V ÷ 380V ac/dc | Ba-9s | RED | ISO-M32 |
| | EFLP3#RO2 | 1NC | 12V ÷ 380V ac/dc | Ba-9s | RED | ISO-M32 |
| | EFLP3#RO3 | 1NO + 1NC | 12V ÷ 380V ac/dc | Ba-9s | RED | ISO-M32 |
| | EFLP3#VE1 | 1NO | 12V ÷ 380V ac/dc | Ba-9s | GREEN | ISO-M32 |
| | EFLP3#VE3 | 1NO + 1NC | 12V ÷ 380V ac/dc | Ba-9s | GREEN | ISO-M32 |

Technical data

| HANDLES-D | CODE | HANDLE COLOUR | SIZE |
|---|---|---------------|--------------|
| BACK COVER INSTALLATION PADLOCKABLE HANDLE (for selector switch only) | | | |
|  | EFI-RLL EFI-RLLX (Stainless Steel) | BLACK | 1/2" ISO-228 |
|  with keys | EFI-RC EFI-RCX (Stainless Steel) | BLACK | 1" ISO-228 |
|  | EFI-MCB EFI-MCBX (Stainless Steel) | BLACK | 1/2" ISO-228 |
| BACK COVER INSTALLATION PADLOCKABLE HANDLE (for MCB only) | | | |
|  | EFI-SC EFI-SCX (Stainless Steel) | BLACK | 1/2" ISO-228 |
| PADLOCKABLE HANDLE FOR MCB (ALL POSITION) | | | |
|  | 2040.00578 2040.00578X (Stainless Steel) | BLACK | 1/2" ISO-228 |
|  | EFI-RLI EFI-RLIX (Stainless Steel) | BLACK | 1/2" ISO-228 |
| PADLOCKABLE HANDLE FOR MCCB 63A MAX (ALL POSITION) | | | |
|  | 2040.00258 2040.00258X (Stainless Steel) | BLACK | 1/2" ISO-228 |
| 63÷400A SIZE PADLOCKABLE HANDLE (ALL POSITIONS) | | | |
|  | EFI-MCCBR8 EFI-MCCBR8X (Stainless Steel) | BLACK | 1/2" ISO-228 |
| PADLOCKABLE DOUBLE HANDLE (ALL POSITIONS) | | | |
|  | EFI-MCCBR10/D EFI-MCCBR10X/D (Stainless steel) | BLACK | 3/4" ISO-228 |
| HANDLES-D | | CODE | |
| ROTARY DEVICE FOR SCHNEIDER MCB | | | |
|   | | 2010.00260 | |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊕ II 2 G Ex d IIC T6 Gb ⊕ II 2 D Ex tb IIIC T85°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 02 ATEX 0090X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 14.0013X EAC: TC RU C-IT.ГБ08.B.01468 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 |

Mechanical characteristics

| | |
|--------------|-----------------------------------|
| Body | marine grade copper free aluminum |
| Cover | marine grade copper free aluminum |
| Round window | transparent tempered glass |
| Gasket | NBR O-Ring sealing |



On Request Accessories:

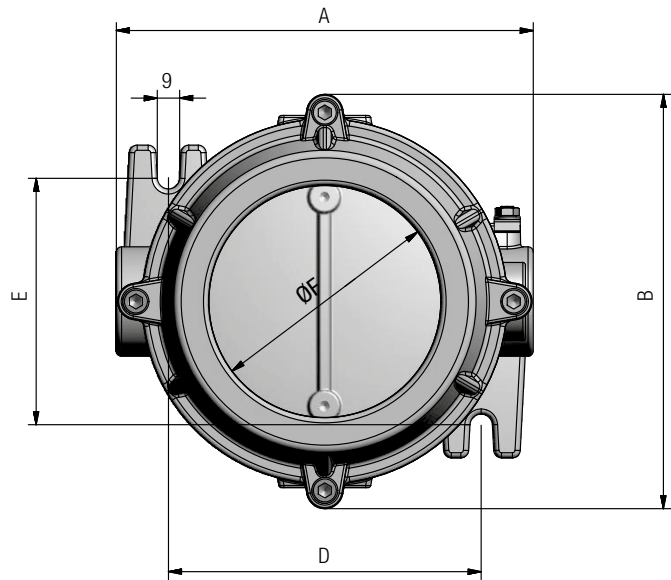
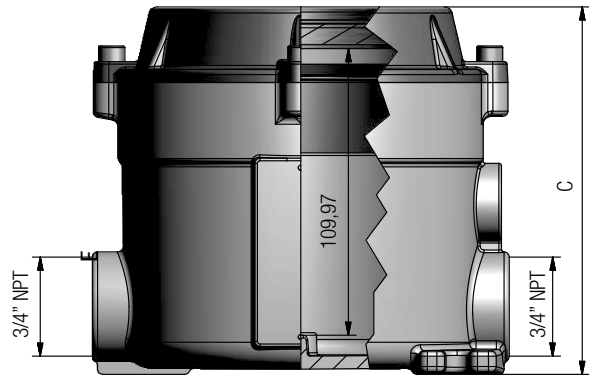
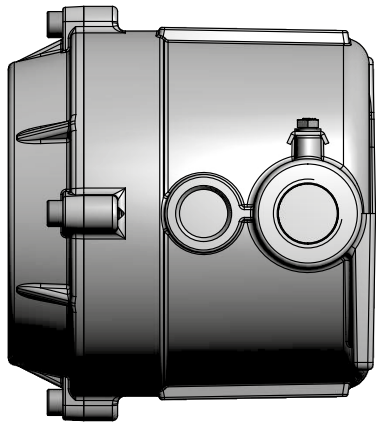
- External epoxy painting with colour on request
- Internal anticondensate painting
- AISI 316L stainless steel drain breather valve

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | ØH [mm] | WEIGHT [Kg] | THREADED ENTRY | DRAIN VALVE | DETAIL |
|---------|--------|--------|--------|--------|--------|--------|--------|---------|-------------|----------------|-------------|--------|
| EMH92 | 160 | 159 | 141 | 120 | 95 | 89 | 110 | 8 | 1,50 | 1 x 3/4" | NO | A |
| EMH922 | 160 | 159 | 141 | 120 | 95 | 89 | 110 | 8 | 1,50 | 2 x 3/4" | NO | A |
| EMH92V | 160 | 159 | 141 | 120 | 95 | 89 | 110 | 8 | 1,50 | 1 x 3/4" | YES | A |
| EMH922V | 160 | 159 | 141 | 120 | 95 | 89 | 110 | 8 | 1,50 | 2 x 3/4" | YES | A |

Reference details

A



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex e IIB or IIC T6 ÷ T3 Gb ⊗ II 2 D Ex tb IIIC T85°C ÷ T200°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-18; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0027X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C (+160°C with ceramic terminals) |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9027U IECEx: IECEx INE 11.0014X Component: IECEx INE 13.0101U INMETRO: CEPPEL 12.2158 EAC: TC RU C-IT.Г508.B.01468 RINA: ELE137217CS002 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20140131-E356725 - Type rating NEMA 1, 12, 4 and 4X Kc (Korean certification): 14-KB4BO-0449 and 14-KB4BO-0451 CCOE-PESO: P405708/3 (zone 2 only) |

Mechanical characteristics

| | |
|----------------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | aluminium |
| Gasket | silicon rubber |



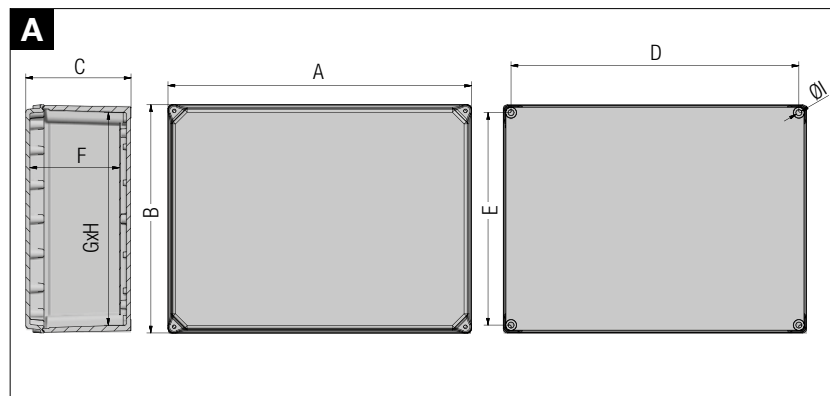
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- Drain and breather valves

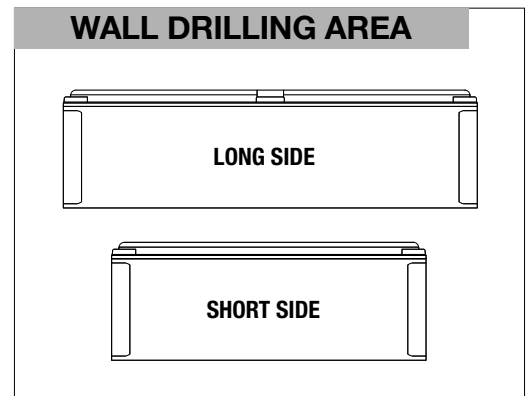
Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | INT.PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------|-------------|--------|
| ESA1313A | 130 | 130 | 87 | 115 | 115 | 70 | 112 | 112 | 6 | 110 - 70 | 1,20 | A |
| ESA1717A | 170 | 170 | 97 | 155 | 155 | 81 | 151 | 151 | 6 | 150 - 150 | 1,50 | A |
| ESA2216A | 220 | 160 | 96 | 205 | 145 | 80 | 141 | 201 | 6 | 200 - 100 | 3,80 | A |
| ESA2222A | 220 | 220 | 112 | 205 | 205 | 95 | 201 | 201 | 6 | 200 - 200 | 4,40 | A |
| ESA3322A | 330 | 220 | 123 | 310 | 200 | 103 | 201 | 311 | 8 | 294 - 154 | 6,40 | A |
| ESA3333A | 330 | 330 | 131 | 310 | 310 | 111 | 311 | 311 | 8 | 290 - 290 | 8,80 | A |
| ESA4433A | 440 | 330 | 154 | 420 | 310 | 131 | 311 | 421 | 8 | 400 - 290 | 11,40 | A |
| ESA5242A | 520 | 420 | 183 | 496 | 394 | 159 | 398 | 499 | 8 | 460 - 370 | 20,20 | A |
| ESA6348A | 630 | 480 | 181 | 615 | 465 | 156 | 459 | 609 | 8 | 550 - 400 | 21,30 | A |

Reference Details



Reference Details



Body enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESA1313A | 2 | 1 | 1 | 1 | / | / | / | / |
| ESA1717A | 5 | 3 | 2 | 2 | 2 | 1 | / | / |
| ESA2216A | 6 | 3 | 3 | 3 | 2 | 2 | / | / |
| ESA2222A | 9 | 5 | 3 | 3 | 3 | 2 | 2 | / |
| ESA3322A | 12 | 7 | 6 | 5 | 4 | 3 | 3 | / |
| ESA3333A | 12 | 7 | 6 | 5 | 4 | 3 | 2 | / |
| ESA4433A | 20 | 14 | 12 | 12 | 6 | 5 | 3 | / |
| ESA5242A | 30 | 18 | 16 | 12 | 12 | 8 | 4 | 3 |
| ESA6348A | 36 | 24 | 18 | 16 | 12 | 10 | 6 | 4 |

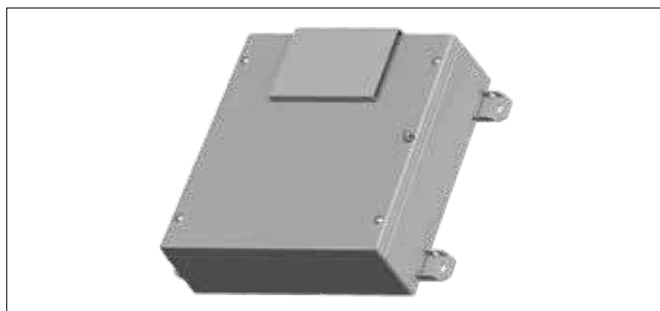
| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|---|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESA1313A | 2 | 1 | 1 | 1 | / | / | / | / |
| ESA1717A | 5 | 3 | 2 | 2 | 2 | 1 | / | / |
| ESA2216A | 4 | 2 | 2 | 2 | 1 | 1 | / | / |
| ESA2222A | 8 | 5 | 3 | 3 | 3 | 2 | 2 | / |
| ESA3322A | 8 | 5 | 4 | 4 | 3 | 2 | 2 | / |
| ESA3333A | 12 | 7 | 6 | 5 | 4 | 3 | 2 | / |
| ESA4433A | 14 | 10 | 8 | 8 | 4 | 3 | 2 | / |
| ESA5242A | 28 | 18 | 14 | 11 | 10 | 7 | 4 | 1 |
| ESA6348A | 30 | 21 | 15 | 12 | 10 | 8 | 4 | 3 |

Indicative quantity of terminals and relevant section

| CODE ENCLOSURE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SEZ. 16,0 [sq/mm] | SEZ. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT.PLATE X - Y [mm] |
|----------------|-------------------|-------------------|--------------------|-------------------|-------------------|--------------------|--------------------|---------------------|----------------------|
| ESA1313A | 10 x 1 | 5 x 1 | 4 x 1 | 4 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | / | 112 - 70 |
| ESA1717A | 20 x 1 | 10 x 1 | 8 x 1 | 8 x 1 | 6 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | 150 - 150 |
| ESA2216A | 30 x 1 | 18 x 1 | 14 x 1 | 10 x 1 | 8 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | 200 - 100 |
| ESA2222A | 30 x 1 | 18 x 1 | 14 x 1 | 10 x 1 | 8 x 1 | 4 x 1 | 2 x 1 | 2 x 1 | 200 - 200 |
| ESA3322A | 46 x 1 | 26 x 1 | 22 x 1 | 18 x 1 | 14 x 1 | 10 x 1 | 6 x 1 | 2 x 1 | 294 - 154 |
| ESA3333A | 46 x 2 | 24 x 2 | 22 x 2 | 16 x 2 | 14 x 2 | 10 x 1 | 8 x 1 | 3 x 1 | 290 - 290 |
| ESA4433A | 70 x 2 | 40 x 2 | 32 x 2 | 26 x 2 | 20 x 2 | 14 x 2 | 10 x 1 | 4 x 1 | 400 - 290 |
| ESA5242A | 70 x 3 | 44 x 3 | 34 x 3 | 30 x 3 | 22 x 3 | 18 x 2 | 14 x 1 | 6 x 1 | 460 - 370 |
| ESA6348A | 90 x 3 | 56 x 3 | 44 x 3 | 40 x 3 | 28 x 3 | 24 x 2 | 20 x 1 | 10 x 1 | 550 - 400 |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



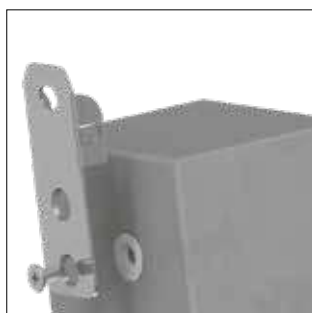
REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex e IIB or IIC T6 ÷ T3 Gb ⊗ II 2 D Ex tb IIIC T85°C ÷ T200°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-18; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0027X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C (+160°C with ceramic terminals) |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9027U IECEx: IECEx INE 11.0014X Component: IECEx INE 13.0101U INMETRO: CEPEL 12.2158 EAC: TC RU C-IT.ГБ08.В.01468 RINA: ELE137217CS002 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20140131-E356725 Type rating NEMA 1, 12, 4 and 4X Kc (Korean certification): 14-KB4B0-0450 and 14-KB4B0-0452 CCOE-PESO: P405708/3 (zone 2 only) |

Mechanical characteristics

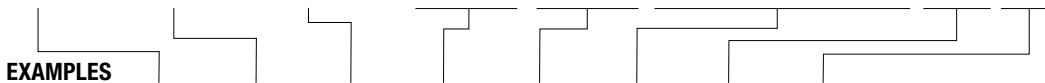
| | |
|----------------|---|
| Body | stainless steel AISI-316L - th. 1,5mm |
| Cover | stainless steel AISI-316L - th. 1,5mm |
| Screws | stainless steel AISI-316L |
| Internal plate | stainless steel AISI-316L - th. 1,5mm |
| Gasket | silicon rubber |
| Fixing | stainless steel AISI-316L fixing lugs, adjustable on horizontal / vertical / 45° position |
| Closing | with key (on demand) / with screws (on standard) |



- On Request Accessories:**
- Hinges system (universal positioning setup)
 - External fixing lugs for supplied loose (new positioning setup)
 - Padlockable lid system and/or closing with key device
 - External epoxy painting with colour on request
 - Internal anticondensate painting orange RAL-2004
 - Drain and breather valves
 - Removable flanges on side walls (see identification table)
 - Documents holders and name plate holder
 - Different thickness (body - cover - internal plate)

Technical Features

| LONG SIDE | | SHORT SIDE | | HEIGHT | | LONG SIDE FLANGE | | | | | | SHORT SIDE FLANGE | | | | | | TYPE OF CLOSING | | | | | | ACCES-SORIES | FIXING LUGS | INTERNAL HEIGHT | PLATE X-Y | WEIGHT | DETAIL | | | | | | |
|-----------|--------|------------|--------|--------|--------|------------------|---|---|---|---|---|-------------------|---|---|---|---|---|-----------------|---|-----|-----|-----|-----|--------------|-------------|-----------------|-----------|--------|--------|---|---|--------|-----------|-------|----|
| TYPE | A [mm] | TYPE | B [mm] | TYPE | C [mm] | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | D [mm] | [mm] | [Kg] | |
| 013 | 130 | 013 | 130 | B | 90 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 55 | 80-80 | 1,50 | A1 |
| 017 | 170 | 017 | 170 | B | 90 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 55 | 120-120 | 2,00 | A1 |
| 022 | 220 | 016 | 165 | A | 150 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 115 | 170-115 | 4,00 | A |
| | | 022 | 220 | A | 150 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 115 | 170-170 | 4,50 | |
| 033 | 330 | 022 | 220 | A | 150 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 115 | 280-170 | 5,50 | A |
| | | 033 | 330 | A | 150 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 115 | 280-280 | 7,50 | A |
| 040 | 400 | 040 | 400 | D | 200 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 165 | 350-350 | 8,50 | A |
| 044 | 440 | 033 | 330 | A | 150 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 115 | 390-280 | 9,00 | A |
| 052 | 520 | 042 | 420 | D | 200 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 165 | 470-370 | 12,50 | A |
| 063 | 630 | 048 | 480 | D | 200 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 165 | 580-430 | 16,50 | A |
| 150 | 1500 | 110 | 1100 | G | 900 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 865 | 1450-1050 | 145 | A |
| 200 | 2000 | 180 | 1800 | H | 600 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | CSS | CVL | CVC | SHL | SHC | PKL | PKC | 0 | T | P | 0 | K | 565 | 1950-1750 | 215 | A |



EXAMPLES

| | | | | | | | | |
|------|-----|-----|---|---|---|-----|---|---|
| ESX# | 013 | 013 | B | 0 | 0 | CSS | 0 | 0 |
|------|-----|-----|---|---|---|-----|---|---|

ESX#013013B00CSS00 = dimensions: 130x130x90, without flanges, closing lid with screws, without accessories, fixing lugs excluded.

| | | | | | | | | |
|------|-----|-----|---|---|---|-----|---|---|
| ESX# | 044 | 033 | A | 1 | 1 | CVL | T | K |
|------|-----|-----|---|---|---|-----|---|---|

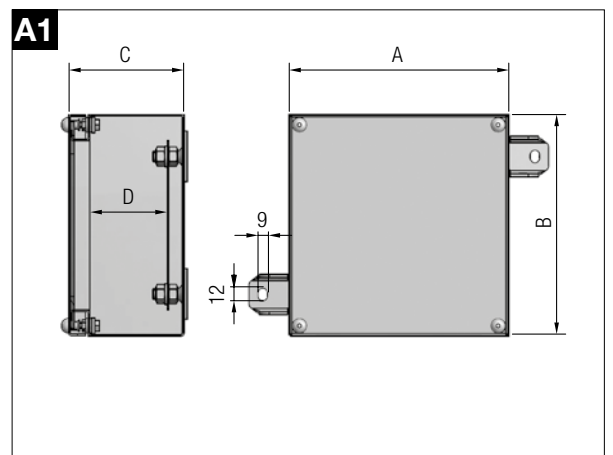
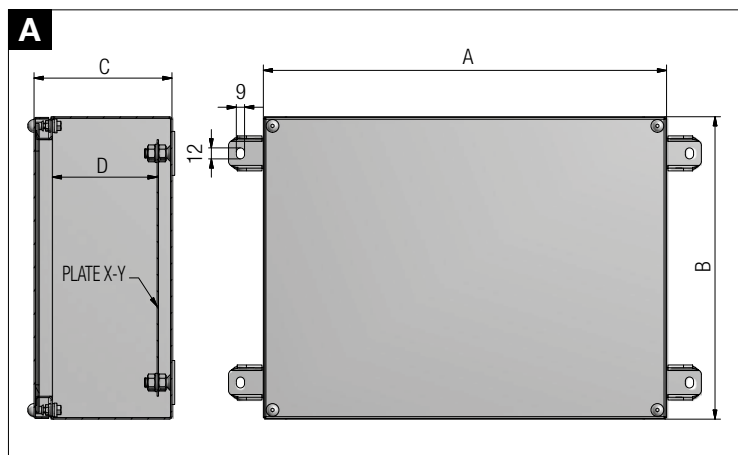
ESX#044033A11CVLTK = dimensions: 440x330x150, 1 flange long side, 1 flange short side, closing lid with hinges and screws long side, with internal documents holder and fixing lugs included.

| N° | Long Side Flange | N° | Short Side Flange | Code | Type of closing |
|----|---------------------------------------|----|--|------|---|
| 0 | without flanges | 0 | without flanges | CSS | closing lid with screws |
| 1 | n. 1 flange long side | 1 | n. 1 flange short side | CVL | closing lid with hinges and screws, long side |
| 2 | n. 2 flanges long side | 2 | n. 2 flanges short side | CVC | closing lid with hinges and screws, short side |
| 3 | n. 1 flange 3 mm thickness long side | 3 | n. 1 flange 3 mm thickness short side | SHL | closing lid with hinges and key, long side |
| 4 | n. 2 flanges 3 mm thickness long side | 4 | n. 2 flanges 3 mm thickness short side | SHC | closing lid with hinges and key, short side |
| 5 | n. 1 double flange long side | 5 | n. 1 double flange short side | PKL | closing lid with hinges and padlock, long side |
| 6 | n. 2 double flanges long side | 6 | n. 2 double flanges short side | PKC | closing lid with hinges and padlock, short side |

| Code | Accessories |
|------|--------------------------------|
| 0 | without accessories |
| T | with internal documents holder |
| P | with plateholder |

| Code | Fixing Lugs |
|------|----------------------|
| 0 | fixing lugs excluded |
| K | fixing lugs included |

Reference Details

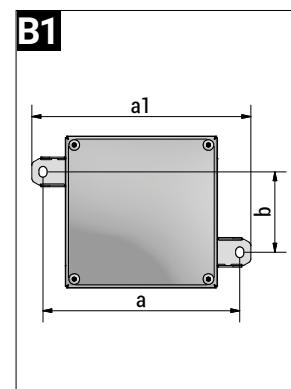
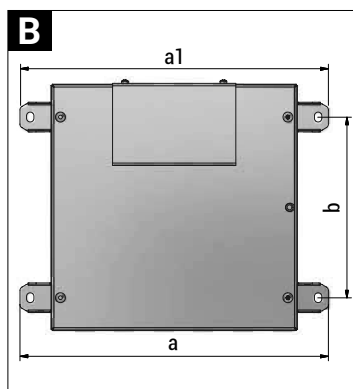




DISTANCE BETWEEN FIXING CENTERS

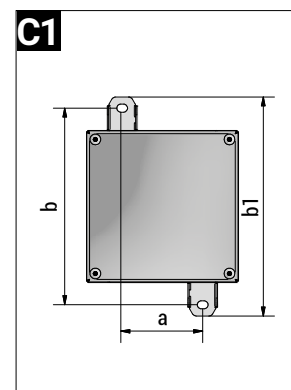
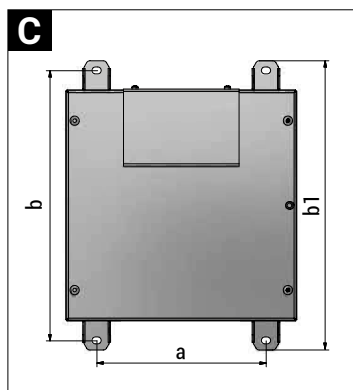
Horizontal position

| ENCLOSURE | a | b | a1 | DETAIL |
|--------------------------|--|-----|-----|--------|
| ESX#1313 | 180 | 50 | 205 | B1 |
| ESX#1717 | 220 | 90 | 245 | B1 |
| ESX#2216 | 270 | 85 | 295 | B |
| ESX#2222 | 270 | 140 | 295 | B |
| ESX#3322 | 380 | 140 | 405 | B |
| ESX#3333 | 380 | 250 | 405 | B |
| ESX#4040 | 450 | 320 | 475 | B |
| ESX#4433 | 490 | 250 | 515 | B |
| ESX#5242 | 570 | 340 | 595 | B |
| ESX#6348 | 680 | 400 | 705 | B |
| ESX#150110 ESX#200180 | * for further details, please contact our technical sales department | | | |



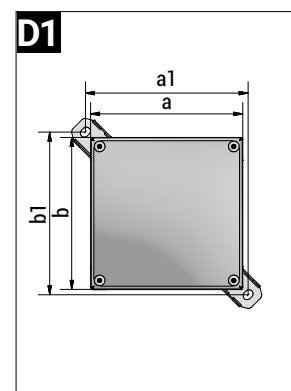
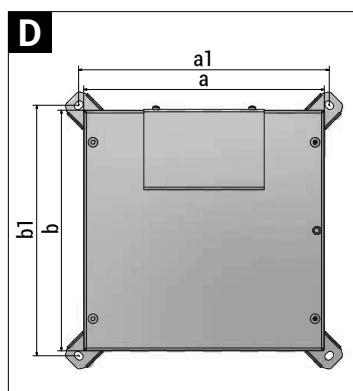
Vertical position

| Enclosure | a | b | b1 | DETAIL |
|--------------------------|--|-----|-----|--------|
| ESX#1313 | 50 | 180 | 205 | C1 |
| ESX#1717 | 90 | 220 | 245 | C1 |
| ESX#2216 | 140 | 210 | 235 | C |
| ESX#2222 | 140 | 270 | 295 | C |
| ESX#3322 | 250 | 270 | 295 | C |
| ESX#3333 | 250 | 380 | 405 | C |
| ESX#4040 | 320 | 450 | 475 | C |
| ESX#4433 | 360 | 380 | 405 | C |
| ESX#5242 | 440 | 470 | 495 | C |
| ESX#6348 | 550 | 530 | 555 | C |
| ESX#150110 ESX#200180 | * for further details, please contact our technical sales department | | | |



45° position

| Enclosure | a | b | a1 | b1 | DETAIL |
|--------------------------|--|-----|-----|-----|--------|
| ESX#1313 | 143 | 143 | 175 | 175 | D1 |
| ESX#1717 | 183 | 183 | 215 | 215 | D1 |
| ESX#2216 | 233 | 178 | 265 | 205 | D |
| ESX#2222 | 233 | 233 | 265 | 265 | D |
| ESX#3322 | 343 | 233 | 375 | 265 | D |
| ESX#3333 | 343 | 343 | 375 | 375 | D |
| ESX#4040 | 413 | 413 | 445 | 445 | D |
| ESX#4433 | 453 | 343 | 485 | 375 | D |
| ESX#5242 | 533 | 433 | 565 | 465 | D |
| ESX#6348 | 643 | 493 | 675 | 525 | D |
| ESX#150110 ESX#200180 | * for further details, please contact our technical sales department | | | | |

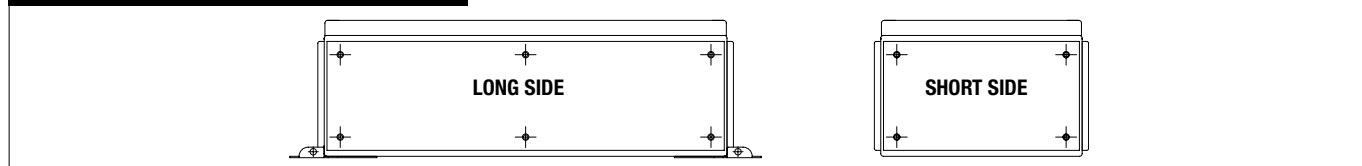


Removable flanges indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|--------------------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESX#2216 | 8 | 5 | 4 | 3 | 2 | 2 | 1 | / |
| ESX#2222 | 8 | 5 | 4 | 3 | 2 | 2 | 1 | / |
| ESX#3322 | 12 | 8 | 7 | 4 | 4 | 3 | 3 | / |
| ESX#3333 | 12 | 8 | 7 | 4 | 4 | 3 | 3 | / |
| ESX#4040 | 14 | 10 | 8 | 6 | 5 | 4 | 3 | / |
| ESX#4433 | 18 | 13 | 11 | 8 | 6 | 5 | 4 | / |
| ESX#5242 | 40 | 28 | 22 | 16 | 14 | 12 | 8 | 4 |
| ESX#6348 | 24 | 17 | 14 | 10 | 9 | 7 | 5 | / |
| ESX#150110 ESX#200180 | * for further details, please contact our technical sales department | | | | | | | |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|--------------------------|--|----|----|----|----|---|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESX#2216 | 6 | 3 | 2 | 2 | 1 | 1 | 1 | / |
| ESX#2222 | 8 | 5 | 4 | 3 | 2 | 2 | 1 | / |
| ESX#3322 | 8 | 5 | 4 | 3 | 2 | 2 | 1 | / |
| ESX#3333 | 12 | 8 | 7 | 4 | 4 | 3 | 3 | / |
| ESX#4040 | 14 | 10 | 8 | 6 | 5 | 4 | 3 | / |
| ESX#4433 | 14 | 9 | 7 | 5 | 4 | 3 | 3 | / |
| ESX#5242 | 32 | 22 | 18 | 14 | 10 | 8 | 6 | 3 |
| ESX#6348 | 18 | 13 | 10 | 8 | 6 | 5 | 4 | / |
| ESX#150110 ESX#200180 | * for further details, please contact our technical sales department | | | | | | | |

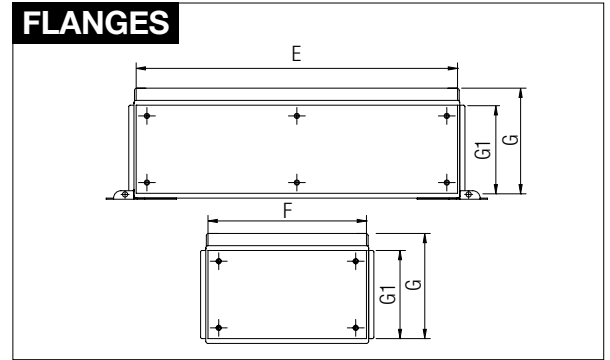
FLANGES DRILLING AREA



Removable flanges dimensions

| CODE | E [mm] | F [mm] | G [mm] | G1 [mm] |
|------------|--|--------|--------|---------|
| ESX#2216 | 214 | 159 | / | 119 |
| ESX#2222 | 214 | 214 | / | 119 |
| ESX#3322 | 324 | 214 | / | 119 |
| ESX#3333 | 324 | 324 | / | 119 |
| ESX#4040 | 394 | 394 | / | 169 |
| ESX#4433 | 484 | 359 | / | 119 |
| ESX#5242 | 514 | 414 | 212,5 | 169 |
| ESX#6348 | 624 | 474 | / | 169 |
| ESX#150110 | * for further details, please contact our technical sales department | | | |
| ESX#200180 | | | | |

Reference Details



Indicative quantity of terminals and relevant section

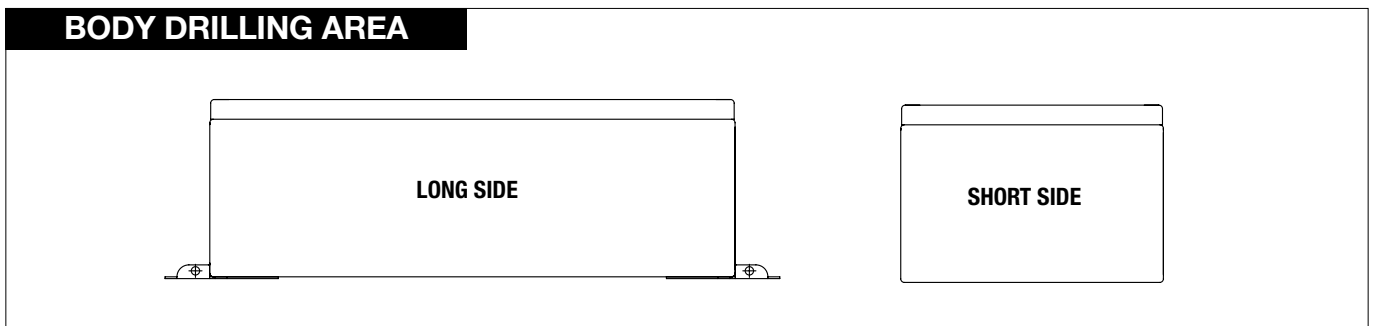
| ENCLOSURE CODE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT. 240,0 [sq/mm] | INT.PLATE X - Y [mm] |
|----------------|--|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------------------|
| ESX#1313 | 8 x 1 | 5 x 1 | 4 x 1 | 4 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | / | 80 - 80 |
| ESX#1717 | 22 x 1 | 12 x 1 | 10 x 1 | 8 x 1 | 7 x 1 | 5 x 1 | 4 x 1 | / | 120 - 120 |
| ESX#2216 | 30 x 1 | 18 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 8 x 1 | 6 x 1 | 1 x 1 | 170 - 115 |
| ESX#2222 | 30 x 1 | 18 x 1 | 14 x 1 | 12 x 1 | 9 x 1 | 8 x 1 | 6 x 1 | 2 x 1 | 170 - 170 |
| ESX#3322 | 48 x 1 | 30 x 1 | 24 x 1 | 18 x 1 | 15 x 1 | 12 x 1 | 11 x 1 | 2 x 1 | 280 - 170 |
| ESX#3333 | 48 x 2 | 30 x 2 | 24 x 2 | 18 x 2 | 15 x 2 | 12 x 2 | 11 x 1 | 2 x 1 | 280 - 280 |
| ESX#4040 | 70 x 2 | 42 x 2 | 34 x 2 | 28 x 2 | 22 x 2 | 18 x 2 | 16 x 1 | 4 x 1 | 350 - 350 |
| ESX#4433 | 78 x 2 | 50 x 2 | 40 x 2 | 34 x 2 | 26 x 2 | 20 x 2 | 18 x 1 | 8 x 1 | 390 - 280 |
| ESX#5242 | 86 x 2 | 55 x 2 | 44 x 2 | 36 x 2 | 28 x 2 | 22 x 2 | 19 x 2 | 6 x 1 | 470 - 370 |
| ESX#6348 | 108 x 3 | 68 x 3 | 54 x 3 | 46 x 3 | 34 x 3 | 28 x 3 | 26 x 2 | 10 x 1 | 580 - 430 |
| ESX#150110 | * for further details, please contact our technical sales department | | | | | | | | 1450 - 1050 |
| ESX#200180 | | | | | | | | | 1950 - 1750 |

Body enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|----|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESX#1313 | 2 | 2 | / | / | / | / | / | / |
| ESX#1717 | 3 | 3 | / | / | / | / | / | / |
| ESX#2216 | 8 | 8 | 6 | 5 | 3 | 2 | 2 | 1 |
| ESX#2222 | 8 | 8 | 6 | 5 | 3 | 2 | 2 | 1 |
| ESX#3322 | 12 | 12 | 10 | 8 | 4 | 4 | 3 | 2 |
| ESX#3333 | 12 | 12 | 10 | 8 | 4 | 4 | 3 | 2 |
| ESX#4040 | 18 | 14 | 12 | 9 | 6 | 4 | 3 | 3 |
| ESX#4433 | 20 | 18 | 15 | 12 | 8 | 6 | 4 | 4 |
| ESX#5242 | 44 | 27 | 24 | 21 | 16 | 14 | 10 | 5 |
| ESX#6348 | 29 | 22 | 20 | 16 | 10 | 7 | 6 | 5 |
| ESX#150110 | * for further details, please contact our technical sales department | | | | | | | |
| ESX#200180 | | | | | | | | |

| ENCLOSURE CODE] | DRILLING AREA SHORT SIDE | | | | | | | |
|-----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ESX#1313 | 2 | 2 | / | / | / | / | / | / |
| ESX#1717 | 3 | 3 | / | / | / | / | / | / |
| ESX#2216 | 6 | 6 | 4 | 3 | 2 | 2 | 1 | 1 |
| ESX#2222 | 8 | 8 | 6 | 5 | 3 | 2 | 2 | 1 |
| ESX#3322 | 8 | 8 | 6 | 5 | 3 | 2 | 2 | 1 |
| ESX#3333 | 12 | 12 | 10 | 8 | 4 | 4 | 3 | 2 |
| ESX#4040 | 18 | 14 | 12 | 9 | 6 | 4 | 3 | 3 |
| ESX#4433 | 14 | 14 | 10 | 8 | 5 | 4 | 3 | 3 |
| ESX#5242 | 36 | 21 | 18 | 15 | 12 | 11 | 8 | 4 |
| ESX#6348 | 21 | 16 | 15 | 12 | 7 | 5 | 4 | 3 |
| ESX#150110 | * for further details, please contact our technical sales department | | | | | | | |
| ESX#200180 | | | | | | | | |

Reference Details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex d e ia/ib mb IIC T6...T4 Gb ⊗ II 2 D Ex tb IIIC T85°C...T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-18; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0041X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -50°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9007U IECEX: IECEX INE 13.0057X IECEX (component): IECEX INE 13.0005U INMETRO: CEPEL 13.2286 INMETRO (component): CEPEL 13.2272U EAC: TC RU C-IT.Г508.B.01468 RINA: ELE137217CS001 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20140131-E356725 - Type rating NEMA 1, 12, 4 and 4X |

Mechanical characteristics

| | |
|----------------|--|
| Body | glass fibre reinforced polyester resin |
| Cover | glass fibre reinforced polyester resin |
| Screws | external - stainless steel |
| Internal plate | aluminium sp. 1,5mm |
| Gasket | silicon rubber |
| Strenght | 4 Joule impact resistance |



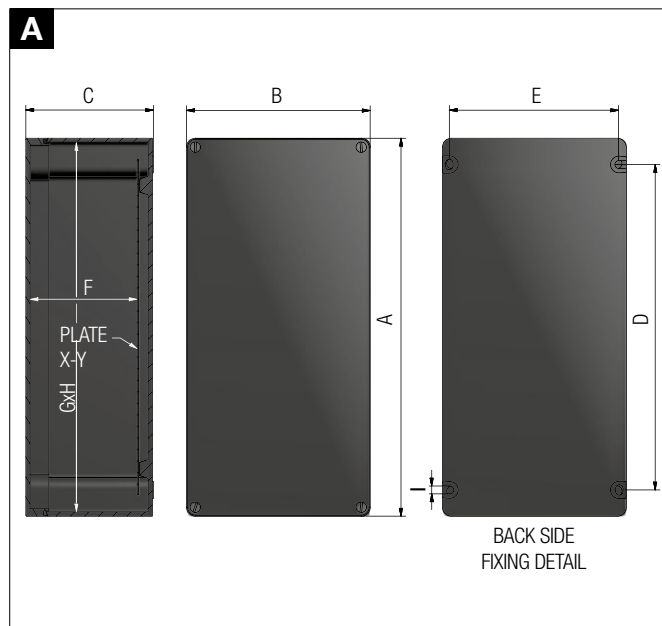
On Request Accessories:
• Drain and breather valves

Technical Features

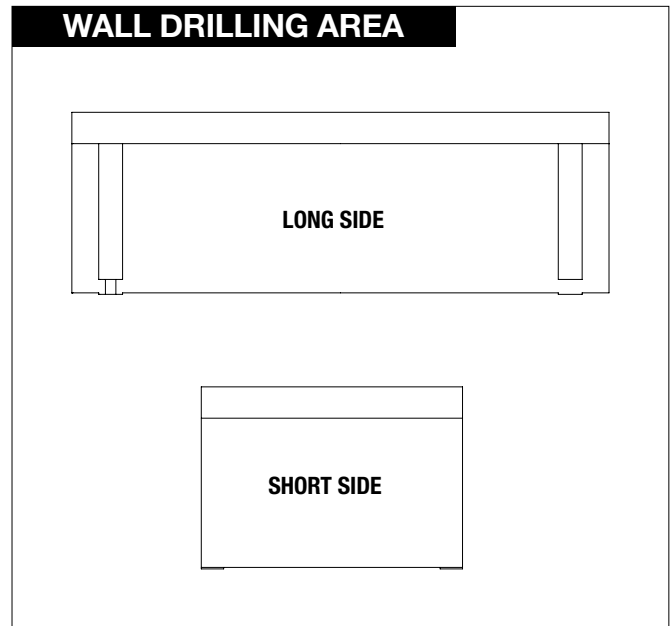
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | INT. PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|-------------|--------|
| AS11(1) | 110 | 110 | 86 | 96 | 96 | 65 | 102 | 102 | 7 | - | 0,30 | A |
| AS14(1) | 140 | 140 | 84 | 108 | 110 | 62 | 132 | 132 | 7 | - | 0,40 | A |
| AS21(1) | 175 | 85 | 121 | 125 | 72 | 102 | 167 | 77 | 7 | - | 0,88 | A |
| AS22(1) | 175 | 175 | 121 | 162 | 125 | 100 | 167 | 167 | 7 | 135 - 135 | 1,25 | A |
| AS42(1) | 360 | 175 | 121 | 310 | 161 | 102 | 352 | 167 | 7 | 320 - 135 | 2,50 | A |
| AS44(1) | 360 | 360 | 121 | 346 | 307 | 102 | 352 | 352 | 7 | 320 - 320 | 3,40 | A |
| AS84(1) | 730 | 360 | 168 | 670 | 340 | 147 | 720 | 350 | 8 | 670 - 310 | 8,00 | A |

(1) Enclosure's colour: B= Light blue RAL 5015. Example: AS42B. Without indication= Black RAL 9005. Example: AS14

Reference Details



Reference Details



Body enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|---|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| AS11 | 1 | 1 | 1 | 1 | - | - | - | - |
| AS14 | 2 | 1 | 1 | 1 | - | - | - | - |
| AS21 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | - |
| AS22 | 5 | 3 | 2 | 2 | 1 | 1 | 1 | - |
| AS42 | 12 | 8 | 7 | 5 | 4 | 4 | 3 | - |
| AS44 | 12 | 8 | 7 | 5 | 4 | 4 | 3 | - |
| AS84 | 35 | 23 | 20 | 17 | 13 | 9 | 7 | 5 |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|---|---|---|---|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| AS11 | 1 | 1 | 1 | - | - | - | - | - |
| AS14 | 2 | 1 | 1 | 1 | - | - | - | - |
| AS21 | 2 | - | - | - | - | - | - | - |
| AS22 | 5 | 3 | 2 | 2 | 1 | 1 | 1 | - |
| AS42 | 5 | 3 | 2 | 2 | 1 | 1 | 1 | - |
| AS44 | 12 | 8 | 7 | 5 | 4 | 4 | 3 | - |
| AS84 | 17 | 11 | 9 | 8 | 6 | 4 | 3 | 2 |

Indicative quantity of terminals and relevant section

| CODE ENCLOSURE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT.240,0 [sq/mm] | INT.PLATE X - Y [mm] |
|----------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| AS11 | 12 x 1 | 8 x 1 | 6 x 1 | 5 x 1 | 3 x 1 | - | - | - | - |
| AS14 | 18 x 1 | 10 x 1 | 8 x 1 | 7 x 1 | 5 x 1 | - | - | - | - |
| AS21 | 18 x 1 | 10 x 1 | 8 x 1 | 7 x 1 | 5 x 1 | - | - | - | - |
| AS22 | 18 x 2 | 10 x 2 | 10 x 1 | 8 x 1 | 6 x 1 | 4 x 1 | 4 x 1 | - | 135 - 135 |
| AS42 | 48 x 2 | 16 x 2 | 16 x 2 | 20 x 1 | 12 x 1 | 4 x 1 | 4 x 1 | - | 320 - 135 |
| AS44 | 48 x 2 | 37 x 2 | 34 x 2 | 29 x 2 | 12 x 2 | 16 x 1 | 16 x 1 | 4 x 1 | 320 - 320 |
| AS84 | 92 x 3 | 74 x 3 | 68 x 3 | 58 x 3 | 32 x 2 | 32 x 2 | 32 x 2 | 14 x 1 | 670 - 310 |



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

ATEX-Directive 2014/34/EU / RoHS-Directive 2011/65/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex db eb IIC Gb |
| | ⊗ II 2 D Ex tb IIIC Db (External actuating elements) |
| | ⊗ II 2 G Ex db eb IIC Gb ⊗ I M 2 Ex db eb I Mb (Internal pilot lamp module) |
| RULES OF COMPLIANCE | ⊗ II 2 G Ex db eb ia IIC Gb ⊗ I M 2 Ex db eb ia I Mb (Ex ia internal pilot lamp module) |
| | ⊗ II 2 G Ex db eb IIC Gb ⊗ I M 2 Ex db eb I Mb (Internal switch module with terminals) |
| EC Type-Examination Certificate | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-31 |
| | CML 13 ATEX 3010U (Actuating elements) CML 17 ATEX 1106U (Pilot lamp modules) LCIE 13 ATEX 3006U (Ammeters) CML 17 ATEX 1105U (Switch modules for push buttons and Control switch modules) |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C (Ammeters) |
| | -55°C ÷ +60°C (Others) |
| OTHER AVAILABLE CERTIFICATES | IECEX CML 14.0005U (Actuating elements) IECEX CML 17.0046U (Pilot lamp modules) IECEX LCIE 13.0008U (Ammeters) IECEX CML 17.0045U (Switch modules for push buttons and Control switch modules) |
| | EAC: TC RU C-DE.BH02.B.00009 (Pilot lamp modules) |
| | EAC: TC RU C-IT.BH08.B.01324 (Ammeters) |
| | EAC: TC RU C-DE.GB06.B.00384 (Others) |
| | EAC: TC RU C-DE.VN02.V.00690/18 (Switch module, 4-pole) |

Mechanical characteristics

PILOT LIGHTS

| | |
|--------------------|---|
| Body | thermo plastic |
| Diffuser / Lens | polycarbonate |
| Insulating voltage | 300V |
| Operating Voltage | 12V ÷ 250V ac |
| | 12V ÷ 60V dc |
| | 12V ÷ 24V ac/dc 10V ÷ 30V ac/dc (Ex ia pilot lamp module only) |


PUSH BUTTONS /SELECTOR SWITCHES

| | |
|----------------------|-----------------------------|
| Body | thermo plastic |
| Ring | thermo plastic |
| Operator | thermo plastic |
| Insulating voltage | 690V |
| Operating Voltage | 400V (AC-12) - 400V (AC-15) |
| | 110V (DC-13) - 24V (DC-13) |
| Conventional Current | 16A (Ta = -55°C ÷ +40°C) |
| | 11A (Ta = -55°C ÷ +60°C) |


AMMETERS


| | |
|-----------------------|------------------------------|
| Housing | fire retardant plastic |
| Insulating voltage | 690V ac |
| Working mode | electromagnetic |
| Accuracy | 1,50% |
| Start up over current | 5 times - (other of request) |


Technical data


| SPRING RETURN PUSH BUTTON | | | | |
|---|---------------------|-----------------------------------|---------------|--------------------|
| HANDLES-DE | COMPLETE OPER. CODE | SINGLE ACTUATING AND MODULE CODES | CONTACT BLOCK | BODY DIAMETER [mm] |
|  | SRPB#11 | 05-0003-000700 * + 07-3323-4400 | 1 NO + 1 NC | 38 |
| | SRPB#20 | 05-0003-000700 * + 07-3323-4200 | 2 NO | 38 |
| | SRPB#02 | 05-0003-000700 * + 07-3323-4100 | 2 NC | 38 |

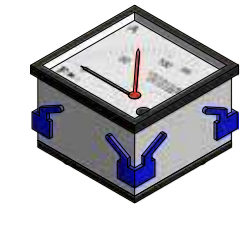
05-0003-000700 *: 5 labels (red, green, yellow, white, black) included

| PULL TO RELEASE MUSHROOM PUSH BUTTON | | | | |
|---|---------------------|-----------------------------------|---------------|--------------------|
| HANDLES-DE | COMPLETE OPER. CODE | SINGLE ACTUATING AND MODULE CODES | CONTACT BLOCK | BODY DIAMETER [mm] |
|  | MRPB#11 | 05-0003-0008 + 07-3323-4400 | 1 NO + 1 NC | 38 |
| | MRPB#20 | 05-0003-0008 + 07-3323-4200 | 2 NO | 38 |
| | MRPB#02 | 05-0003-0008 + 07-3323-4100 | 2 NC | 38 |

| KEY-OPERATED CONTROL BUTTON | | | | |
|--|---------------------|--|---------------|----------------|
| HANDLES-DE | COMPLETE OPER. CODE | SINGLE ACTUATING AND MODULE CODES | CONTACT BLOCK | OPERATOR COLOR |
|  | ESPB#04 | 05-0003-000800 + 05-0091-02F3 + 07-3381-1000 | 4 NC | 38 |
| | ESPB#31 | 05-0003-000800 + 05-0091-02F3 + 07-3381-2000 | 1 NO + 3 NC | 38 |
| | ESPB#22 | 05-0003-000800 + 05-0091-02F3 + 07-3381-3000 | 2 NO + 2 NC | 38 |
| | ESPB#13 | 05-0003-000800 + 05-0091-02F3 + 07-3381-5000 | 3 NO + 1 NC | 38 |
| | ESPB#40 | 05-0003-000800 + 05-0091-02F3 + 07-3381-4000 | 4 NO | 38 |

| PILOT LIGHT FOR BACK COVER INSTALLATION | | | | | | |
|---|-----------------------------|-----------------------------------|-------------|-----------|------------|-----------------|
| HANDLES-DE | COMPLETE OPER. CODE | SINGLE ACTUATING AND MODULE CODES | EXECUTION | LAMP TYPE | LAMP COLOR | BODY DIAM. [mm] |
|  | PLCI#EXEBBI | 05-0003-0016 + 07-3353-4140 | Ex db eb | LED | WHITE | 38 |
| | PLCI#EXIABI | 05-0003-0016 + 07-3353-4440 | Ex db eb ia | | | |
| | PLCI#EXEBGI | 05-0003-0015 + 07-3353-4130 | Ex db eb | LED | YELLOW | 38 |
| | PLCI#EXIAGI | 05-0003-0015 + 07-3353-4430 | Ex db eb ia | | | |
| | PLCI#EXEBRO | 05-0003-0013 + 07-3353-4110 | Ex db eb | LED | RED | 38 |
| | PLCI#EXIARO | 05-0003-0013 + 07-3353-4410 | Ex db eb ia | | | |
| | PLCI#EXEBVE | 05-0003-0014 + 07-3353-4120 | Ex db eb | LED | GREEN | 38 |
| | PLCI#EXIAVE | 05-0003-0014 + 07-3353-4420 | Ex db eb ia | | | |
| | PLCI#EXEBBL | 05-0003-0017 + 07-3353-4150 | Ex db eb | LED | BLUE | 38 |
| PLCI#EXIABL | 05-0003-0017 + 07-3353-4450 | Ex db eb ia | | | | |

| KEY-OPERATED CONTROL BUTTON | | | | | |
|---|---------------------|-----------------------------------|---------------|----------------|--------------------|
| HANDLES-DE | COMPLETE OPER. CODE | SINGLE ACTUATING AND MODULE CODES | CONTACT BLOCK | OPERATOR COLOR | BODY DIAMETER [mm] |
|  | CSEL4#11 | 05-0003-001200 + 07-3323-4400 | 1 NO + 1 NC | BLACK | 38 |
| | CSEL4#20 | 05-0003-001200 + 07-3323-4200 | 2 NO | BLACK | 38 |
| | CSEL4#02 | 05-0003-001200 + 07-3323-4100 | 2 NC | BLACK | 38 |


| AMMETER AND MILLIAMMETER | | | |
|---|------|---------------|---|
| HANDLES-DE | CODE | RATED CURRENT | SCALE |
|  | AM1A | 40mA | 0÷20/40mA |
| | | 40mA | 4÷20/40mA |
| | | 1A | 0÷1A |
| | | 5A | 0÷5A |
| | | X/1A | 0...1A; 5A; 10A; 15A; 20A; 25A; 30A; 40A; 60A; 75A; 100A; 150A; 200A; 300A; 500A; |
| | | X/5A | 0...1A; 5A; 10A; 15A; 20A; 25A; 30A; 40A; 60A; 75A; 100A; 150A; 200A; 300A; 500A; |





Technical data

| CONTROL SWITCH INSTALLATION MODULE 4 POLE ONLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-------------------|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|--|----|----|----|----|--|
| HANDLES-DE | CODE | CONTACT | SWITCH (POSITION) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 07-3331-1A01 | <table border="1"> <tr><td></td><td>13</td><td>23</td><td>33</td><td>43</td></tr> <tr><td>0</td><td></td><td></td><td></td><td></td></tr> <tr><td>I</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td></td><td>14</td><td>24</td><td>34</td><td>44</td></tr> </table> | | 13 | 23 | 33 | 43 | 0 | | | | | I | X | X | X | X | | 14 | 24 | 34 | 44 | | | | | | | | | | | | | | | |
| | | 13 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | I | X | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 14 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 07-3331-1A02 | <table border="1"> <tr><td></td><td>13</td><td>23</td><td>31</td><td>41</td></tr> <tr><td>0</td><td></td><td></td><td>X</td><td>X</td></tr> <tr><td>I</td><td>X</td><td>X</td><td></td><td></td></tr> <tr><td></td><td>14</td><td>24</td><td>32</td><td>42</td></tr> </table> | | 13 | 23 | 31 | 41 | 0 | | | X | X | I | X | X | | | | 14 | 24 | 32 | 42 | | | | | | | | | | | | | | | |
| | | 13 | 23 | 31 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | I | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 14 | 24 | 32 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 07-3331-1A03 | <table border="1"> <tr><td></td><td>11</td><td>23</td><td>33</td><td>43</td></tr> <tr><td>0</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>I</td><td></td><td>X</td><td>X</td><td>X</td></tr> <tr><td></td><td>12</td><td>24</td><td>34</td><td>44</td></tr> </table> | | 11 | 23 | 33 | 43 | 0 | X | | | | I | | X | X | X | | 12 | 24 | 34 | 44 | | | | | | | | | | | | | | | |
| | | 11 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 07-3331-1A04 | <table border="1"> <tr><td></td><td>11</td><td>21</td><td>31</td><td>43</td></tr> <tr><td>0</td><td>X</td><td>X</td><td>X</td><td></td></tr> <tr><td>I</td><td></td><td></td><td></td><td>X</td></tr> <tr><td></td><td>12</td><td>22</td><td>32</td><td>44</td></tr> </table> | | 11 | 21 | 31 | 43 | 0 | X | X | X | | I | | | | X | | 12 | 22 | 32 | 44 | | | | | | | | | | | | | | | | |
| | 11 | 21 | 31 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 22 | 32 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 11 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| III | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 1 | 3 | 5 | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | X | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 4 | 6 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 07-3331-1C06 | <table border="1"> <tr><td></td><td>13</td><td>23</td><td>33</td><td>43</td></tr> <tr><td>0</td><td>X</td><td>X</td><td></td><td></td></tr> <tr><td>I</td><td></td><td></td><td></td><td></td></tr> <tr><td>II</td><td></td><td></td><td>X</td><td>X</td></tr> <tr><td></td><td>14</td><td>24</td><td>34</td><td>44</td></tr> </table> | | 13 | 23 | 33 | 43 | 0 | X | X | | | I | | | | | II | | | X | X | | 14 | 24 | 34 | 44 | | | | | | | | | | | |
| | 13 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 07-3331-1C07 | <table border="1"> <tr><td></td><td>13</td><td>23</td><td>31</td><td>41</td></tr> <tr><td>0</td><td></td><td></td><td>X</td><td>X</td></tr> <tr><td>I</td><td></td><td></td><td></td><td></td></tr> <tr><td>II</td><td>X</td><td>X</td><td></td><td></td></tr> <tr><td></td><td>14</td><td>24</td><td>32</td><td>42</td></tr> </table> | | 13 | 23 | 31 | 41 | 0 | | | X | X | I | | | | | II | X | X | | | | 14 | 24 | 32 | 42 | | | | | | | | | | | |
| | 13 | 23 | 31 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | 24 | 32 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 11 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 13 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 13 | 23 | 33 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| III | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IV | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | 24 | 34 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 07-3331-1N02 | <table border="1"> <tr><td></td><td>1</td><td>3</td><td>5</td><td>11</td></tr> <tr><td>0</td><td></td><td></td><td></td><td>X</td></tr> <tr><td>I</td><td>X</td><td>X</td><td>X</td><td></td></tr> <tr><td></td><td>2</td><td>4</td><td>6</td><td>12</td></tr> </table> | | 1 | 3 | 5 | 11 | 0 | | | | X | I | X | X | X | | | 2 | 4 | 6 | 12 | | | | | | | | | | | | | | | | |
| | 1 | 3 | 5 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 4 | 6 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Technical data

| CONTROL SWITCH OPERATING HANDLE ONLY | | |
|---|----------------|---------------|
| HANDLES-DE | CODE | DESCRIPTION |
|  | 05-0003-006301 | 0-I |
| | 05-0003-006302 | I-II |
| | 05-0003-006303 | I-0-II |
| | 05-0003-006304 | 0-I-II |
| | 05-0003-006305 | 0-I-II-III |
| | 05-0003-006306 | 0-I-II-III-IV |
| | 05-0003-006309 | HAND-0-AUTO |

| COMPLETE SELECTOR SWICHTH | | | | |
|--|-------------------------------|-----------------------------------|--------------|--------------------|
| HANDLES-DE | COMPLETE OPER.CODE | SINGLE ACTUATING AND MODULE CODES | DIAGRAM CODE | HANDLE DESCRIPTION |
|   | CSEL1#A001 | 05-0003-006301 + 07-3331-1A01 | A01 | 0-I |
| | CSEL1#B001 | 05-0003-006302 + 07-3331-1A01 | A01 | I-II |
| | CSEL1#A002 | 05-0003-006301 + 07-3331-1A02 | A02 | 0-I |
| | CSEL1#B002 | 05-0003-006302 + 07-3331-1A02 | A02 | I-II |
| | CSEL1#A003 | 05-0003-006301 + 07-3331-1A03 | A03 | 0-I |
| | CSEL1#B003 | 05-0003-006302 + 07-3331-1A03 | A03 | I-II |
| | CSEL1#A004 | 05-0003-006301 + 07-3331-1A04 | A04 | 0-I |
| | CSEL1#B004 | 05-0003-006302 + 07-3331-1A04 | A04 | I-II |
| | CSEL1#E005 | 05-0003-006305 + 07-3331-1H05 | H05 | 0-I-II-III |
| | CSEL1#A006 | 05-0003-006301 + 07-3331-1N01 | N01 | 0-I |
| | CSEL1#B006 | 05-0003-006302 + 07-3331-1N01 | N01 | I-II |
| | CSEL1#C007 | 05-0003-006303 + 07-3331-1C06 | C06 | I-0-II |
| | CSEL1#G007 | 05-0003-006309 + 07-3331-1C06 | C06 | HAND-0-AUTO |
| | CSEL1#D008 | 05-0003-006304 + 07-3331-1C07 | C07 | 0-I-II |
| | CSEL1#D009 | 05-0003-006304 + 07-3331-1E08 | E08 | 0-I-II |
| | CSEL1#D010 | 05-0003-006304 + 07-3331-1E09 | E09 | 0-I-II |
| | CSEL1#F011 | 05-0003-006306 + 07-3331-1L01 | L01 | 0-I-II-III-IV |
| CSEL1#A012 | 05-0003-006301 + 07-3331-1N02 | N02 | 0-I | |
| CSEL1#B012 | 05-0003-006302 + 07-3331-1N02 | N02 | I-II | |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

| CONTROL STATIONS - ASCS | |
|---------------------------------|--|
| Directive 2014/34/EU | |
| EXECUTION | ⊗ II 2 G Ex d e ia/ib mb IIC T6...T4 Gb ⊗ II 2 D Ex tb IIIC T85°C...T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-18; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0041X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -50°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9007U IECEx: IECEx INE 13.0057X IECEx (component): IECEx INE 13.0005U INMETRO: CEPEL 13.2286 INMETRO (component): CEPEL 13.2272U EAC: TC RU C-IT.Г508.B.01468 RINA: ELE137217CS001 NEC 505: UL 20140131-E356725 - Type rating NEMA 1, 12, 4 and 4X |

| CONTROL STATIONS - ESACS - ESXCS | |
|---|---|
| Directive 2014/34/EU | |
| EXECUTION | ⊗ II 2 G Ex e IIB or IIC T6 ÷ T3 Gb ⊗ II 2 D Ex tb IIIC T85°C ÷ T200°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-18; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0027X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9027U IECEx: IECEx INE 11.0014X INMETRO: CEPEL 12.2158 EAC: TC RU C-IT.Г508.B.01468 RINA: ELE137217CS001 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 NEC 505: UL 20140131-E356725 Type rating NEMA 1, 12, 4 and 4X Kc (Korean certification): 14-KB4B0-0450 and 14-KB4B0-0452 |

| Mechanical characteristics - ASCS | |
|--|---|
| Body | glass fibre reinforced polyester resin color dark grey RAL 7021 |
| Cover | glass fibre reinforced polyester resin color dark grey RAL 7021 |
| Screws | stainless steel |
| Internal plate | stainless steel - aluminium |
| Gasket | silicon |
| Strenght | 4 Joule impact resistance |

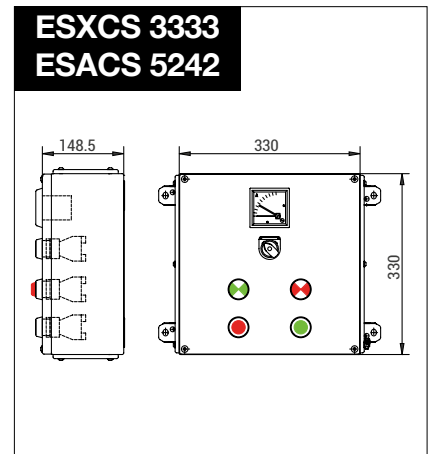
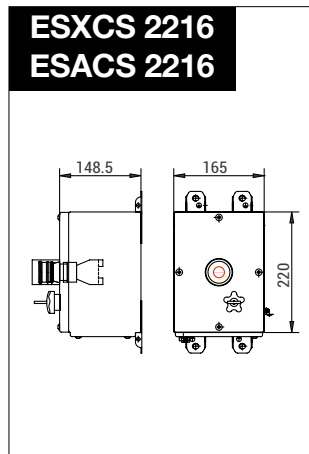
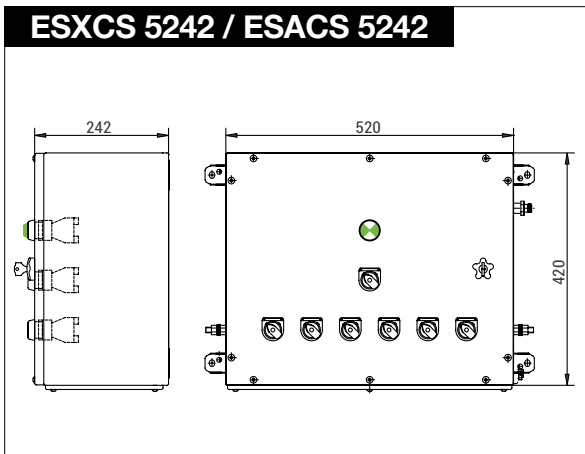
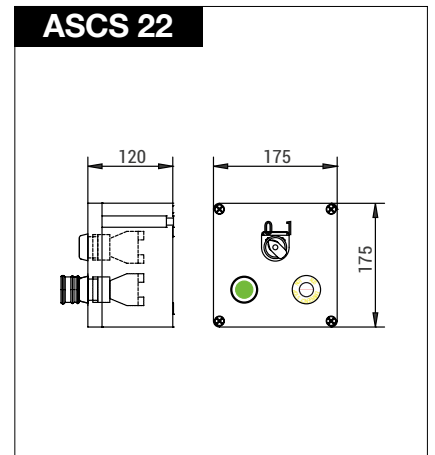
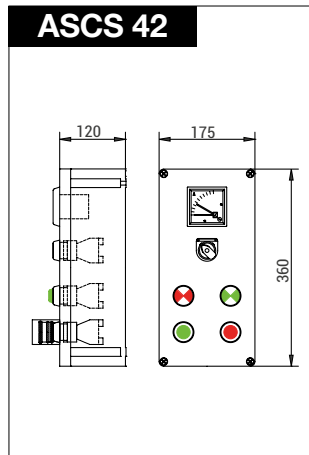
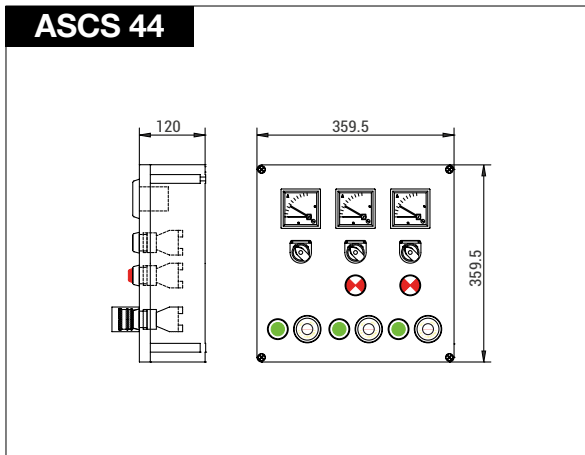
| Mechanical characteristics - ESXCS | |
|---|-------------------------------------|
| Body | stainless steel AISI 316l sp. 1,5mm |
| Cover | stainless steel AISI 316l sp. 1,5mm |
| Screws | stainless steel AISI 316L |
| Internal plate | stainless steel AISI 316L |
| Gasket | silicon |
| Strenght | 4 Joule impact resistance |

| Mechanical characteristics - ESACS | |
|---|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | aluminium |
| Gasket | silicon rubber |
| Strenght | 4 Joule impact resistance |



- On Request Accessories:**
- External epoxy painting with colour on request
 - Internal anticondensate painting orange RAL 2004 (ESX)
 - Drain and breather valves
 - Removable flanges (only stainless steel enclosures)

Typical installation



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Areas

Classification: IP66



REFERENCE STANDARDS

ENCLOSURE

| | |
|---------------------------------|-------------------------|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | EN 60529 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |

Mechanical characteristics

| | |
|----------------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | aluminium |
| Gasket | silicon rubber |



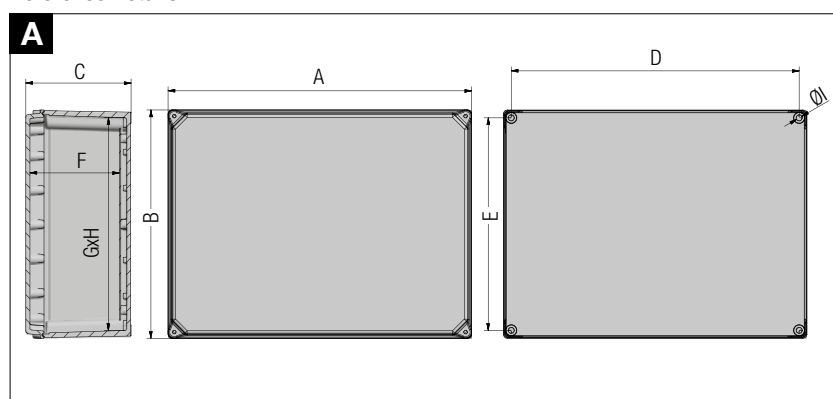
On Request Accessories:

- External epoxy painting with colour on request
- Internal anticondensate painting orange RAL-2004
- Drain and breather valves

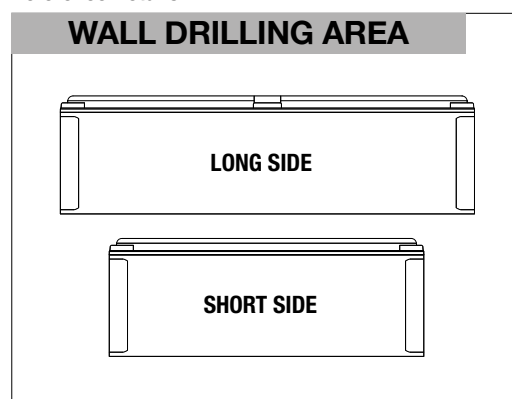
Tehnichal Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | INT.PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------|-------------|--------|
| ES1313A | 130 | 130 | 87 | 115 | 115 | 70 | 112 | 112 | 6 | 110 - 70 | 1,20 | A |
| ES1717A | 170 | 170 | 97 | 155 | 155 | 81 | 151 | 151 | 6 | 150 - 150 | 1,50 | A |
| ES2216A | 220 | 160 | 96 | 205 | 145 | 80 | 141 | 201 | 6 | 200 - 100 | 3,80 | A |
| ES2222A | 220 | 220 | 112 | 205 | 205 | 95 | 201 | 201 | 6 | 200 - 200 | 4,40 | A |
| ES3322A | 330 | 220 | 123 | 310 | 200 | 103 | 201 | 311 | 8 | 294 - 154 | 6,40 | A |
| ES3333A | 330 | 330 | 131 | 310 | 310 | 111 | 311 | 311 | 8 | 290 - 290 | 8,80 | A |
| ES4433A | 440 | 330 | 154 | 420 | 310 | 131 | 311 | 421 | 8 | 400 - 290 | 11,40 | A |
| ES5242A | 520 | 420 | 183 | 496 | 394 | 159 | 398 | 499 | 8 | 460 - 370 | 20,20 | A |
| ES6348A | 630 | 480 | 181 | 615 | 465 | 156 | 459 | 609 | 8 | 550 - 400 | 21,30 | A |

Reference Details



Reference Details



Body enclosures indicative maximum quantity of holes of the same size

| ENCLOSURE CODE | DRILLING AREA LONG SIDE | | | | | | | |
|----------------|--|----|----|----|----|----|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ES1313A | 2 | 1 | 1 | 1 | / | / | / | / |
| ES1717A | 5 | 3 | 2 | 2 | 2 | 1 | / | / |
| ES2216A | 6 | 3 | 3 | 3 | 2 | 2 | / | / |
| ES2222A | 9 | 5 | 3 | 3 | 3 | 2 | 2 | / |
| ES3322A | 12 | 7 | 6 | 5 | 4 | 3 | 3 | / |
| ES3333A | 12 | 7 | 6 | 5 | 4 | 3 | 2 | / |
| ES4433A | 20 | 14 | 12 | 12 | 6 | 5 | 3 | / |
| ES5242A | 30 | 18 | 16 | 12 | 12 | 8 | 4 | 3 |
| ES6348A | 36 | 24 | 18 | 16 | 12 | 10 | 6 | 4 |

| ENCLOSURE CODE | DRILLING AREA SHORT SIDE | | | | | | | |
|----------------|--|----|----|----|----|---|---|---|
| | QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ES1313A | 2 | 1 | 1 | 1 | / | / | / | / |
| ES1717A | 5 | 3 | 2 | 2 | 2 | 1 | / | / |
| ES2216A | 4 | 2 | 2 | 2 | 1 | 1 | / | / |
| ES2222A | 8 | 5 | 3 | 3 | 3 | 2 | 2 | / |
| ES3322A | 8 | 5 | 4 | 4 | 3 | 2 | 2 | / |
| ES3333A | 12 | 7 | 6 | 5 | 4 | 3 | 2 | / |
| ES4433A | 14 | 10 | 8 | 8 | 4 | 3 | 2 | / |
| ES5242A | 28 | 18 | 14 | 11 | 10 | 7 | 4 | 1 |
| ES6348A | 30 | 21 | 15 | 12 | 10 | 8 | 4 | 3 |

Indicative quantity of terminals and relevant section

| CODE ENCLOSURE | SECT. 2,5 [sq/mm] | SECT. 6,0 [sq/mm] | SECT. 10,0 [sq/mm] | SECT. 16,0 [sq/mm] | SECT. 35,0 [sq/mm] | SECT. 50,0 [sq/mm] | SECT. 70,0 [sq/mm] | SECT.240,0 [sq/mm] | NT.PLATE X - Y [mm] |
|----------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| ES1313A | 10 x 1 | 5 x 1 | 4 x 1 | 4 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | / | 112 - 70 |
| ES1717A | 20 x 1 | 10 x 1 | 8 x 1 | 8 x 1 | 6 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | 150 - 150 |
| ES2216A | 30 x 1 | 18 x 1 | 14 x 1 | 10 x 1 | 8 x 1 | 3 x 1 | 2 x 1 | 1 x 1 | 200 - 100 |
| ES2222A | 26 x 1 | 16 x 1 | 12 x 1 | 10 x 1 | 8 x 1 | 4 x 1 | 2 x 1 | 2 x 1 | 200 - 200 |
| ES3322A | 46 x 1 | 26 x 1 | 22 x 1 | 18 x 1 | 14 x 1 | 10 x 1 | 6 x 1 | 2 x 1 | 294 - 154 |
| ES3333A | 46 x 2 | 24 x 2 | 22 x 2 | 16 x 2 | 14 x 2 | 10 x 1 | 8 x 1 | 3 x 1 | 290 - 290 |
| ES4433A | 70 x 2 | 40 x 2 | 32 x 2 | 26 x 2 | 20 x 2 | 14 x 2 | 10 x 1 | 4 x 1 | 400 - 290 |
| ES5242A | 70 x 3 | 44 x 3 | 34 x 3 | 30 x 3 | 22 x 3 | 18 x 2 | 14 x 1 | 6 x 1 | 460 - 370 |
| ES6348A | 120 x 3 | 76 x 3 | 60 x 3 | 50 x 3 | 34 x 3 | 30 x 2 | 24 x 1 | 12 x 1 | 550 - 400 |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



EX CABLE GLANDS





EX CABLE GLANDS





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex db / Ex eb/ Ex ia/ IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0140X |
| PROTECTION DEGREE | IP66 or IP66/68 |
| AMBIENT TEMPERATURE | -40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0013X INMETRO: CEPEL 12.2176X EAC: TC RU C-IT.Г508.B.02646 (-75°C ÷ +180°C) RINA: ELE137217CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 Kc (Korean certification): 14-KB4B0- (from 0427X to 0444X) CCOE-PESO: P405708/7 |

Mechanical characteristics

| | |
|---------------------|---|
| Body / cap | OT-58 marine brass (ON) - AISI-316L stainless steel (IX) marine grade copper free aluminium (on project request only) |
| Finishes | full nickel plating treatment (brass material only) |
| Rubber rings | EPDM rubber 50-60 shore hardness (standard supply) Silicon rubber 60 shore hardness (on demand only) |
| O-ring | silicon rubber - 60 shore hardness |
| Skid washer | nylon 6.0 |
| Chamber for sealing | OT-58 marine brass ("R" version only) |

Applications

- For steel wire armoured cables (swa) for steel tape armoured cables and for lead inner sheath cables
- Double Compression Type For Indoor And Outdoor Use
- Provided armour clamping using clamping arrangements suitable for all armour wire/braid types
- Internal lead device for electrical bond of cable lead inner sheath
- Double compression - under armour and overall of armour cable (inner and outer sealing)
- Sealing with proper resin into "chamber of sealing" (on barrier type version "r" only)



On Request Accessories:

- Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)

Cable gland selection table

| CODE | SIZE | ENTRY THREAD SIZE | | | DIA. UNDER ARMOUR | | OUTER SHEATH DIA. | | HEXAGON [mm] | MATERIAL | | | | | | |
|----------------|------|----------------------------|---------|-------------|-------------------|----------|-------------------|----------|-----------------|----------|------|-------|-----------------|------|-----------------|----|
| | | METRIC (2) | NPT (2) | ISO 228 (2) | min [mm] | max [mm] | min [mm] | max [mm] | | (3) | | | | | | |
| PAPD PAPD-R | 11 | (20) ISO-M20 (1) 1/2" | M | 1/2"NPT | N | 1/2" | G | 3,5 | 6,0 | 10,0 | 15,0 | 32,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 6,0 | 8,5 | | | | 14,0 | 19,0 | STAINLESS STEEL | XK |
| | | | | | | | | 8,5 | 11,0 | | | | | | | |
| PAPD PAPD-R | 21 | (25) ISO-M25 (2) 3/4" | M | 3/4"NPT | N | 3/4" | G | 8,5 | 11,0 | 15,0 | 20,0 | 36,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 11,0 | 13,5 | | | | 19,0 | 24,0 | STAINLESS STEEL | XK |
| | | | | | | | | 13,5 | 16 | | | | | | | |
| PAPD PAPD-R | 31 | (32) ISO-M32 (3) 1" | M | 1"NPT | N | 1" | G | 13,0 | 16,0 | 20,0 | 26,0 | 45,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 16,0 | 19,0 | | | | 25,0 | 31,0 | STAINLESS STEEL | XK |
| | | | | | | | | 19,0 | 22,0 | | | | | | | |
| PAPD PAPD-R | 41 | (40) ISO-M40 (4) 1 1/4" | M | 1 1/4"NPT | N | 1 1/4" | G | 19,0 | 22,0 | 26,0 | 32,0 | 53,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 22,0 | 25,0 | | | | 31,0 | 37,0 | STAINLESS STEEL | XK |
| | | | | | | | | 25,0 | 28,0 | | | | | | | |
| PAPD PAPD-R | 51 | (50) ISO-M50 (5) 1 1/2" | M | 1 1/2"NPT | N | 1 1/2" | G | 22,0 | 25,0 | 30,0 | 37,0 | 61,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 25,0 | 28,0 | | | | 36,0 | 43,0 | STAINLESS STEEL | XK |
| | | | | | | | | 28,0 | 31,0 | | | | | | | |
| | | | | | | | | 31,0 | 34,0 | | | | | | | |
| PAPD PAPD-R | 61 | (63) ISO-M63 (6) 2" | M | 2"NPT | N | 2" | G | 34,0 | 37,0 | 42,0 | 48,0 | 71,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 37,0 | 40,0 | | | | 47,0 | 53,0 | STAINLESS STEEL | XK |
| | | | | | | | | 40,0 | 43,0 | | | | | | | |
| | | | | | | | | 43,0 | 46,0 | | | | | | | |
| PAPD PAPD-R | 71 | (75) ISO-M75 (7) 2 1/2" | M | 2 1/2"NPT | N | 2 1/2" | G | 40,0 | 43,0 | 52,0 | 58,0 | 84,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 43,0 | 46,0 | | | | 58,0 | 64,0 | STAINLESS STEEL | XK |
| | | | | | | | | 46,0 | 49,0 | | | | | | | |
| | | | | | | | | 49,0 | 52,0 | | | | | | | |
| PAPD PAPD-R | 81 | (90) ISO-M90 (8) 3" | M | 3"NPT | N | 3" | G | 52,0 | 55,0 | 65,0 | 72,0 | 101,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 56,0 | 59,0 | | | | 71,0 | 78,0 | STAINLESS STEEL | XK |
| | | | | | | | | 57,0 | 60,0 | | | | | | | |
| | | | | | | | | 60,0 | 63,0 | | | | | | | |
| | | | | | | | | 63,0 | 66,0 | | | | | | | |
| PAPD PAPD-R | 91 | (100) ISO-M100 (9) 4" | M | 4"NPT | N | 4" | G | 58,0 | 66,0 | 81,0 | 88,0 | 126,0 | NICKEL PL.BRASS | ONK | | |
| | | | | | | | | 66,0 | 72,0 | | | | 88,0 | 96,0 | STAINLESS STEEL | XK |
| | | | | | | | | 72,0 | 78,0 | | | | | | | |
| | | | | | | | | 78,0 | 84,0 | | | | | | | |
| | | | | | | | | 84,0 | 90,0 | | | | | | | |

CABLE GLAND ORDERING EXAMPLES

| | | | | | | | |
|------|----|----|---|---|-----|----------------|--|
| PAPD | 11 | 20 | - | M | ONK | = PAPD1120MONK | (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) |
| PAPD | 21 | - | 2 | N | XK | = PAPD212NXK | (NON-BARRIER CABLE GLAND STAINLESS STEEL) |

LEGEND

| | | |
|-----|------------------------|--|
| (1) | CABLE GLAND TYPE/MODEL | PAPD = NON-BARRIER CABLE GLAND - PAPD-R = BARRIER CABLE GLAND |
| (2) | THREADING | M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = ISO-228 |
| (3) | CABLE GLAND MATERIAL | ONK = NICKEL PLATED MARINE BRASS - XK = STAINLESS STEEL AISI-316L |

PAPD DIMENSIONAL

| | |
|-------|---|
| 1 | BODY |
| 2-3-4 | INNER SEALING RING FOR ARMOURED CABLE |
| 5 | ARMOUR CLAMPING CONE |
| 6 | ARMOUR CLAMPING RING FOR ARMOURED CABLE |
| 7 | GLAND BARREL |
| 8-9 | OUTER SEALING RING |
| 10 | ANTI RUBBING WASHER |
| 11 | GLAND NUT |
| 12 | O-RING (ONLY FOR METRICAL) |
| 13 | *CHAMBER FOR SEALING ("R" VERSION ONLY) |
| 14 | LEAD WASHER |

* Chamber will be filled with sealing when cable gland is completely assembled.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex db / Ex eb/ Ex ia/ IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0140X |
| PROTECTION DEGREE | IP66 or IP66/68 |
| AMBIENT TEMPERATURE | -40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0013X INMETRO: CEPEL 12.2176X EAC: TC RU C-IT.ГБ08.B.02646 (-75°C ÷ +180°C) RINA: ELE137217CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 Kc (Korean certification): 14-KB4BO- (from 0427X to 0044X) CCOE-PESO: P405708/7 Deluge certification* for sizes 1÷6 with silicon rubber rings only : SIR20200310-001 SIR20200310-002 SIR20200310-003 SIR20200311-004 SIR20200311-005 SIR20200311-006 according to Shell DTS-01:91 *on request only |

Mechanical characteristics

| | |
|---------------------|---|
| Body / cap | OT-58 marine brass (ON) - AISI-316L stainless steel (IX) marine grade copper free aluminium (on project request only) |
| Finishes | full nickel plating treatment (brass material only) |
| Rubber rings | EPDM rubber 50-60 shore hardness (standard supply) Silicon rubber 60 shore hardness (on demand only) |
| O-ring | silicon rubber - 60 shore hardness |
| Skid washer | nylon 6.0 |
| Chamber for sealing | OT-58 marine brass ("R" version only) |

Applications

- For steel wire armoured cables (swa) for steel tape armoured cables and for lead inner sheath cables
- Double Compression Type For Indoor And Outdoor Use
- Provided armour clamping using clamping arrangements suitable for all armour wire/braid types
- Internal lead device for electrical bond of cable lead inner sheath
- Double compression - under armour and overall of armour cable (inner and outer sealing)
- Sealing with proper resin into "chamber of sealing" (on barrier type version "r" only)



On Request Accessories:

- Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)
- Deluge option from size 1 to size 6 with silicon rubber rings only

Cable gland selection table

| CODE | SIZE | ENTRY THREAD SIZE | | | DIA. UNDER ARMOUR | | OUTER SHEATH DIA. | | HEXAGON [mm] | MATERIAL | | | | |
|----------------------------------|----------------------------|----------------------------|-----------|-------------|-------------------|----------|-------------------|----------|-----------------|----------|-------|-----------------|-----------------|----|
| | | METRIC (2) | NPT (2) | ISO 228 (2) | min [mm] | max [mm] | min [mm] | max [mm] | | (3) | | | | |
| PAP PAP-R | 00 | (16)ISO-M16 (0)3/8" | M | 3/8"NPT | N | 3/8" | G | 4,0 | 7,0 | 10,0 | 15,0 | 24,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 7,0 | 10,0 | | | | STAINLESS STEEL | IX |
| | | (20)ISO-M20 (1)1/2" | M | 1/2"NPT | N | 1/2" | G | 5,5 | 8,0 | 10,0 | 15,0 | 32,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 8,0 | 10,5 | | | | STAINLESS STEEL | IX |
| PAP PAP-R PAPDL* PAPDL* | 11 | (20) ISO-M20 (1) 1/2" | M | 1/2"NPT | N | 1/2" | G | 10,5 | 13,0 | 14,0 | 19,0 | 32,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 5,5 | 8,0 | | | | NICKEL PL.BRASS | ON |
| | | | | | | | | 8,0 | 10,5 | | | | STAINLESS STEEL | IX |
| | 21 | (25) ISO-M25 (2) 3/4" | M | 3/4"NPT | N | 3/4" | G | 10,5 | 13,0 | 15,0 | 20,0 | 36,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 13,0 | 15,5 | | | | STAINLESS STEEL | IX |
| | | | | | | | | 15,5 | 18,0 | | | | NICKEL PL.BRASS | ON |
| | 31 | (32) ISO-M32 (3) 1" | M | 1"NPT | N | 1" | G | 15,0 | 18,0 | 20,0 | 26,0 | 45,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 18,0 | 21,0 | | | | STAINLESS STEEL | IX |
| | | | | | | | | 21,0 | 24,0 | | | | NICKEL PL.BRASS | ON |
| | 41 | (40) ISO-M40 (4) 1 1/4" | M | 1 1/4"NPT | N | 1 1/4" | G | 21,0 | 24,0 | 26,0 | 32,0 | 53,0 | NICKEL PL.BRASS | ON |
| | | | | | | | | 24,0 | 27,0 | | | | STAINLESS STEEL | IX |
| | | | | | | | | 27,0 | 30,0 | | | | NICKEL PL.BRASS | ON |
| 51 | (50) ISO-M50 (5) 1 1/2" | M | 1 1/2"NPT | N | 1 1/2" | G | 24,0 | 27,0 | 30,0 | 37,0 | 61,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 27,0 | 30,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 30,0 | 33,0 | | | | NICKEL PL.BRASS | ON | |
| 61 | (63) ISO-M63 (6) 2" | M | 2"NPT | N | 2" | G | 33,0 | 36,0 | 40,0 | 47,0 | 71,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 36,0 | 39,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 39,0 | 42,0 | | | | NICKEL PL.BRASS | ON | |
| 71 | (75) ISO-M75 (7) 2 1/2" | M | 2 1/2"NPT | N | 2 1/2" | G | 42,0 | 45,0 | 52,0 | 58,0 | 84,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 45,0 | 48,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 48,0 | 51,0 | | | | NICKEL PL.BRASS | ON | |
| 81 | (90) ISO-M90 (8) 3" | M | 3"NPT | N | 3" | G | 51,0 | 54,0 | 61,0 | 67,0 | 101,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 52,0 | 56,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 56,0 | 59,0 | | | | NICKEL PL.BRASS | ON | |
| 91 | (100) ISO-M100 (9) 4" | M | 4"NPT | N | 4" | G | 59,0 | 62,0 | 71,0 | 78,0 | 126,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 62,0 | 65,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 65,0 | 68,0 | | | | NICKEL PL.BRASS | ON | |
| | | | | | | | 68,0 | 74,0 | 81,0 | 88,0 | 96,0 | NICKEL PL.BRASS | ON | |
| | | | | | | | 74,0 | 80,0 | | | | STAINLESS STEEL | IX | |
| | | | | | | | 80,0 | 86,0 | | | | NICKEL PL.BRASS | ON | |
| | | | | | | | 86,0 | 92,0 | 96,0 | 104,0 | | | NICKEL PL.BRASS | ON |

CABLE GLAND ORDERING

EXAMPLES

| | | | | | | |
|-------|----|----|---|---|----|---|
| PAP | 11 | 20 | - | M | ON | = PAP1120MON (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) |
| PAP | 21 | - | 2 | N | IX | = PAP212NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL) |
| PAPDL | 31 | - | 3 | N | IX | = PAPDL313NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL WITH DELUGE) |

LEGEND

| | | |
|-----|------------------------|--|
| (1) | CABLE GLAND TYPE/MODEL | PAP# = NON-BARRIER CABLE GLAND - PAP-R# = BARRIER CABLE GLAND |
| (2) | THREADING | M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = ISO-228 |
| (3) | CABLE GLAND MATERIAL | ON = NICKEL PLATED MARINE BRASS - IX = AISI-316L STAINLESS STEEL |

PAP - PAPDL DIMENSIONAL

| | |
|-------|---|
| 1 | BODY |
| 2-3-4 | INNER SEALING RING FOR ARMoured CABLE |
| 5-5.1 | ARMOUR CLAMPING CONE |
| 6 | ARMOUR CLAMPING RING FOR ARMoured CABLE |
| 7 | GLAND BARREL |
| 8-8.1 | OUTER SEALING SILICON RING |
| 9 | DELUGE* SILICON RUBBER O-RING |
| 10 | ANTI RUBBING WASHER |
| 11 | GLAND NUT |
| 12 | SILICON O. RING (ONLY FOR ISOMETRIC BODY) |

*on request, from size 1 to 6 only

REMARK:

*Deluge is available on request from size 1 to 6 with silicon rubber rings and metric or NTP entry thread only.

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex db / Ex eb/ Ex ia/ IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS OTEX 0140X |
| PROTECTION DEGREE | IP66 or IP66/68 |
| AMBIENT TEMPERATURE | -40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0013X INMETRO: CEPEL 12.2176X EAC: TC RU C-IT.ГБ08.B.02646 (-75°C ÷ +180°C) RINA: ELE137217CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 Kc (Korean certification): 14-KB4BO- (from 0427X to 044X) CCOE-PESO: P405708/7 |

Mechanical characteristics

| | |
|---------------------|---|
| Body / cap | OT-58 marine brass (ON) - AISI-316L stainless steel (IX) marine grade copper free aluminium (on project request only) |
| Finishes | full nickel plating treatment (brass material only) |
| Rubber rings | EPDM rubber 50-60 shore hardness (standard supply) Silicon rubber 60 shore hardness (on demand only) |
| O-ring | silicon rubber - 60 shore hardness |
| Skid washer | nylon 6.0 |
| Chamber for sealing | OT-58 marine brass ("R" version only) |

Applications

| |
|---|
| For steel wire armoured cables (swa) for steel tape armoured cables |
| Single compression type for indoor and outdoor use |
| Provided armour clamping using clamping arrangements suitable for all armour wire/braid types |
| Single compression - under armour and overall of armour cable (inner and outer sealing) |
| Sealing with proper resin into "chamber of sealing" (on barrier type version "r" only) |



On Request Accessories:

- Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)

Cable gland selection table

| CODE | SIZE | ENTRY THREAD SIZE | | | | DIA. UNDER ARMOUR | | OUTER SHEATH DIA. | HEXAGON \varnothing | MATERIAL | | | |
|------------|------|----------------------------|-----|-----------|----------|-------------------|----------|-------------------|-----------------------|----------|-------|------------------|----|
| | | METRIC | NPT | ISO 228 | min [mm] | max [mm] | max [mm] | | | [mm] | (3) | | |
| PA PA-R | 00 | (16) ISO-M16 (0) 3/8" | M | 3/8"NPT | N | 3/8" | G | 4,0 | 7,0 | 10,0 | 24,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 7,0 | 10,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 11 | (20) ISO-M20 (1) 1/2" | M | 1/2"NPT | N | 1/2" | G | 5,5 | 8,0 | 10,0 | 32,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 8,0 | 10,5 | | | STAINLESS STEEL | IX |
| PA PA-R | 21 | (25) ISO-M25 (2) 3/4" | M | 3/4"NPT | N | 3/4" | G | 10,5 | 13,0 | 14,0 | 36,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 13,0 | 15,5 | | | STAINLESS STEEL | IX |
| PA PA-R | 31 | (32) ISO-M32 (3) 1" | M | 1"NPT | N | 1" | G | 15,0 | 18,0 | 24,0 | 45,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 18,0 | 21,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 41 | (40) ISO-M40 (4) 1 1/4" | M | 1 1/4"NPT | N | 1 1/4" | G | 21,0 | 24,0 | 30,0 | 53,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 24,0 | 27,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 51 | (50) ISO-M50 (5) 1 1/2" | M | 1 1/2"NPT | N | 1 1/2" | G | 27,0 | 30,0 | 36,0 | 61,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 30,0 | 33,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 61 | (63) ISO-M63 (6) 2" | M | 2"NPT | N | 2" | G | 36,0 | 39,0 | 45,0 | 71,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 39,0 | 42,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 71 | (75) ISO-M75 (7) 2 1/2" | M | 2 1/2"NPT | N | 2 1/2" | G | 42,0 | 45,0 | 54,0 | 84,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 45,0 | 48,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 81 | (90) ISO-M90 (8) 3" | M | 3"NPT | N | 3" | G | 48,0 | 51,0 | 68,0 | 101,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 51,0 | 54,0 | | | STAINLESS STEEL | IX |
| PA PA-R | 91 | (100) ISO-M100 (9) 4" | M | 4"NPT | N | 4" | G | 52,0 | 56,0 | 92,0 | 126,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 56,0 | 59,0 | | | STAINLESS STEEL | IX |
| | | | | | | | | 59,0 | 62,0 | | | NICKEL PL. BRASS | ON |
| | | | | | | | | 62,0 | 65,0 | | | STAINLESS STEEL | IX |
| | | | | | | | | 65,0 | 68,0 | | | NICKEL PL. BRASS | ON |
| | | | | | | | | 68,0 | 74,0 | | | STAINLESS STEEL | IX |
| | | | | | | | | 74,0 | 80,0 | | | NICKEL PL. BRASS | ON |
| | | | | | | | | 80,0 | 86,0 | | | STAINLESS STEEL | IX |
| | | | | | | | | 86,0 | 92,0 | | | NICKEL PL. BRASS | ON |
| | | | | | | | | | | | | STAINLESS STEEL | IX |

CABLE GLAND ORDERING EXAMPLES

| | | | | | | |
|-----|----|----|---|---|-----|---|
| PAP | 11 | 20 | - | M | ONK | = PA1120MONK (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) |
| PAP | 21 | - | 2 | N | XK | = PA212NXK (NON-BARRIER CABLE GLAND STAINLESS STEEL) |

LEGEND

| | | |
|-----|------------------------|--|
| (1) | CABLE GLAND TYPE/MODEL | PA = NON-BARRIER CABLE GLAND - PA-R = BARRIER CABLE GLAND |
| (2) | THREADING | M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = ISO-228 |
| (3) | CABLE GLAND MATERIAL | ON = NICKEL PLATED MARINE BRASS - IX = AISI-316L STAINLESS STEEL |

PA DIMENSIONAL

| | |
|-------|---|
| 1 | BODY |
| 2-3-4 | INNER SEALING RING FOR ARMOURED CABLE |
| 5 | ARMOUR CLAMPING CONE |
| 6 | ARMOUR CLAMPING RING FOR ARMOURED CABL |
| 7 | ANTI RUBBING WASHER |
| 8 | GLAND NUT |
| 9 | O-RING (ONLY FOR METRICAL) |
| 10 | *CHAMBER FOR SEALING ("R" VERSION ONLY) |

* Chamber will be filled with sealing when cable gland is completely assembled.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex db / Ex eb/ Ex ia/ IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0140X |
| PROTECTION DEGREE | IP66 or IP66/68 |
| AMBIENT TEMPERATURE | -40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0013X INMETRO: CEPEL 12.2174X EAC: TC RU C-IT.ГБ08.B.02646 (-75°C ÷ +180°C) RINA: ELE137217CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 Kc (Korean certification): 14-KB4BO- (from 0427X to 0044X) CCOE-PESO: P405708/7 |

Mechanical characteristics

| | |
|---------------------|---|
| Body / cap | OT-58 marine brass (ON) - AISI-316L stainless steel (IX) marine grade copper free aluminium (on project request only) |
| Finishes | full nickel plating treatment (brass material only) |
| Rubber rings | EPDM rubber 50-60 shore hardness (standard supply) Silicon rubber 60 shore hardness (on demand only) |
| O-ring | silicon rubber - 60 shore hardness |
| Skid washer | nylon 6.0 |
| Chamber for sealing | OT-58 marine brass ("R" version only) |

Applications

| |
|--|
| For unarmoured cables only |
| Single compression type suitable for indoor and outdoor use |
| Single compression - on cable (inner sealing) |
| Sealing with proper resin into "chamber of sealing" (on barrier type version "R" only) |



On Request Accessories:

- Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)

Cable gland selection table

| CODE | SIZE | ENTRY THREAD SIZE | | | INNER SHEATH DIA. | | HEXAGON ϕ | MATERIAL | | | | |
|--------------|------|----------------------------|-----|-----------|-------------------|----------|--------------|----------|------|-------|------------------|----|
| | | METRIC | NPT | ISO 228 | min [mm] | max [mm] | | (3) | | | | |
| PNA PNA-R | 00 | (16)ISO-M16 (0)3/8" | M | 3/8"NPT | N | 3/8" | G | 4,0 | 7,0 | 24,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 7,0 | 10,0 | | STAINLESS STEEL | IX |
| | | (20)ISO-M20 (1)1/2" | M | 1/2"NPT | N | 1/2" | G | 5,5 | 8,0 | 32,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 8,0 | 10,5 | | STAINLESS STEEL | IX |
| PNA PNA-R | 11 | (20) ISO-M20 (1) 1/2" | M | 1/2"NPT | N | 1/2" | G | 5,5 | 8,0 | 32,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 8,0 | 10,5 | | STAINLESS STEEL | IX |
| | | | | | | | | 10,5 | 13,0 | | | |
| PNA PNA-R | 21 | (25) ISO-M25 (2) 3/4" | M | 3/4"NPT | N | 3/4" | G | 10,5 | 13,0 | 36,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 13,0 | 15,5 | | STAINLESS STEEL | IX |
| | | | | | | | | 15,5 | 18,0 | | | |
| PNA PNA-R | 31 | (32) ISO-M32 (3) 1" | M | 1"NPT | N | 1" | G | 15,0 | 18,0 | 45,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 18,0 | 21,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 21,0 | 24,0 | | | |
| PNA PNA-R | 41 | (40) ISO-M40 (4) 1 1/4" | M | 1 1/4"NPT | N | 1 1/4" | G | 21,0 | 24,0 | 53,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 24,0 | 27,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 27,0 | 30,0 | | | |
| PNA PNA-R | 51 | (50) ISO-M50 (5) 1 1/2" | M | 1 1/2"NPT | N | 1 1/2" | G | 24,0 | 27,0 | 61,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 27,0 | 30,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 30,0 | 33,0 | | | |
| | | | | | | | | 33,0 | 36,0 | | | |
| PNA PNA-R | 61 | (63) ISO-M63 (6) 2" | M | 2"NPT | N | 2" | G | 36,0 | 39,0 | 71,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 39,0 | 42,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 42,0 | 45,0 | | | |
| | | | | | | | | 45,0 | 48,0 | | | |
| PNA PNA-R | 71 | (75) ISO-M75 (7) 2 1/2" | M | 2 1/2"NPT | N | 2 1/2" | G | 48,0 | 51,0 | 84,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 51,0 | 54,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 52,0 | 56,0 | | | |
| | | | | | | | | 56,0 | 59,0 | | | |
| | | | | | | | | 59,0 | 62,0 | | | |
| PNA PNA-R | 81 | (90) ISO-M90 (8) 3" | M | 3"NPT | N | 3" | G | 62,0 | 65,0 | 101,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | 65,0 | 68,0 | | STAINLESS STEEL | IX |
| | | | | | | | | 68,0 | 74,0 | | | |
| | | | | | | | | 74,0 | 80,0 | | | |
| | | | | | | | | 80,0 | 86,0 | | | |
| PNA PNA-R | 91 | (100) ISO-M100 (9) 4" | M | 4"NPT | N | 4" | G | 86,0 | 92,0 | 126,0 | NICKEL PL. BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |

CABLE GLAND ORDERING EXAMPLES

| | | | | | | |
|-----|----|----|---|---|-----|--|
| PNA | 11 | 20 | - | M | ONK | = PNA1120MONK (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) |
| PNA | 21 | - | 2 | N | XK | = PNA212NXK (NON-BARRIER CABLE GLAND STAINLESS STEEL) |

LEGEND

| | | |
|-----|------------------------|--|
| (1) | CABLE GLAND TYPE/MODEL | PNA = NON-BARRIER CABLE GLAND - PNA-R = BARRIER CABLE GLAND |
| (2) | THREADING | M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = ISO-228 |
| (3) | CABLE GLAND MATERIAL | ON = NICKEL PLATED MARINE BRASS - IX = AISI-316L STAINLESS STEEL |

PNA DIMENSIONAL

| | |
|-------|---|
| 1 | BODY |
| 2-3-4 | INNER SEALING RING FOR NOT ARMOURED CABLE |
| 5 | PRESS RING |
| 6 | GLAND NUT |
| 7 | O-RING (ONLY FOR METRICAL) |
| 8 | *CHAMBER FOR SEALING ("R" VERSION ONLY) |

* Chamber will be filled with sealing when cable gland is completely assembled.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex db / Ex eb/ Ex ia/ IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0140X |
| PROTECTION DEGREE | IP66 or IP66/68 |
| AMBIENT TEMPERATURE | -40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON) |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0013X INMETRO: CEPEL 12.2174X EAC: TC RU C-IT.ГБ08.B.02646 (-75°C ÷ +180°C) RINA: ELE137217CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 Kc (Korean certification): 14-KB4BO-(from 0427X to 0444X) CCOE-PESO: P405708/7 |

Mechanical characteristics

| | |
|---------------------|---|
| Body / cap | OT-58 marine brass (ON) - AISI-316L stainless steel (IX) marine grade copper free aluminium (on project request only) |
| Finishes | full nickel plating treatment (brass material only) |
| Rubber rings | EPDM rubber 50-60 shore hardness (standard supply) Silicon rubber 60 shore hardness (on demand only) |
| O-ring | silicon rubber - 60 shore hardness |
| Skid washer | nylon 6.0 |
| Chamber for sealing | OT-58 marine brass ("R" version only) |

Applications

| |
|---|
| For unarmoured cables only |
| Suitable for flexible conduit coupling connection by threaded cap (uni iso 228) |
| Single compression type suitable for indoor and outdoor use |
| Single compression - on cable (inner sealing) |
| Sealing with proper resin into "chamber of sealing" (on barrier type version "R" only) |



On Request Accessories:

- Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing
(See DL-NW-PTD-ET bulletin)

Cable gland selection table

| CODE (1) | SIZE | ENTRY THREAD SIZE | | | INNER SHEATH DIA. | | FEMALE THREAD UNI ISO 228 (4) | HEXAGON ϕ [mm] | MATERIAL | | | |
|----------------|------|----------------------------|------------|----------------|-------------------|----------|--|----------------------|----------|-----------------|-----------------|----|
| | | METRIC (2) | NPT (2) | ISO 228 (2) | min [mm] | max [mm] | | | (3) | (3) | | |
| PNAF PNAF-R | 00 | (16)ISO-M16 (0)3/8" | M | 3/8"NPT | 3/8" | G | 3/8" | 24,0 | | NICKEL PL.BRASS | ON | |
| | | | | | | | | | | STAINLESS STEEL | IX | |
| | | (20)ISO-M20 (1)1/2" | M | 1/2"NPT | 1/2" | G | 1/2" | 32,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| PNAF PNAF-R | 11 | (20) ISO-M20 (1) 1/2" | M | 1/2"NPT | 1/2" | G | 1/2" | 32,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 21 | (25) ISO-M25 (2) 3/4" | M | 3/4"NPT | 3/4" | G | 3/4" | 36,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 31 | (32) ISO-M32 (3) 1" | M | 1"NPT | 1" | G | 1" | 45,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 41 | (40) ISO-M40 (4) 1 1/4" | M | 1 1/4"NPT | 1 1/4" | G | 1 1/4" | 53,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 51 | (50) ISO-M50 (5) 1 1/2" | M | 1 1/2"NPT | 1 1/2" | G | 1 1/2" | 61,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 61 | (63) ISO-M63 (6) 2" | M | 2"NPT | 2" | G | 2" | 71,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 71 | (75) ISO-M75 (7) 2 1/2" | M | 2 1/2"NPT | 2 1/2" | G | 2 1/2" | 84,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 81 | (90) ISO-M90 (8) 3" | M | 3"NPT | 3" | G | 3" | 101,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PNAF PNAF-R | 91 | (100) ISO-M100 (9) 4" | M | 4"NPT | 4" | G | 4" | 126,0 | | | NICKEL PL.BRASS | ON |
| | | | | | | | | | | | STAINLESS STEEL | IX |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

CABLE GLAND ORDERING

EXAMPLES

| | | | | | | |
|------|----|----|---|---|-----|---|
| PNAF | 11 | 20 | - | M | ONK | = PNAF1120MONK (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) |
| PNAF | 21 | - | 2 | N | XK | = PNAF212NXK (NON-BARRIER CABLE GLAND STAINLESS STEEL) |

LEGENDA

| | | |
|-----|------------------------|--|
| (1) | CABLE GLAND TYPE/MODEL | PNAF = NON-BARRIER CABLE GLAND - PNAF-R = BARRIER CABLE GLAND |
| (2) | THREADING | M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = ISO-228 |
| (3) | CABLE GLAND MATERIAL | ONK = NICKEL PLATED MARINE BRASS - XK = AISI-316L STAINLESS STEEL |
| (4) | FEMALE THREAD | ISO-228 FEMALE THREAD SUITABLE FOR FLEXIBLE CONDUIT COUPLING |

PNAF DIMENSIONAL

| | |
|-------|---|
| 1 | BODY |
| 2-3-4 | INNER SEALING RING FOR NOT ARMOURED CABLE |
| 5 | PRESS RING |
| 6 | GLAND NUT "FEMALE" |
| 7 | O-RING (ONLY FOR METRICAL) |
| 8 | *CHAMBER FOR SEALING ("R" VERSION ONLY) |

* Chamber will be filled with sealing when cable gland is completely assembled.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



Mechanical characteristics

LOCKNUTS

| | |
|----------|---|
| Material | nickel plated brass |
| Finishes | full nickel plating treatment (brass material only) |

SHROUDS

| | |
|----------|------|
| Material | PVC* |
|----------|------|

*EPDM rubber on request

GASKETS

| | |
|----------|-----------|
| Material | nylon 6.0 |
|----------|-----------|

EARTH TAGS

| | |
|----------|--|
| Material | stainless steel (for stainless cable glands) |
| | nickel plated brass (for nickel plated brass cable glands) |

Applications

| | |
|--------------------|--|
| Locknuts | Are preferred items used in securing cable glands to the gland plate especially to plastic junction boxes |
| Shrouds | For all type of glands application where additional protection is required |
| Epoxy compound kit | Is provided for submission of barrier cable glands type P.-R Kit composed of: - Component A (dark grey) - Component B (white) - Nitrile gloves |
| Gaskets | Are used to maintain the ip rating across the interface between the equipment and relevant cable gland |
| Earth tags | Are used to ensure earth continuity and grounding of cable armour |

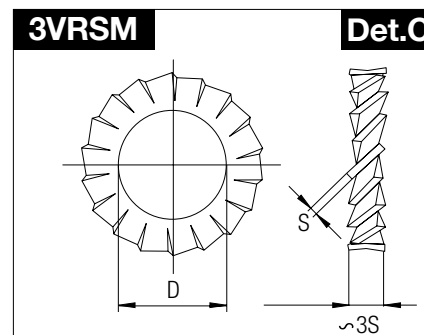
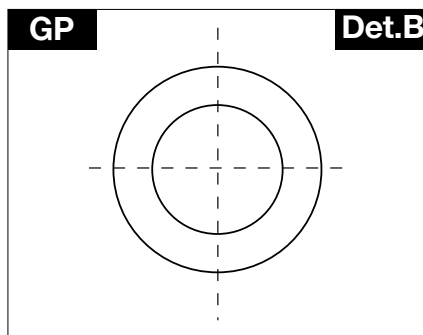
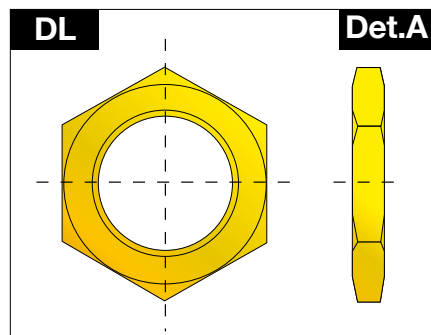


Technical Features

| LOCKNUTS | | | |
|----------|----------------|---------|------|
| DETAIL A | THREADS / SIZE | | |
| TYPE | NPT | UNI-228 | ISO |
| DL0 | 3/8" | 3/8" | M16 |
| DL1 | 1/2" | 1/2" | M20 |
| DL2 | 3/4" | 3/4" | M25 |
| DL3 | 1" | 1" | M32 |
| DL4 | 1-1/4" | 1-1/4" | M40 |
| DL5 | 1-1/2" | 1-1/2" | M50 |
| DL6 | 2" | 2" | M63 |
| DL7 | 2-1/2" | 2-1/2" | M75 |
| DL8 | 3" | 3" | M90 |
| DL9 | 4" | 4" | M100 |

| GASKETS | | | |
|----------|----------------|---------|------|
| DETAIL B | THREADS / SIZE | | |
| TYPE | NPT | UNI-228 | ISO |
| GP0 | 3/8" | 3/8" | M16 |
| GP1 | 1/2" | 1/2" | M20 |
| GP2 | 3/4" | 3/4" | M25 |
| GP3 | 1" | 1" | M32 |
| GP4 | 1-1/4" | 1-1/4" | M40 |
| GP5 | 1-1/2" | 1-1/2" | M50 |
| GP6 | 2" | 2" | M63 |
| GP7 | 2-1/2" | 2-1/2" | M75 |
| GP8 | 3" | 3" | M90 |
| GP9 | 4" | 4" | M100 |

| WASHERS | | |
|----------|---------|--------|
| TYPE | ØD [mm] | DETAIL |
| 3VRSM20X | 20 | C |
| 3VRSM25X | 25 | C |
| 3VRSM32X | 32 | C |
| 3VRSM40X | 40 | C |
| 3VRSM50X | 50 | C |
| 3VRSM63X | 63 | C |

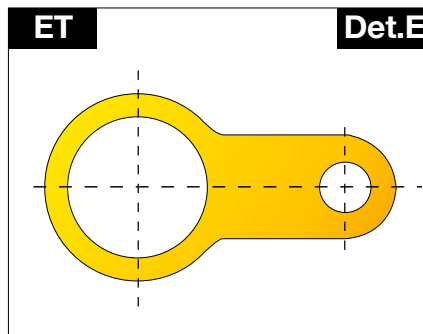
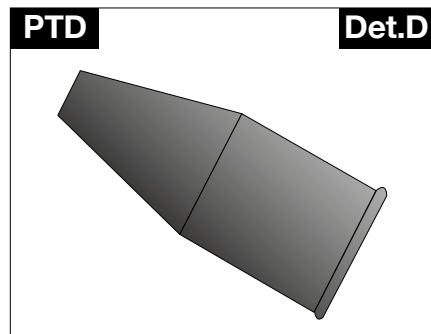


| SHROUDS* | | | |
|----------|----------------|---------|------|
| DETAIL D | THREADS / SIZE | | |
| TYPE | NPT | UNI-228 | ISO |
| PTD0 | 3/8" | 3/8" | M16 |
| PTD1 | 1/2" | 1/2" | M20 |
| PTD2 | 3/4" | 3/4" | M25 |
| PTD3 | 1" | 1" | M32 |
| PTD4 | 1-1/4" | 1-1/4" | M40 |
| PTD5 | 1-1/2" | 1-1/2" | M50 |
| PTD6 | 2" | 2" | M63 |
| PTD7 | 2-1/2" | 2-1/2" | M75 |
| PTD8 | 3" | 3" | M90 |
| PTD9 | 4" | 4" | M100 |

| EARTHS TAGS | | | |
|-------------|-----------------|---------|------|
| DETAIL E | THREADS / SIZEE | | |
| TYPE | NPT | UNI-228 | ISO |
| ET0 | 3/8" | 3/8" | M16 |
| ET1 | 1/2" | 1/2" | M20 |
| ET2 | 3/4" | 3/4" | M25 |
| ET3 | 1" | 1" | M32 |
| ET4 | 1-1/4" | 1-1/4" | M40 |
| ET5 | 1-1/2" | 1-1/2" | M50 |
| ET6 | 2" | 2" | M63 |
| ET7 | 2-1/2" | 2-1/2" | M75 |
| ET8 | 3" | 3" | M90 |
| ET9 | 4" | 4" | M100 |

| TWO-COMPONENT EPOXY PASTE | |
|---------------------------|--------------------|
| SIZE / CODE | Q.TY COMPOUND [gr] |
| 0 / INN-FS0904-1 | 6 |
| 1 / INN-FS0904-1 | 6 |
| 2 / INN-FS0904-2 | 12 |
| 3 / INN-FS0904-3 | 24 |
| 4 / INN-FS0904-5 | 56 |
| 5 / INN-FS0904-5 | 56 |
| 6 / INN-FS0904-6 | 88 |
| 7 / INN-FS0904-7 | 200 |
| 8 / INN-FS0904-8 | 288 |

* Blue colour on request.



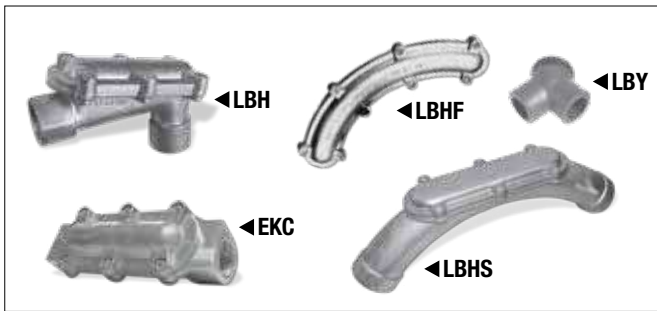
REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



EX CONDUIT FITTINGS





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

| | |
|---------------------------------|---|
| Directive 2014/34/EU | |
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex db IIC Gb ⊗ II 2 G Ex eb IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 16 ATEX 0006X (LBH - LBY only) |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +130°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 16.0013X (LBH - LBY only) INMETRO: CEPTEL 13.2228U EAC: TC RU C-IT.ГБ08.В.02646 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC 505: 20160229-E356727 (LBY Series only) CCOE-PESO: P413651/2 |

Mechanical characteristics

| | |
|----------------|---|
| Body and cover | marine grade copper free aluminum light alloy |
| Screws | galvanized steel |

Applications

OPEN BENDS AND PULLING BOXES ARE USED FOR THE WIRING IN ELECTRICAL CONDUIT PLANTS.
PROVIDING FOR A GAP ON THE BACK IS MORE 'EASY INSPECTION AND THE INCLUSION OF ELECTRIC CABLES.



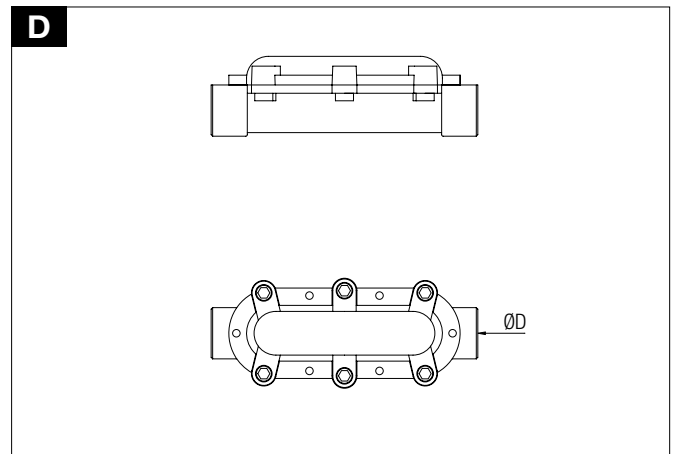
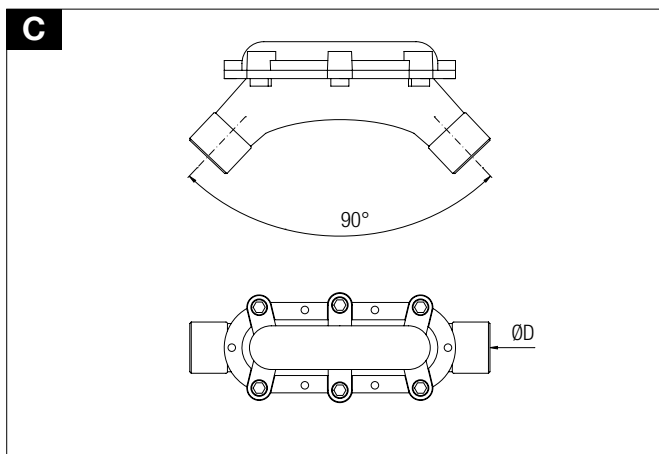
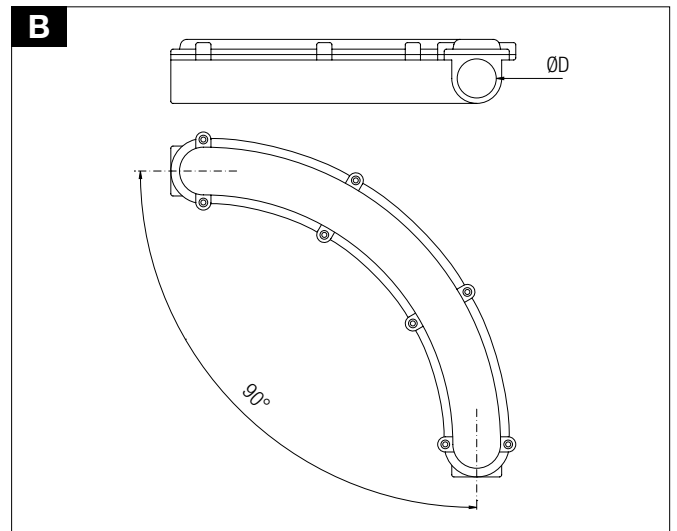
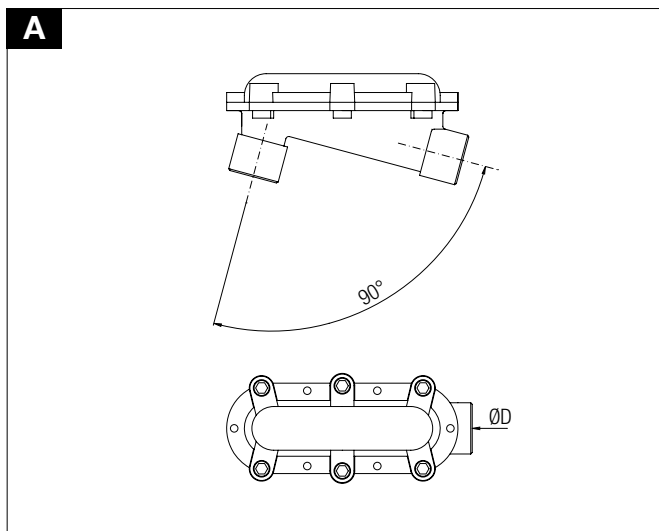
On Request Accessories:

- Different thread from standard
- Stainless steel screws
- Painting

Technical Features

| DETAIL "A" | DETAIL "B" | DETAIL "C" | DETAIL "D" | ØD HUBS (EN 10226-2 OR NPT) |
|------------|------------|------------|------------|--------------------------------|
| TYPE | TYPE | TYPE | TYPE | |
| LBH2 | LBHF2 | LBHS2 | EKC2 | 2 x 3/4" |
| LBH3 | LBHF3 | LBHS3 | EKC3 | 2 x 1" |
| LBH4 | - | - | EKC4 | 2 x 1-1/4" |
| LBH5 | LBHF5 | LBHS5 | EKC5 | 2 x 1-1/2" |
| LBH6 | LBHF6 | LBHS6 | EKC6 | 2 x 2" |
| LBH7 | LBHF7 | LBHS7 | EKC7 | 2 x 2-1/2" |
| LBH8 | LBHF8 | LBHS8 | EKC8 | 2 x 3" |
| LBH9 | LBHF9 | LBHS9 | - | 2 x 3-1/2" |
| LBH10 | LBHF10 | LBHS10 | - | 2 x 4" |
| LBH11 | LBHF11 | LBHS11 | - | 2 x 5" |
| LBH12 | LBHF12 | LBHS12 | - | 2 x 6" |

Reference Details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

| | |
|---------------------------------|--|
| Directive 2014/34/EU | |
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 61241-0; EN/IEC 61241-1 |
| EC Type-Examination Certificate | ICEPI 11 ATEX 03C002 (sealing fittings) INERIS 13 ATEX 0001X (three pieces union) |
| PROTECTION DEGREE | IP66 (sealing fittings) IP66/IP67 (three pieces union) |
| AMBIENT TEMPERATURE | -20°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | <ul style="list-style-type: none"> IECEX: IECEx 13.0002X (three pieces union) INMETRO: CEPEL 13.2242U (three pieces union) EAC: TC RU C-IT.ГБ08.В.02646 (-60°C ÷ +80°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC-505: 20160229-E356727 (three pieces union) |

SEALING FITTINGS - Mechanical characteristics

| | |
|----------|---|
| Material | marine grade copper free aluminum light alloy |
|----------|---|

THREE PIECE UNIONS - Mechanical characteristics

| | |
|----------|---------------------|
| Material | galvanized steel |
| Gasket | silicon rubber EPDM |



On Request Accessories:

- Different threads from standard
- Different materials from standard

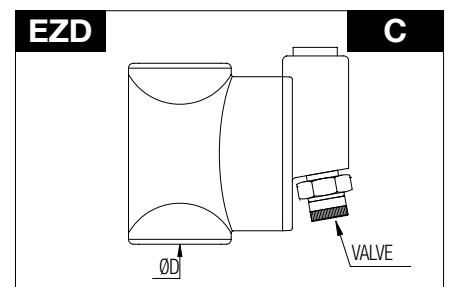
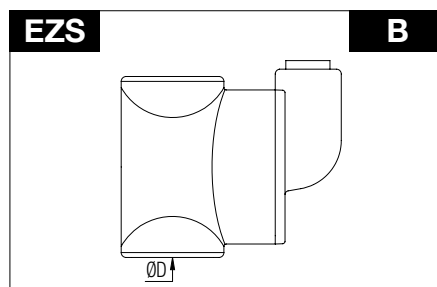
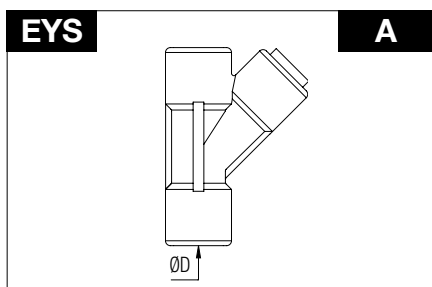
Technical Features

| DETAIL "A" | DETAIL "B" | DETAIL "C" | ØD HUBS (UNI6125 OR NPT) |
|------------|------------|------------|-----------------------------|
| TYPE | TYPE | TYPE | |
| EYS1 | EZS1 | EZD1 | 1/2" |
| EYS2 | EZS2 | EZD2 | 3/4" |
| EYS3 | EZS3 | EZD3 | 1" |
| - | EZS5 | EZD5 | 1-1/2" |
| - | EZS6 | EZD6 | 2" |
| - | EZS7 | EZD7 | 2-1/2" |
| - | EZS8 | EZD8 | 3" |

Sealing compound table

| SIZE | EYS | EZS - EZD |
|------|---------------|---------------|
| | QUANTITY [gr] | QUANTITY [gr] |
| 1 | 35 | 140 |
| 2 | 50 | 140 |
| 3 | 100 | 140 |
| 5 | - | 390 |
| 6 | - | 570 |
| 7 | - | 1000 |
| 8 | - | 1000 |

SEALING FITTINGS TO BE SEALED BY MEANS OF ASP 500 OR ASP 1000 BI-COMPONENT SEALING COMPOUND PLEASE REFER TO SEALING TABLE FOR QUANTITIES.

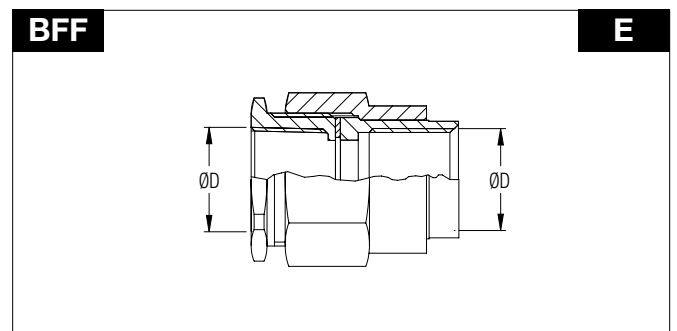
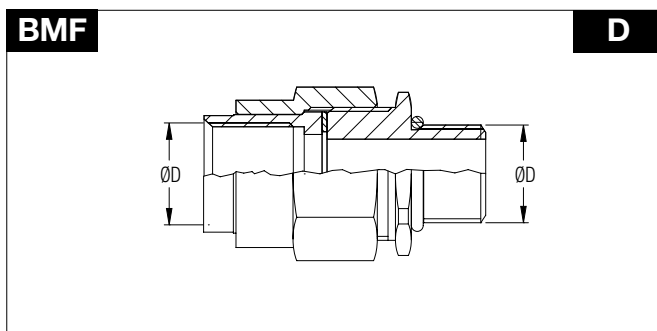


THREE PIECES UNION - Technical Features

| THREE PIECE UNION MALE/FEMALE Ex d IIC | | |
|--|--------|--------|
| TYPE | ØD | DETAIL |
| BMF1 | 1/2" | D |
| BMF2 | 3/4" | D |
| BMF3 | 1" | D |
| BMF4 | 1-1/4" | D |
| BMF5 | 1-1/2" | D |
| BMF6 | 2" | D |
| BMF7 | 2-1/2" | D |
| BMF8 | 3" | D |

| THREE PIECE UNION MALE/MALE Ex d IIC | | |
|--------------------------------------|--------|--------|
| TYPE | ØD | DETAIL |
| BMM1 | 1/2" | D |
| BMM2 | 3/4" | D |
| BMM3 | 1" | D |
| BMM4 | 1-1/4" | D |
| BMM5 | 1-1/2" | D |
| BMM6 | 2" | D |
| BMM7 | 2-1/2" | D |
| BMM8 | 3" | D |

| THREE PIECE UNION FEMALE/FEMALE Ex d IIC | | |
|--|--------|--------|
| TYPE | ØD | DETAIL |
| BFF1 | 1/2" | E |
| BFF2 | 3/4" | E |
| BFF3 | 1" | E |
| BFF4 | 1-1/4" | E |
| BFF5 | 1-1/2" | E |
| BFF6 | 2" | E |
| BFF7 | 2-1/2" | E |
| BFF8 | 3" | E |



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

| Directive 2014/34/EU | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex db IIC Gb ⊗ II 2 G Ex eb IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 16 ATEX 0006X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +130°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 16.0013X INMETRO: CEPEL 13.2222U EAC: TC RU C-IT.Г508.B.02646 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC-505: 20160229-E356727 CCOE-PESO: P413651/2 |

Mechanical characteristics

| | |
|--------------------|--|
| Reducers materials | galvanized steel (AZ) |
| Adaptors materials | OT-58 marine brass (OT) - nichel plated brass (ON) - AISI-316L stainless steel (X) - galvanized steel (AZ) |
| Finishes | full nickel plating threatment (brass material only) |
| Gasket | silicon rubber EPDM / NYLON |

Applications

EXPLOSION PROOF REDUCER AND ADAPTORS ARE USED TO CONNECT VARIOUS EQUIPMENT: ENCLOSURES, LIGHTING FIXTURES, JUNCTION AND PULLING BOXES ECT. OF DIFFERENT DIAMETERS AND THREADS



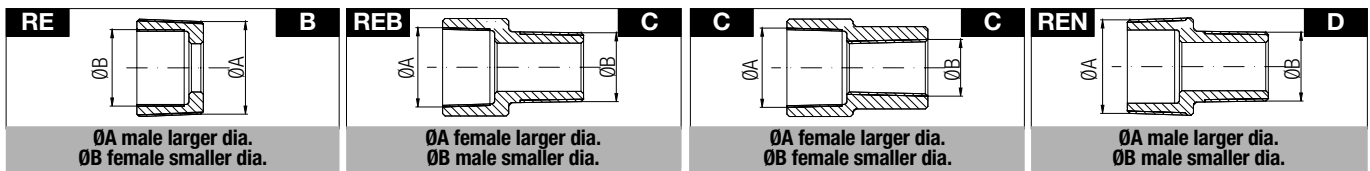
On Request Accessories:

- Different threads from standard
- Different materials from standard
- Silicon Rubber Gaskets

REDUCERS - Technical Features

| RING REDUCERS - RE | | | | REDUCERS BUSHING - REB | | | | REDUCERS COUPLING - REM | | | | REDUCERS NIPPLE - REN | | | |
|--------------------|---------|-----------|------|------------------------|---------|-----------|------|-------------------------|-----------|-----------|------|-----------------------|---------|---------|------|
| TYPE | ØA MALE | ØB FEMALE | DET. | TYPE | ØA MALE | ØB FEMALE | DET. | TYPE | ØA FEMALE | ØA FEMALE | DET. | TYPE | ØA MALE | ØA MALE | DET. |
| RE21 | 3/4" | 1/2" | A | REB21 | 1/2" | 3/4" | B | REM21 | 3/4" | 1/2" | C | REN21 | 3/4" | 1/2" | D |
| RE31 | 1" | 1/2" | A | REB31 | 1/2" | 1" | B | REM31 | 1" | 1/2" | C | REN31 | 1" | 1/2" | D |
| RE32 | 1" | 3/4" | A | REB32 | 3/4" | 1" | B | REM32 | 1" | 3/4" | C | REN32 | 1" | 3/4" | D |
| RE41 | 1-1/4" | 1/2" | A | REB41 | 1/2" | 1-1/4" | B | REM41 | 1-1/4" | 1/2" | C | REN41 | 1-1/4" | 1/2" | D |
| RE42 | 1-1/4" | 3/4" | A | REB42 | 3/4" | 1-1/4" | B | REM42 | 1-1/4" | 3/4" | C | REN42 | 1-1/4" | 3/4" | D |
| RE43 | 1-1/4" | 1" | A | REB43 | 1" | 1-1/4" | B | REM43 | 1-1/4" | 1" | C | REN43 | 1-1/4" | 1" | D |
| RE51 | 1-1/2" | 1/2" | A | REB51 | 1/2" | 1-1/2" | B | REM51 | 1-1/2" | 1/2" | C | REN51 | 1-1/2" | 1/2" | D |
| RE52 | 1-1/2" | 3/4" | A | REB52 | 3/4" | 1-1/2" | B | REM52 | 1-1/2" | 3/4" | C | REN52 | 1-1/2" | 3/4" | D |
| RE53 | 1-1/2" | 1" | A | REB53 | 1" | 1-1/2" | B | REM53 | 1-1/2" | 1" | C | REN53 | 1-1/2" | 1" | D |
| RE54 | 1-1/2" | 1-1/4" | A | REB54 | 1-1/4" | 1-1/2" | B | REM54 | 1-1/2" | 1-1/4" | C | REN54 | 1-1/2" | 1-1/4" | D |
| RE61 | 2" | 1/2" | A | REB61 | 1/2" | 2" | B | REM61 | 2" | 1/2" | C | REN61 | 2" | 1/2" | D |
| RE62 | 2" | 3/4" | A | REB62 | 3/4" | 2" | B | REM62 | 2" | 3/4" | C | REN62 | 2" | 3/4" | D |
| RE63 | 2" | 1" | A | REB63 | 1" | 2" | B | REM63 | 2" | 1" | C | REN63 | 2" | 1" | D |
| RE64 | 2" | 1-1/4" | A | REB64 | 1-1/4" | 2" | B | REM64 | 2" | 1-1/4" | C | REN64 | 2" | 1-1/4" | D |
| RE65 | 2" | 1-1/2" | A | REB65 | 1-1/2" | 2" | B | REM65 | 2" | 1-1/2" | C | REN65 | 2" | 1-1/2" | D |
| RE71 | 2-1/2" | 1/2" | A | REB71 | 1/2" | 2-1/2" | B | REM71 | 2-1/2" | 1/2" | C | REN71 | 2-1/2" | 1/2" | D |
| RE72 | 2-1/2" | 3/4" | A | REB72 | 3/4" | 2-1/2" | B | REM72 | 2-1/2" | 3/4" | C | REN72 | 2-1/2" | 3/4" | D |
| RE73 | 2-1/2" | 1" | A | REB73 | 1" | 2-1/2" | B | REM73 | 2-1/2" | 1" | C | REN73 | 2-1/2" | 1" | D |
| RE74 | 2-1/2" | 1-1/4" | A | REB74 | 1-1/4" | 2-1/2" | B | REM74 | 2-1/2" | 1-1/4" | C | REN74 | 2-1/2" | 1-1/4" | D |
| RE75 | 2-1/2" | 1-1/2" | A | REB75 | 1-1/2" | 2-1/2" | B | REM75 | 2-1/2" | 1-1/2" | C | REN75 | 2-1/2" | 1-1/2" | D |
| RE76 | 2-1/2" | 2" | A | REB76 | 2" | 2-1/2" | B | REM76 | 2-1/2" | 2" | C | REN76 | 2-1/2" | 2" | D |
| RE81 | 3" | 1/2" | A | REB81 | 1/2" | 3" | B | REM81 | 3" | 1/2" | C | REN81 | 3" | 1/2" | D |
| RE82 | 3" | 3/4" | A | REB82 | 3/4" | 3" | B | REM82 | 3" | 3/4" | C | REN82 | 3" | 3/4" | D |
| RE83 | 3" | 1" | A | REB83 | 1" | 3" | B | REM83 | 3" | 1" | C | REN83 | 3" | 1" | D |
| RE84 | 3" | 1-1/4" | A | REB84 | 1-1/4" | 3" | B | REM84 | 3" | 1-1/4" | C | REN84 | 3" | 1-1/4" | D |
| RE85 | 3" | 1-1/2" | A | REB85 | 1-1/2" | 3" | B | REM85 | 3" | 1-1/2" | C | REN85 | 3" | 1-1/2" | D |
| RE86 | 3" | 2" | A | REB86 | 2" | 3" | B | REM86 | 3" | 2" | C | REN86 | 3" | 2" | D |
| RE87 | 3" | 2-1/2" | A | REB87 | 2-1/2" | 3" | B | REM87 | 3" | 2-1/2" | C | REN87 | 3" | 2-1/2" | D |

New available sizes on demand: 3-1/2" - 4" - 5" - 6"



Identification adaptors selection table

| |
|--|
| SIZE LARGER DIAMETER 02 / 03 / 04 / 05 / 06 / 06 / 07 / 08 |
| LARGER DIA. TYPE OF THREAD R-Rc (EN 10226-2), P(PG), N (NPT), G (ISO 228), M (ISO-metric) |
| SIZE SMALLER DIAMETER 01 / 02 / 03 / 04 / 05 / 06 / 06 / 07 |
| SMALLER DIA. TYPE OF THREAD R-Rc (EN 10226-2), P(PG), N (NPT), G (ISO 228), M (ISO-metric) |
| MATERIAL X (stainless steel), ON (nikel plated brass), OT (marine brass) |

| | TYPE | SIZE LARGER DIAMETER | THREAD | SIZE SMALLER DIAMETER | THREAD | MATERIAL |
|------------------|------|----------------------|--------|-----------------------|--------|----------|
| EXAMPLE 1 | RE | 02 | R-Rc | 01 | G | ON |
| EXAMPLE 2 | REB | 03 | N | - | M40 | X |

EXAMPLE 1: RE02K01GON= REDUCER TYPE RE MALE 3/4" 6125 - FEMALE 1/2" ISO228 NIKEL PLATED BRASS
EXAMPLE 2: REB03NM40X= REDUCER TYPE REB MALE 1"NPT - FEMALE M40 STAINLESS STEEL

REMARK: Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.

RE-REB-REM-REN



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex db IIC Gb ⊗ II 2 G Ex eb IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 16 ATEX 0006X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | 60°C ÷ +130°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 16.0013X INMETRO: CEPEL 11.2218U (plug) CEPEL 13.2220U (drain breather valve) CEPEL 13.2224U (nipples and coupling) CEPEL 13.2226U (elbows) EAC: TC RU C-IT.Г508.B.02646 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 UL NEC-505: 20160229-E356727 CCOE-PESO: P413651/2 KCS 19-KA4BO-0791U (only for PLG1 with Ex e execution) KCS 19-KA4BO-0790U (only for ECDE1 with Ex e execution) |

Mechanical characteristics

| PLUGS - LOCKNUTS | |
|-----------------------|--|
| Material - plugs | marine grade copper free aluminum light alloy - galvanized steel - stainless steel - nichel plated brass |
| Material - locknuts | galvanized steel - stainless steel nichel plated brass - aluminium |
| ELBOWS . BUSHINGS | |
| Material | marine grade copper free aluminum light alloy - galvanized steel |
| Screws | stainless steel (DBT only) |
| NIPPLES - COUPLINGS | |
| Material | galvanized steel - stainless steel (nipples only) |
| DRAIN/BREATHER VALVES | |
| Material | stainless steel AISI 316L |
| Gasket | silicon rubber |

(1) REMARK: locknuts DL type and bushings DB-DBT type are not covered by Ex certificate



On Request Accessories:

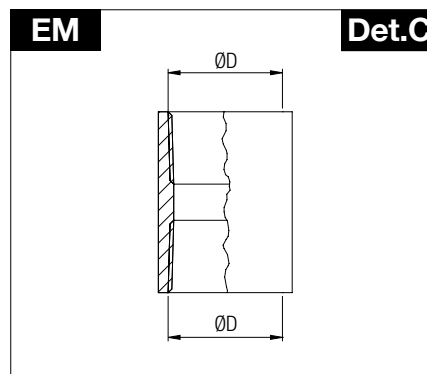
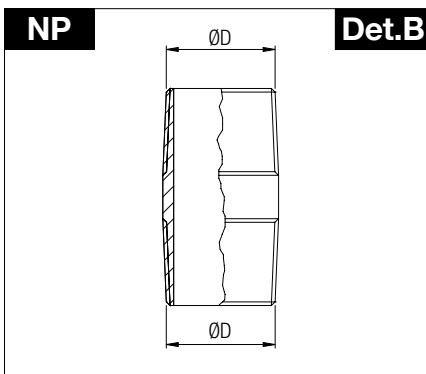
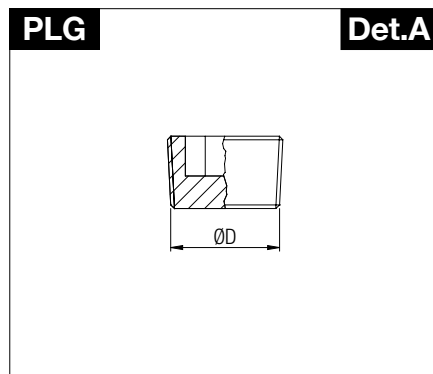
- Different threads from standard
- Different metal materials from standard

Technical Features

| DETAIL "A" | |
|------------|--------|
| MALE PLUGS | |
| TYPE | ØD |
| PLG1 | 1/2" |
| PLG2 | 3/4" |
| PLG3 | 1" |
| PLG4 | 1-1/4" |
| PLG5 | 1-1/2" |
| PLG6 | 2" |
| PLG7 | 2-1/2" |
| PLG8 | 3" |
| PLG9 | 3-1/2" |
| PLG10 | 4" |
| PLG11 | 5" |
| PLG12 | 6" |

| DETAIL "B" | |
|------------|--------|
| NIPPLES | |
| TYPE | ØD |
| NP1 | 1/2" |
| NP2 | 3/4" |
| NP3 | 1" |
| NP4 | 1-1/4" |
| NP5 | 1-1/2" |
| NP6 | 2" |
| NP7 | 2-1/2" |
| NP8 | 3" |
| NP9 | 3-1/2" |
| NP10 | 4" |
| NP11 | 5" |
| NP12 | 6" |

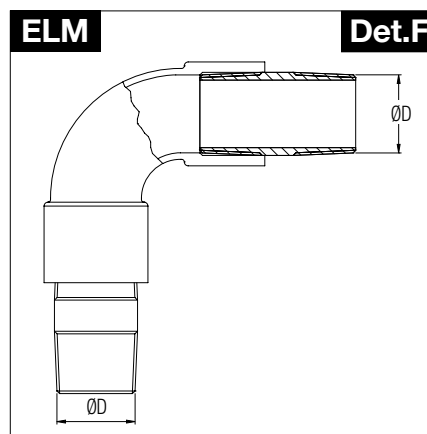
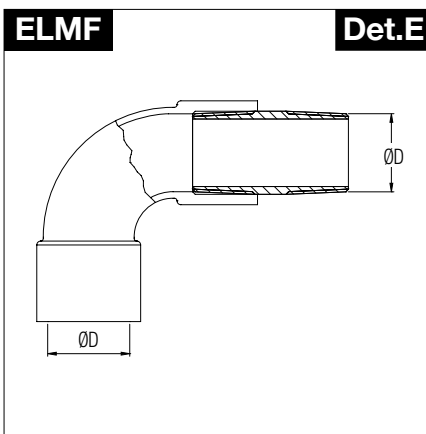
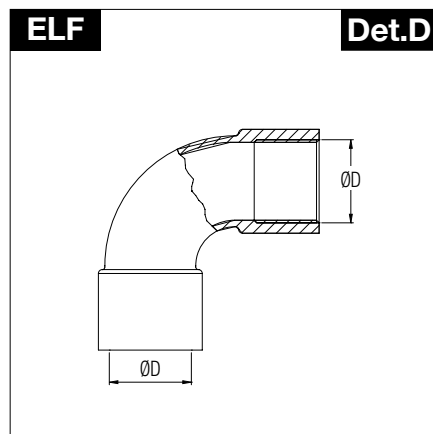
| DETAIL "C" | |
|------------|--------|
| COUPLING | |
| TYPE | ØD |
| EM1 | 1/2" |
| EM2 | 3/4" |
| EM3 | 1" |
| EM4 | 1-1/4" |
| EM5 | 1-1/2" |
| EM6 | 2" |
| EM7 | 2-1/2" |
| EM8 | 3" |
| EM9 | 3-1/2" |
| EM10 | 4" |
| EM11 | 5" |
| EM12 | 6" |



| DETAIL "D" | |
|------------------------------|--------|
| 90deg ELBOWS FEMALE - FEMALE | |
| TYPE | ØD |
| ELF1 | 1/2" |
| ELF2 | 3/4" |
| ELF3 | 1" |
| ELF4 | 1-1/4" |
| ELF5 | 1-1/2" |
| ELF6 | 2" |
| ELF7 | 2-1/2" |
| ELF8 | 3" |
| ELF9 | 3-1/2" |
| ELF10 | 4" |
| ELF11 | 5" |
| ELF12 | 6" |

| DETAIL "E" | |
|----------------------------|--------|
| 90deg ELBOWS FEMALE - MALE | |
| TYPE | ØD |
| ELMF1 | 1/2" |
| ELMF2 | 3/4" |
| ELMF3 | 1" |
| ELMF4 | 1-1/4" |
| ELMF5 | 1-1/2" |
| ELMF6 | 2" |
| ELMF7 | 2-1/2" |
| ELMF8 | 3" |
| ELMF9 | 3-1/2" |
| ELMF10 | 4" |
| ELMF11 | 5" |
| ELMF12 | 6" |

| DETAIL "F" | |
|--------------------------|--------|
| 90deg ELBOWS MALE - MALE | |
| TYPE | ØD |
| ELM1 | 1/2" |
| ELM2 | 3/4" |
| ELM3 | 1" |
| ELM4 | 1-1/4" |
| ELM5 | 1-1/2" |
| ELM6 | 2" |
| ELM7 | 2-1/2" |
| ELM8 | 3" |
| ELM9 | 3-1/2" |
| ELM10 | 4" |
| ELM11 | 5" |
| ELM12 | 6" |





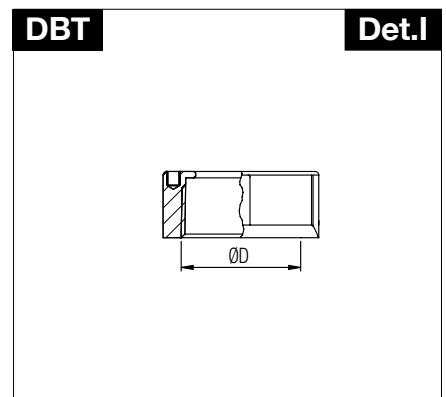
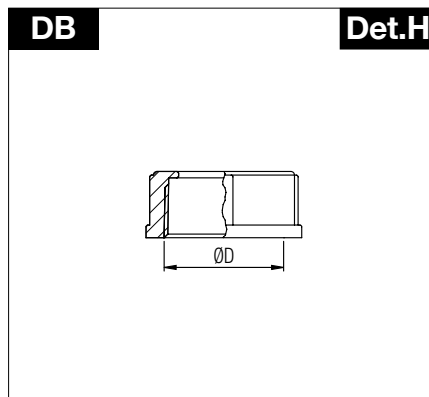
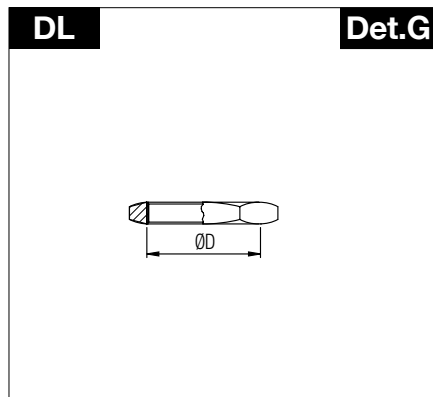
Technical Features

| DETAIL "G" | |
|--------------|--------|
| LOCKNUTS (*) | |
| TYPE | ØD |
| DL1 | 1/2" |
| DL2 | 3/4" |
| DL3 | 1" |
| DL4 | 1-1/4" |
| DL5 | 1-1/2" |
| DL6 | 2" |
| DL7 | 2-1/2" |
| DL8 | 3" |
| DL10 | 4" |

| DETAIL "H" | |
|--------------|--------|
| BUSHINGS (*) | |
| TYPE | ØD |
| DB1 | 1/2" |
| DB2 | 3/4" |
| DB3 | 1" |
| DB4 | 1-1/4" |
| DB5 | 1-1/2" |
| DB6 | 2" |
| DB7 | 2-1/2" |
| DB8 | 3" |
| DB10 | 4" |

| DETAIL "I" | |
|--------------------------------|--------|
| BUSHINGS WITH EARTH SCREWS (*) | |
| TYPE | ØD |
| DBT1 | 1/2" |
| DBT2 | 3/4" |
| DBT3 | 1" |
| DBT4 | 1-1/4" |
| DBT5 | 1-1/2" |
| DBT6 | 2" |
| DBT7 | 2-1/2" |
| DBT8 | 3" |
| DBT10 | 4" |

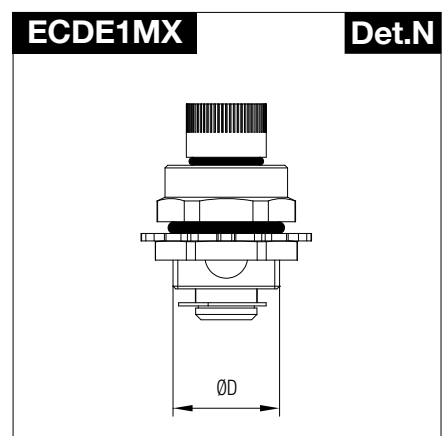
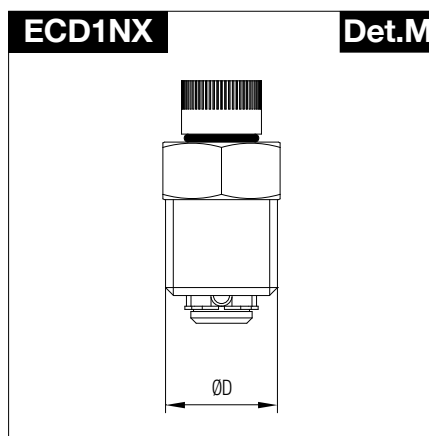
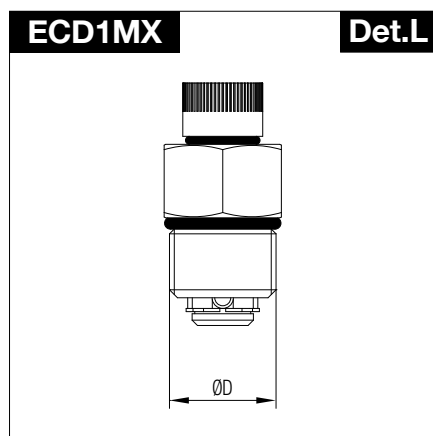
(*) REMARK: locknuts DL type and bushings DB-DBT type are not covered by Ex certificate.



| DETAIL "L" | |
|---|-----|
| DRAIN/BREATHER VALVE FOR Ex d... ENCLOSURES | |
| TYPE | ØD |
| ECD1MX | M20 |

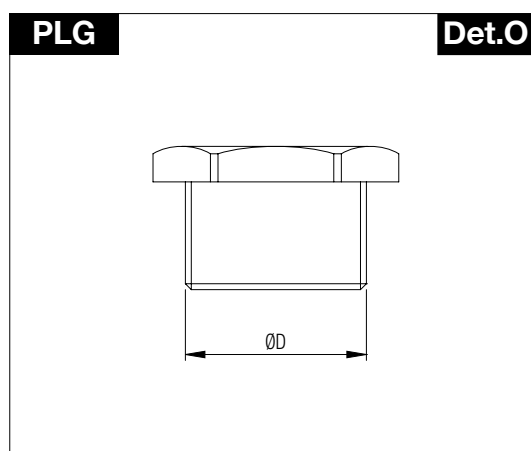
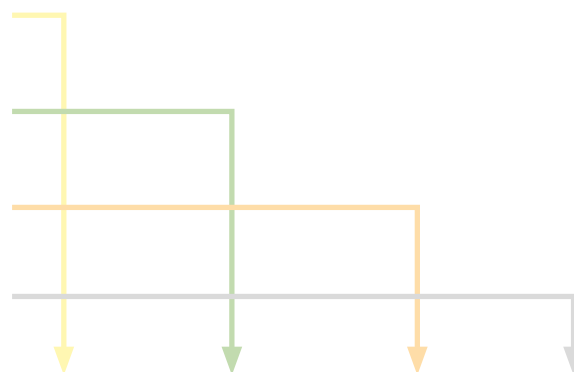
| DETAIL "M" | |
|---|----------|
| DRAIN/BREATHER VALVE FOR Ex d... ENCLOSURES | |
| TYPE | ØD |
| ECD1NX | 1/2" NPT |

| DETAIL "N" | |
|---|-----|
| DRAIN/BREATHER VALVE FOR ESA/ESX ENCLOSURES | |
| TYPE | ØD |
| ECDE1MX | M20 |



Technical Features

| Identification stopping plugs selection table | |
|--|--|
| TYPE (Fig.0) | |
| PLG | |
| THREAD / DIAMETER | |
| 01 / 02 / 03 / 04 / 05 / 06 / 06 / 07 / 08 / 09 / 10 / 11 / 12 | |
| TYPE OF THREAD | |
| R-Rc (EN 10226-2), P(PG), N (NPT), G (ISO 228), M (ISO-metric) | |
| MATERIAL | |
| X (stainless steel), ON (marine brass) | |



| | TYPE | THREAD DIAMETER | TYPE OF THREAD | MATERIAL |
|-----------|------|-----------------|----------------|----------|
| EXAMPLE 1 | PLG | 6 | R-Rc | ON |
| EXAMPLE 2 | PLG | 3 | N | X |
| EXAMPLE 3 | PLG | 2 | G | X |
| EXAMPLE 4 | PLG | 2 | M | X |
| EXAMPLE 5 | PLG | 5 | R-Rc | X |

- EXAMPLE 1: PLG6ON= NICKEL PLATED BRASS STOPPING PLUG 2"UNI-6125
- EXAMPLE 2: PLG3NX= STAINLESS STEEL AISI-316L STOPPING PLUG 1"NPT
- EXAMPLE 3: PLG20GX= STAINLESS STEEL AISI-316L STOPPING PLUG 3/4"ISO-228
- EXAMPLE 4: PLG2MX= STAINLESS STEEL AISI-316L STOPPING PLUG ISO-M25
- EXAMPLE 5: PLG5X= STAINLESS STEEL AISI-316L STOPPING PLUG 1 1/2"UNI-6125

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIC Gb ⊗ II 2 D Ex tb IIIC Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 06 ATEX 9004U |
| PROTECTION DEGREE | IP66/67 |
| AMBIENT TEMPERATURE | -50°C ÷ +130°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 08.0002U INMETRO: CEPEL 13.2240 EAC: TC RU C-IT.ГБ08.B.02646 (-60°C ÷ +130°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02549.280 |

Mechanical characteristics

| | |
|------------------------|--|
| Internal flexible pipe | stainless steel |
| External braid | stainless steel |
| Terminals | threaded terminals in stainless steel or cold galvanized steel |

Applications

FLEXIBLE CONDUITS ARE INSTALLED WHERE CONNECTIONS MUST BE MADE TO EQUIPMENT SUBJECT TO VIBRATIONS: MOTORS, PUMPS, ETC. ALSO FAVOURED FOR CONNECTION TO PEDANT LIGHTING FITTING AND AT BENDS WHERE RIGID CONDUITS IS DIFFICULT TO HANDLE.



On Request Accessories:

- Different lengths from standard
- PVC coating
- Female thread end terminal
- Male or female thread revolving end terminal

Technical Features

| TERMINAL ENDS | SIZE | THREAD NPT | INTERNAL DIA. [ØA] [mm] | EXTERNAL DIA. [ØB] [mm] | C - LENGHT [mm] | TERMINAL'S MATERIAL |
|---------------|------|------------|-------------------------|-------------------------|-----------------|--|
| H* | 1N | (1/2") | 12 | 21,5 | 300 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 2N | (3/4) | 16 | 29 | 300 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 3N | (1") | 25 | 37,5 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 4N | (1-1/4") | 32 | 46,8 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 5N | (1-1/2") | 38 | 53 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 6N | (2") | 50 | 68 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 7N | (2-1/2") | 63 | 85 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 8N | (3") | 75 | 99 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |
| H* | 10N | (4") | 100 | 122 | 400 | XC or XB (stainless steel) - GB (galvanized steel) |

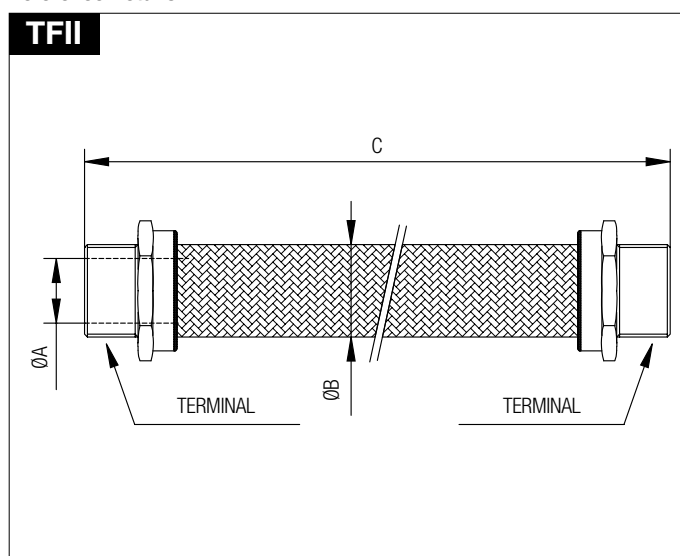
| | TERMINAL ENDS | SIZE | C - LENGHT [mm] | TERMINAL'S MATERIAL |
|-------|---------------|------|-----------------|---------------------|
| TFII# | H | 2N | 0500 | XC or XB |
| TFII# | N | 6N | 1000 | GB |

EXAMPLE 1: TFII#H2N00500XC = Flexible Conduit 3/4" Dia. 500mm total lenght c/w stainless steel NPT thread fix male/fix male, Ex C execution

EXAMPLE 2: TFII#N6N01000GB = Flexible Conduit 2" Dia. 1000mm total lenght c/w galvanized steel / fix male / revolving male, Ex B execution

| End 1 \ End 2 | Execution IIC | | Execution IIB | | Execution IIC | |
|---------------|---------------|-----------------|-------------------|---------------------|-------------------|---------------------|
| | Fixed male NF | Fixed female CF | Revolving male BM | Revolving female BF | Revolving male RM | Revolving female RF |
| Execution IIC | TFII (H) | TFII (G) | TFII (N) | TFII (I) | TFII (RN) | TFII (RI) |
| Execution IIB | | TFII (Z) | TFII (Y) | TFII (D) | TFII (RY) | TFII (RD) |
| Execution IIC | | | TFII (P) | TFII (E) | | |
| Execution IIB | | | | TFII (T) | | |
| Execution IIC | | | | | TFII (RP) | TFII (RE) |
| Execution IIB | | | | | | TFII (RT) |

Reference Details



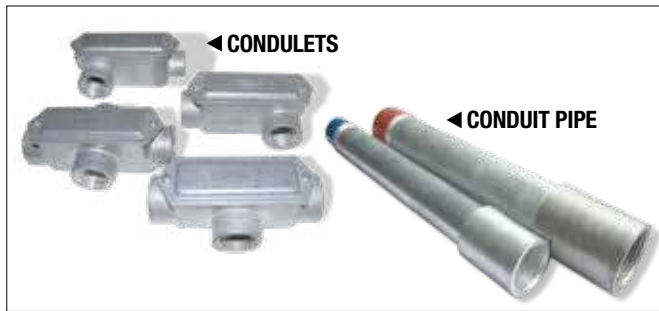
Standard lengths

| STANDARD LENGTHS [mm] | FLEXIBLE CONDUIT SIZE | | | | | | | |
|-----------------------|-----------------------|----|----|----|----|----|----|----|
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| 300 | X | X | - | - | - | - | - | - |
| 400 | X | X | X | X | X | X | X | X |
| 450 | X | X | X | X | X | X | X | X |
| 500 | X | X | X | X | X | X | X | X |
| 600 | X | X | X | X | X | X | X | X |
| 700 | X | X | X | X | X | X | X | X |
| 800 | X | X | X | X | X | X | X | X |
| 900 | X | X | X | X | X | X | X | X |
| 1000 | X | X | X | X | X | X | X | X |

*FLEX. CONDUIT PIPES WITH LENGHS DIFFERENT THAN STANDARD, PLEASE CONTACT OUR SALES DEPT.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: Safe Area

Classification: IP66



REFERENCE STANDARDS

VAPOUR TIGHT CONDULETS

CEI / EN

| | |
|---------------------|-----------------------|
| EXECUTION | INDUSTRIAL WATERPROOF |
| AMBIENT TEMPERATURE | - |
| PROTECTION DEGREE | IP66 |
| CERTIFICATE REF. | - |
| RULES OF COMPLIANCE | CEI / EN 60529 |

RIGID STEEL CONDUIT

CEI / EN

| | |
|---------------------|-------------|
| EXECUTION | - |
| AMBIENT TEMPERATURE | - |
| PROTECTION DEGREE | IP65 - IP66 |
| CERTIFICATE REF. | - |
| RULES OF COMPLIANCE | UNI 7683 |

Mechanical characteristics

VAPOUR TIGHT CONDULETS

| | |
|----------|---|
| Material | marine grade copper free aluminum light alloy |
| Screws | galvanized steel |
| Gasket | neoprene |

***RIGID STEEL CONDUIT UNI7683**

| | |
|----------|--------------------------------------|
| Material | hot dip galvanized steel |
| Finishes | hot galvanized according to UNI 5745 |

* Complete with one coupling at one end and plastic protecting cap at the other end. Suppliable in bars 3mt. Or 6mt. Lenght, contact our sales dept for the availability.

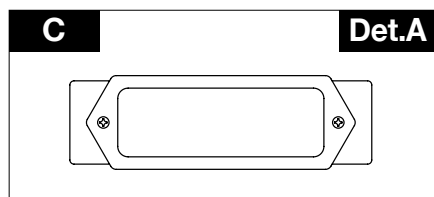


On Request Accessories:

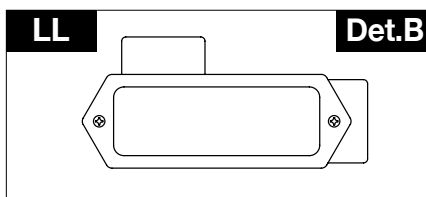
- Different threads from standard

Technical Features

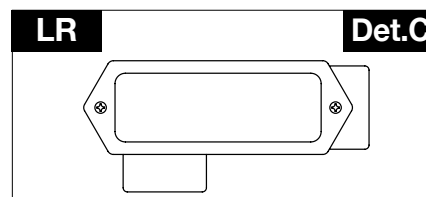
| DETAIL "A" | |
|--------------------|------------|
| CONDULETS TYPE "C" | |
| TYPE | HUBS SIZE |
| C17 | 2 x 1/2" |
| C27 | 2 x 3/4" |
| C37 | 2 x 1" |
| C47 | 2 x 1-1/4" |
| C57 | 2 x 1-1/2" |
| C67 | 2 x 2" |
| C77 | 2 x 2-1/2" |
| C87 | 2 x 3" |



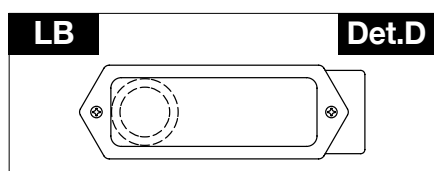
| DETAIL "B" | |
|---------------------|------------|
| CONDULETS TYPE "LL" | |
| TYPE | HUBS SIZE |
| LL17 | 2 x 1/2" |
| LL27 | 2 x 3/4" |
| LL37 | 2 x 1" |
| LL47 | 2 x 1-1/4" |
| LL57 | 2 x 1-1/2" |
| LL67 | 2 x 2" |
| LL77 | 2 x 2-1/2" |
| LL87 | 2 x 3" |



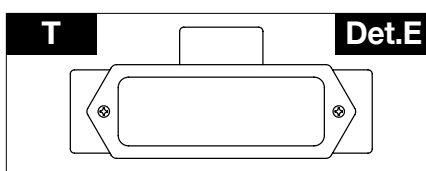
| DETAIL "C" | |
|---------------------|------------|
| CONDULETS TYPE "LR" | |
| TYPE | HUBS SIZE |
| LR17 | 2 x 1/2" |
| LR27 | 2 x 3/4" |
| LR37 | 2 x 1" |
| LR47 | 2 x 1-1/4" |
| LR57 | 2 x 1-1/2" |
| LR67 | 2 x 2" |
| LR77 | 2 x 2-1/2" |
| LR87 | 2 x 3" |



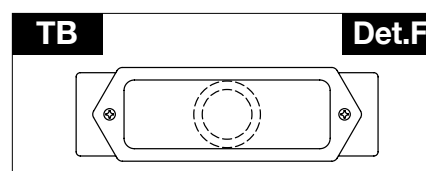
| DETAIL "D" | |
|---------------------|------------|
| CONDULETS TYPE "LB" | |
| TYPE | HUBS SIZE |
| LB17 | 2 x 1/2" |
| LB27 | 2 x 3/4" |
| LB37 | 2 x 1" |
| LB47 | 2 x 1-1/4" |
| LB57 | 2 x 1-1/2" |
| LB67 | 2 x 2" |
| LB77 | 2 x 2-1/2" |
| LB87 | 2 x 3" |



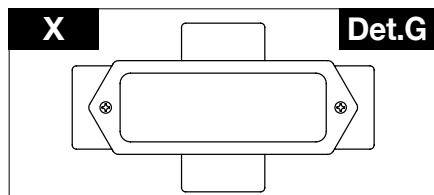
| DETAIL "E" | |
|--------------------|------------|
| CONDULETS TYPE "T" | |
| TYPE | HUBS SIZE |
| T17 | 3 x 1/2" |
| T27 | 3 x 3/4" |
| T37 | 3 x 1" |
| T47 | 3 x 1-1/4" |
| T57 | 3 x 1-1/2" |
| T67 | 3 x 2" |
| T77 | 3 x 2-1/2" |
| T87 | 3 x 3" |



| DETAIL "F" | |
|---------------------|------------|
| CONDULETS TYPE "TB" | |
| TYPE | HUBS SIZE |
| TB17 | 3 x 1/2" |
| TB27 | 3 x 3/4" |
| TB37 | 3 x 1" |
| TB47 | 3 x 1-1/4" |
| TB57 | 3 x 1-1/2" |
| TB67 | 3 x 2" |
| TB77 | 3 x 2-1/2" |
| TB87 | 3 x 3" |



| DETAIL "G" | |
|--------------------|------------|
| CONDULETS TYPE "X" | |
| TYPE | HUBS SIZE |
| X17 | 4 x 1/2" |
| X27 | 4 x 3/4" |
| X37 | 4 x 1" |
| X47 | 4 x 1-1/4" |
| X57 | 4 x 1-1/2" |
| X67 | 4 x 2" |
| X77 | 4 x 2-1/2" |
| X87 | 4 x 3" |



RIGID STEEL CONDUIT UNI 7683

Technical Features

| TYPE | Ø THREADS - UNI 6125 OR NPT |
|------|-----------------------------|
| TR1 | 1/2" |
| TR2 | 3/4" |
| TR3 | 1" |
| TR4 | 1-1/4" |
| TR5 | 1-1/2" |
| TR6 | 2" |
| TR7 | 2-1/2" |
| TR8 | 3" |
| TR10 | 4" |

Complete with one coupling at one end and plastic protecting cap at the other end. Available in bars 3mt. or 6mt. length. Please contact our sales dept for relevant availability.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





EX CONTROL STATIONS





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

| Directive 2014/34/EU | |
|---------------------------------|--|
| EXECUTION | ⊕ II 2 G Ex d IIB T6/T5 Gb ⊕ II 2 D Ex tb IIIC T85°C/ T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0049X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0024X INMETRO: CEPTEL 12.2252X EAC: TC RU C-IT.ГБ08.B.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

Mechanical characteristics

| | |
|----------------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | galvanized steel |



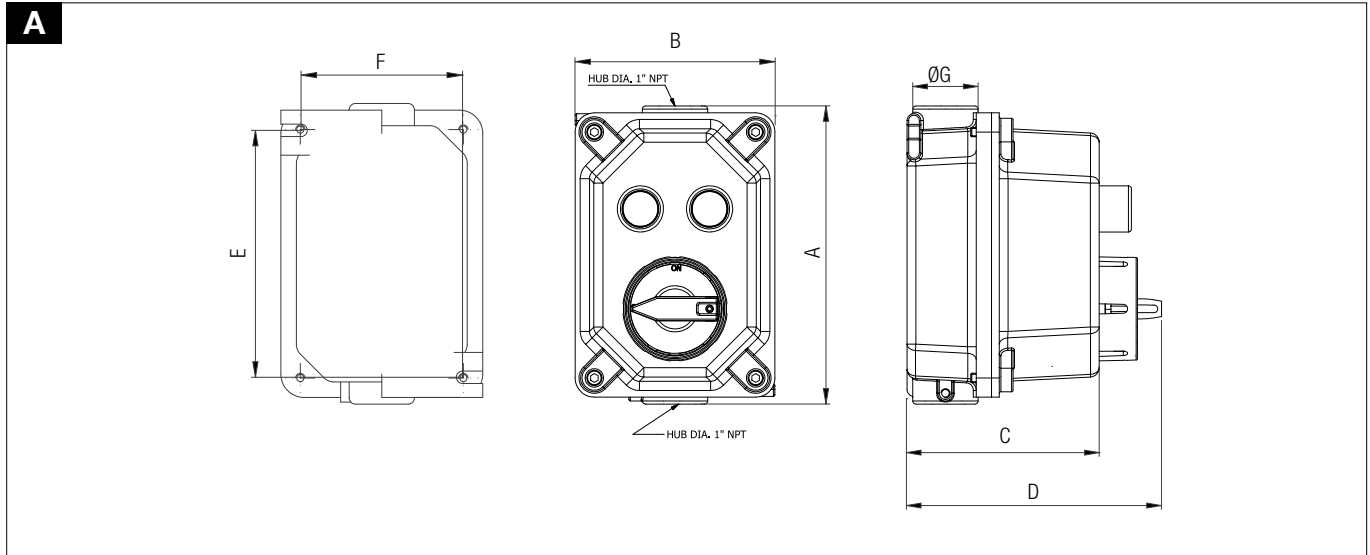
On Request Accessories:

- External epoxy painting with colour on request
- Cable entries with different threads from standards

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | Ø G [mm] | PLATE X - Y [mm] | WEIGHT [Kg] | DETAIL |
|------|--------|--------|--------|--------|--------|--------|----------|------------------|-------------|--------|
| EFG6 | 195 | 130 | 125 | 175 | 160 | 104 | GK 1" | 150 - 95 | 3,5 | A |

Reference details



Max. operators allowed diagrams

EFG6

DIAGRAM "A" DIAGRAM "A1" DIAGRAM "B" DIAGRAM "B1" DIAGRAM "C"

LEGEND:

- ① EFP PUSH BUTTON
- ② EFL PILOT LIGHT
- ③ EFI HANDLE SWITCH

MORE OPERATORS DETAILS ARE AVAILABLE ON "HANDLES-D" BULLETIN

REMARK - (A) TWIN HOLES 1-2 TYPE, CAN BE REPLACED BY ONE HOLE 3 TYPE

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIB T6/T5 Gb ⊗ II 2 D Ex tb IIIC T85°C/T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 03 ATEX 0049X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 11.0024X INMETRO: CEPEL 12.2252X EAC: TC RU C-IT.ГБ08.B.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

Mechanical characteristics

| | |
|----------------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Internal plate | galvanized steel |



On Request Accessories:

- External epoxy painting with colour on request
- Cable entries with different threads from standards

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | ØF [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|---------------------------------|--------|--------|--------|--------|--------|---------|-------------------------|---------------------------|-------------|--------|
| EFSC218 M310 EFSC218M310L | 195 | 185 | 130 | 118 | 145 | GK 1" | T4 T5 | T100°C T125°C | 3,45 | A |
| EFSC218 3I3V25 EFSC2183I3V26 | 195 | 185 | 130 | 118 | 145 | GK 1" | T4 T5 | T100°C T125°C | 3,10 | B |
| EFSC218 GUSC... | 195 | 185 | 130 | 118 | 155 | GK 1" | T4 T5 | T100°C T125°C | 3,10 | C |
| EFSC218 GUSV... | 195 | 185 | 130 | 118 | 145 | GK 1" | T4 T5 | T100°C T125°C | 3,20 | D |
| EFSC218 SMT... | 195 | 185 | 130 | 118 | 130 | GK 1" | T4 T5 | T100°C T125°C | 2,90 | E |

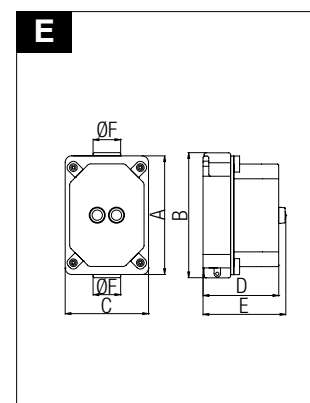
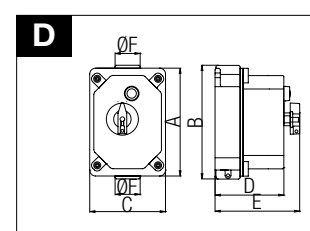
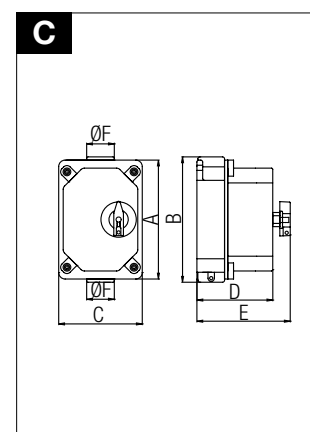
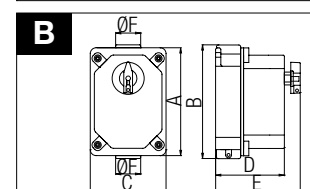
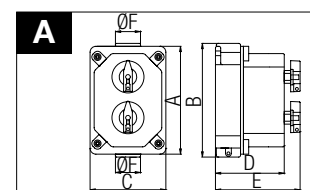
| SELECTOR SWITCHES 500V 50-60Hz | | | | |
|--------------------------------|------------------------|---------------|-----------|--------|
| CODE | SELECTOR SWITCHES Q.TY | | RATE [In] | DETAIL |
| | PADLOCK HANDLE | NORMAL HANDLE | | |
| EFSC218M310 | - | 2 | 10A | A |
| EFSC218M310L | 1 | 1 | 10A | A |

| THREE POLES FUSE SWITCH 500V 50-60Hz | | | | |
|--------------------------------------|-------------------|-----------------------|-----------|--------|
| CODE | THREE POLE SWITCH | E16 DELAYED FUSE Q.TY | RATE [In] | DETAIL |
| EFSC2183I3V16 | 1 | 3 | 16A | B |
| EFSC2183I3V25 | 1 | 3 | 25A | B |

| CIRCUIT BREAKERS CURVE "C" 415V 50-60Hz 6kA | | | | |
|---|------------------|-----------------|-----------|--------|
| CODE TWO POLES | CODE THREE POLES | CODE FOUR POLES | RATE [In] | DETAIL |
| EFSC218GUSC3206 | EFSC218GUSC3306 | EFSC218GUSC3406 | 6A | C |
| EFSC218GUSC3210 | EFSC218GUSC3310 | EFSC218GUSC3410 | 10A | C |
| EFSC218GUSC3216 | EFSC218GUSC3316 | EFSC218GUSC3416 | 16A | C |
| EFSC218GUSC3220 | EFSC218GUSC3320 | EFSC218GUSC3420 | 20A | C |
| EFSC218GUSC3225 | EFSC218GUSC3325 | EFSC218GUSC3425 | 25A | C |
| EFSC218GUSC3232 | EFSC218GUSC3332 | EFSC218GUSC3432 | 32A | C |
| EFSC218GUSC3240 | EFSC218GUSC3340 | EFSC218GUSC3440 | 40A | C |
| EFSC218GUSC3250 | EFSC218GUSC3350 | EFSC218GUSC3450 | 50A | C |
| EFSC218GUSC3263 | EFSC218GUSC3363 | EFSC218GUSC3463 | 63A | C |

| EARTH LEAKAGE CIRCUIT BREAKERS 400/230V 50-60Hz 300mA 1PH+N - 3PH+N | | | |
|---|-----------------|-----------|--------|
| CODE TWO POLES | CODE FOUR POLES | RATE [In] | DETAIL |
| EFSC218GUSV3225 | EFSC218GUSV3425 | 25A | D |
| EFSC218GUSV3240 | EFSC218GUSV3440 | 40A | D |
| - | EFSC218GUSV3463 | 63A | D |

| THERMAL MAGNETIC MOTOR PROTECTION THREE POLES 660V 50-60Hz | | |
|--|----------------|--------|
| CODE | RANGE | DETAIL |
| EFSC218SMT034 | 0,20 - 0,35A | E |
| EFSC218SMT036 | 0,35 - 0,60A | E |
| EFSC218SMT301 | 0,60 - 1,00A | E |
| EFSC218SMT302 | 1,00 - 1,60A | E |
| EFSC218SMT303 | 1,60 - 2,50A | E |
| EFSC218SMT304 | 2,50 - 4,00A | E |
| EFSC218SMT306 | 4,00 - 6,60A | E |
| EFSC218SMT310 | 6,00 - 10,00A | E |
| EFSC218SMT316 | 10,00 - 16,00A | E |



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIC T6/T5 Gb ⊗ II 2 D Ex tb IIIC T85°C/T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 06 ATEX 0016X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 11.0023X INMETRO: CEPPEL 13.2254X EAC: TC RU C-IT.Г508.B.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 KC: 14-KB4BO-0445 and 14-KB4BO-0447 KC CCOE-PESO: P405708/2 |

Mechanical characteristics

| | |
|---------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Gaskets | NBR rubber sealing ring |



On Request Accessories:

- External epoxy painting with colour on request
- Different threads from standards

Technical Features

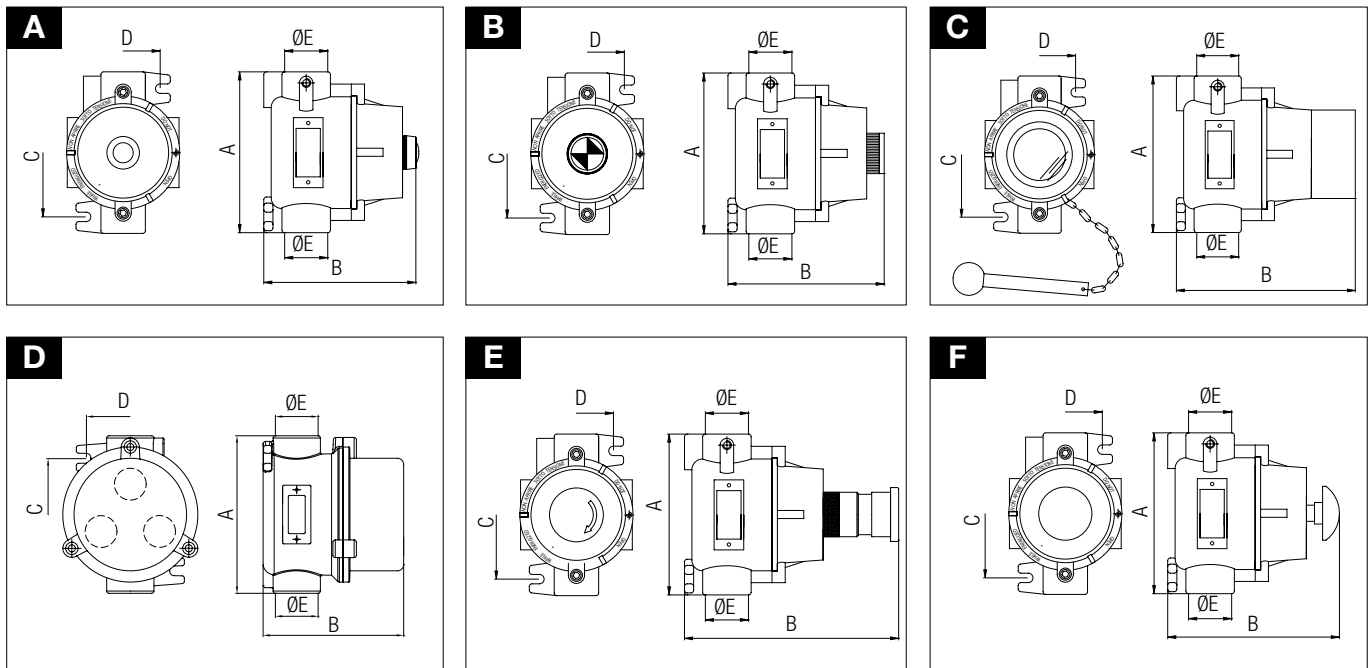
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | ØE [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|-----------|--------|--------|--------|--------|---------|-------------------------|---------------------------|-------------|--------|
| EFDC1/2 | 120 | 115 | 95 | 55 | GK 3/4" | T6 T5 | T85°C T100°C | 0,90 | A |
| EFDC3 | 120 | 120 | 95 | 5 | GK 3/4" | T6 T5 | T85°C T100°C | 0,90 | B |
| EFDC1E | 120 | 135 | 95 | 55 | GK 3/4" | T6 T5 | T85°C T100°C | 1,00 | C |
| EFDC...R | 140 | 125 | 100 | 80 | GK 1" | T6 T5 | T85°C T100°C | 1,50 | D |
| EFDC1EFSR | 120 | 160 | 95 | 55 | GK 3/4" | T6 T5 | T85°C T100°C | 0,90 | E |
| EFDC1EF | 120 | 130 | 95 | 55 | GK 3/4" | T6 T5 | T85°C T100°C | 0,90 | F |

| OPERATORS TYPE | OPERATORS LAYOUT (QUANTITY) | | | | | |
|--------------------|-----------------------------|---------|----------|----------|---------|----------|
| PUSH BUTTON NO (1) | 1 | 1 | 2 | 1 | 1 | 3 |
| PUSH BUTTON NC (2) | 1 | 1 | 1 | - | - | - |
| PILOT LIGHT (3) | 1 | - | - | 2 | 1 | - |
| CODE EXAMPLES: | EFDC123R | EFDC12R | EFDC112R | EFDC133R | EFDC13R | EFDC111R |

Standard operators layout

| CODE | DETAIL | CODE | DETAIL | CODE | DETAIL |
|--------------|--------|----------|--------|----------|--------|
| EFDC1 | A | EFDC3V | B | EFDC13R | D |
| EFDC2 | A | EFDC111R | B | EFDC23R | D |
| EFDC1E (*) | C | EFDC121R | D | EFDC133R | D |
| EFDC1EF (**) | F | EFDC122R | D | EFDC233R | D |
| EFDC1EFSR | E | EFDC123R | D | EFDC33R | D |
| EFDC3R | B | EFDC222R | D | EFDC333R | D |

* WITH BREAKING GLASS (EMERGENCY STOP)
 ** WITH RED MUSHROOM EMERGENCY PUSH BUTTON



REMARK:
 Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIC T6/T5 Gb ⊗ II 2 D Ex tb IIIC T85°C/ T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 06 ATEX 0016X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 11.0023X INMETRO: CEPTEL 13.2254X EAC: TC RU C-IT.ГБ08.B.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 KC: 14-KB4BO-0446 and 14-KB4BO-0448 CCOE-PESO: P405708/2 |

Mechanical characteristics

| | |
|--------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Gasket | NBR rubber sealing ring |



On Request Accessories:

- External epoxy painting with colour on request
- Different threads from standards

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | ØE [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|----------|--------|--------|--------|--------|---------|-------------------------|---------------------------|-------------|--------|
| EFSC2... | 120 | 135 | 95 | 55 | GK 3/4" | T6 / T5 | T85°C / T100°C | 0,90 | A |
| EFSC3... | 140 | 150 | 100 | 80 | GK 1" | T6 / T5 | T85°C / T100°C | 0,90 | B |
| EFSC5... | 165 | 170 | 150 | 115 | - | T6 / T5 | T85°C / T100°C | 1,80 | C |

| CODE ON/OFF SWITCHES 500V 50/60Hz | | | | RATE [In] | DETAIL |
|-----------------------------------|----------|----------|----------|-----------|--------|
| 1 POLE | 2 POLES | 3 POLES | 4 POLES | | |
| | | | | | |
| EFSC21 | EFSC22 | EFSC23 | - | 16A | A |
| EFSC3125 | EFSC3225 | EFSC3325 | EFSC3425 | 25A | B |
| EFSC5125 | EFSC5225 | EFSC5325 | EFSC5425 | 25A | C |
| EFSC3132 | EFSC3232 | EFSC3332 | EFSC3432 | 32A | B |
| EFSC5132 | EFSC5232 | EFSC5332 | EFSC5432 | 32A | C |

| CODE TWO WAY SWITCHES 500V 50/60Hz | | | | RATE [In] | DETAIL |
|------------------------------------|-----------|-----------|---------|-----------|--------|
| 1 POLE | 2 POLES | 3 POLES | 4 POLES | | |
| | | | | | |
| EFSC21D | EFSC22D | - | - | 16A | A |
| EFSC3125D | EFSC3225D | EFSC3325D | (1) | 25A | B |
| EFSC5125D | EFSC5225D | EFSC5325D | (1) | 25A | C |
| EFSC3132D | EFSC3232D | EFSC3332D | (1) | 32A | B |
| EFSC5132D | EFSC5232D | EFSC5332D | (1) | 32A | C |

(1): On request only

| CODE CHANGE OVER SWITCHES 500V 50/60Hz | | | | RATE [In] | DETAIL |
|--|-----------|-----------|---------|-----------|--------|
| 1 POLE | 2 POLES | 3 POLES | 4 POLES | | |
| | | | | | |
| EFSC21C | EFSC22C | - | - | 16A | A |
| EFSC3125C | EFSC3225C | EFSC3325C | (1) | 25A | B |
| EFSC5125C | EFSC5225C | EFSC5325C | (1) | 25A | C |
| EFSC3132C | EFSC3232C | EFSC3332C | (1) | 32A | B |
| EFSC5132C | EFSC5232C | EFSC5332C | (1) | 32A | C |

(1): On request only

| SELECTOR SWITCHES 500V 50/60Hz | | | | DIAGRAM | DETAIL |
|--------------------------------|-----------|----------|-----------|---------|--------|
| CODE | RATE [In] | CODE | RATE [In] | | |
| EFSC310R | 10A | EFSC316R | 16A | R | B |
| EFSC310X | 10A | EFSC316X | 16A | X | B |
| EFSC310Y | 10A | EFSC316Y | 16A | Y | B |
| EFSC310W | 10A | EFSC316W | 16A | W | B |
| EFSC310Z | 10A | EFSC316Z | 16A | Z | B |
| EFSC510R | 10A | EFSC516R | 16A | R | C |
| EFSC510X | 10A | EFSC516X | 16A | X | C |
| EFSC510Y | 10A | EFSC516Y | 16A | Y | C |
| EFSC510W | 10A | EFSC516W | 16A | W | C |
| EFSC510Z | 10A | EFSC516Z | 16A | Z | C |

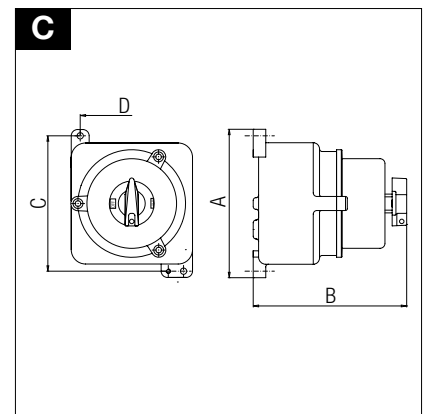
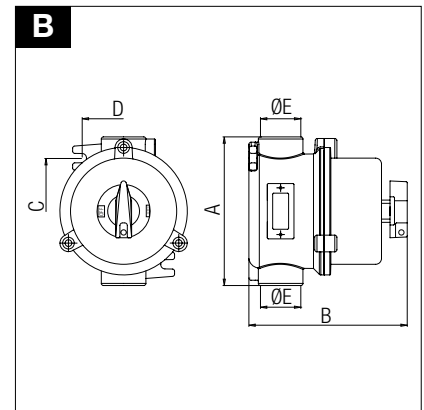
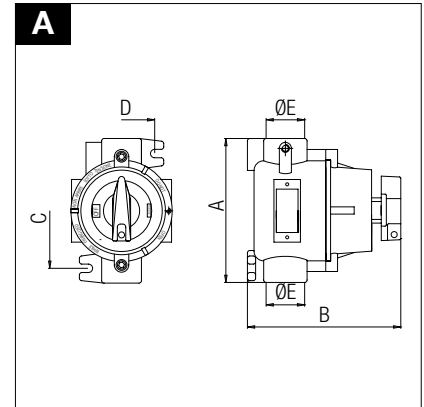
Motor switch diagram arrangements

| TYPE "R" Contactor control with maintained OFF position | TYPE "X" Contactor control | TYPE "Y" Reverse motor starter control | TYPE "W" Impulse control | TYPE "Z" MAN. AUT. control |
|---|-------------------------------|--|-----------------------------|-------------------------------|
| | | | | |

*DIAGRAM ARRANGEMENTS DIFFERENT THAN STANDARD, PLEASE CONTACT OUR SALES DEPT.

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex d IIC T6/T5 Gb ⊗ II 2 D Ex tb IIIC T85°C/ T100°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 06 ATEX 0016X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEX: IECEX INE 11.0023X INMETRO: CEPPEL 13.2254X EAC: TC RU C-IT.ГБ08.В.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 KC: 14-KB4BO-0445 and 14-KB4BO-0447 CCOE-PESO: P405708/2 |

Mechanical characteristics

| | |
|--------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Gasket | NBR rubber sealing ring |



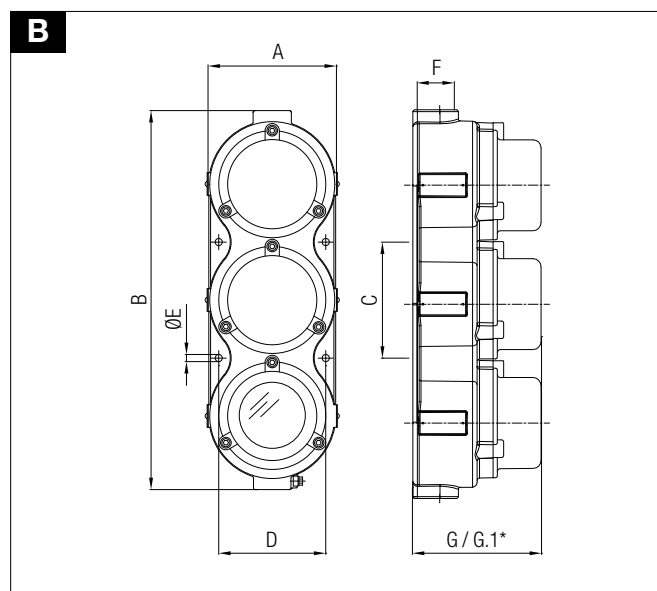
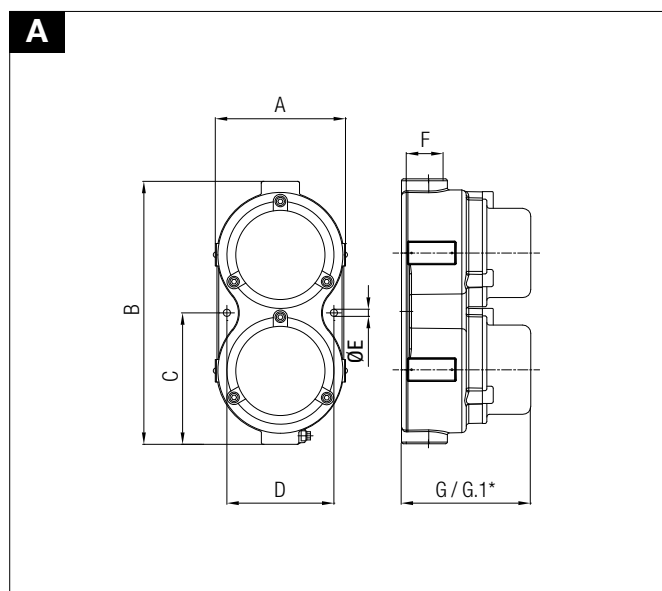
On Request Accessories:

- External epoxy painting with colour on request
- Cable entries with different threads from standards

Technical Features

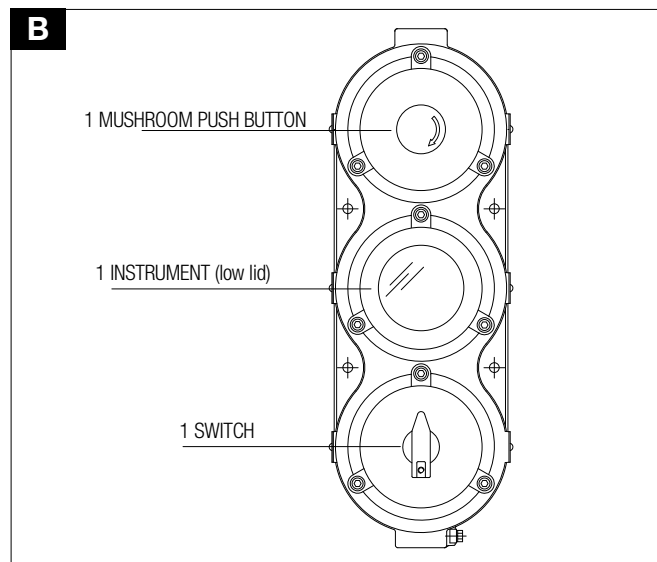
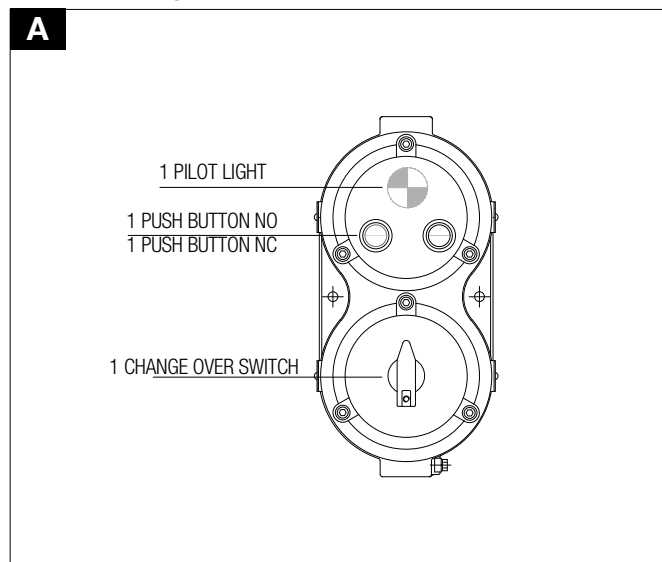
| CODE | A [mm] | B [mm] | C [mm] | D [mm] | Ø E [mm] | F [mm] | G [mm] | G.1 [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | DETAIL |
|--------|--------|--------|--------|--------|----------|--------|--------|----------|-------------------------|---------------------------|--------|
| EFDC3D | 145 | 295 | 147,5 | 120 | 9 | 1" NPT | 145 | 125 | T6 T5 | T85°C T100°C | A |
| EFDC3T | 145 | 425 | 130 | 120 | 9 | 1" NPT | 145 | 125 | T6 T5 | T85°C T100°C | B |

Reference details



*LOW LID, ONLY FOR GLASS WINDOW

Installation examples



OPERATOR ARRANGEMENT:

ON EACH COVER IS POSSIBLE TO FIT THE FOLLOWING MATERIAL:

- 1 48x48 INSTRUMENT (low lid with glass)
- UP TO 3 PILOT LIGHTS
- UP TO 3 PUSH BUTTON
- 1 MUSHROOM PUSH BUTTON
- 1 SELECTOR SWITCH

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | <ul style="list-style-type: none"> ⊗ Ex II 2 G Ex db IIC T6/T5/T4 Gb ⊗ Ex II 2 D Ex tb IIC T85°C/T100°C/T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0, EN/IEC 60079-1, EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 18 ATEX 0014X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE18.0008X EAC: TC RU C-IT.Г508.B.01324 INMETRO: CEPTEL 14.2324X RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

Mechanical characteristics

| | |
|--------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Pins | brass |



On Request Accessories:

- External epoxy painting with colour on request
- Cable entries with different threads from standards

Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | Ø F [mm] | Ø G [mm] | FIXING HxL [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|---------------|--------|--------|--------|--------|--------|----------|------------|-----------------|---|---------------------------|-------------|--------|
| CPSC/CPH | 195 | 370 | 113 | 155 | 140 | 3/4"NPT | 1"NPT | 92-90 | T6 (Ta -60°C ÷ +40°C) T5 (Ta -60°C ÷ +60°C) | T85°C T100°C | 2,8 | A |
| FSQC/BPA | 230 | 415 | 155 | 200 | 163 | 1"NPT | 1"NPT | 125-80 | T6 (Ta -60°C ÷ +40°C) T5 (Ta -60°C ÷ +55°C) T4 (Ta -60°C ÷ +60°C) | T85°C T100°C T135°C | 4,0 | B |
| FSQC125/BP125 | 380 | 615 | 275 | 305 | 225 | - | 1 1/2" NPT | 308x270 | T6 (Ta -60°C ÷ +60°C) | T85°C | 15,5 | C |

| INTERLOCKED SOCKET AND PLUGS | | | | |
|------------------------------|------------|-------------|-------------------|-----------|
| SOCKET CODE | PLUG CODE | POLES | VOLTAGE (50/60Hz) | CURRENT |
| CPSC212-25A | CPH212-25A | 2P+T (PE) | 12V | / 16A-25A |
| CPSC224-25A | CPH224-25A | 2P+T (PE) | 24V | 16A-25A |
| CPSC248-25A | CPH248-25A | 2P+T (PE) | 48V | 16A-25A |
| CPSC211-25A | CPH211-25A | 2P+T (PE) | 110/130V | 16A-25A |
| CPSC222-25A | CPH222-25A | 2P+T (PE) | 220/250V | 16A-25A |
| CPSC338-25A | CPH338-25A | 3P+T (PE) | 380/500V | 16A-25A |
| CPSC438-25A | CPH438-25A | 3P+N+T (PE) | 380/500V | 16A-25A |

| INTERLOCKED SOCKETS AND PLUGS WITH CIRCUIT BREAKER | | | | |
|--|-----------|-----------|-------------------|---------|
| SOCKET CODE | PLUG CODE | POLES | VOLTAGE (50/60Hz) | CURRENT |
| FSQCA235 | BPA235 | 2P+T (PE) | 220/250V | 32A |
| FSQCA335 | BPA335 | 3P+T (PE) | 380/400V | 32A |
| FSQCA260 | BPA260 | 2P+T (PE) | 220/250V | 63A |
| FSQCA360* | BPA360 | 3P+T (PE) | 380/400V | 63A |

*Threaded hole ØF: 1-1/2" NPT

| INTERLOCKED SOCKETS AND PLUGS WITH ON-LOAD SWITCH | | | | |
|---|-----------|-------------|-------------------|---------|
| SOCKET CODE | PLUG CODE | POLES | VOLTAGE (50/60Hz) | CURRENT |
| FSQC235 | BPA235 | 2P+T (PE) | 220/250V | 32A |
| FSQC335 | BPA335 | 3P+T (PE) | 380/500V | 32A |
| FSQC435 | BPA435 | 3P+N+T (PE) | 380/500V | 32A |
| FSQC260 | BPA260 | 2P+T (PE) | 220/250V | 63A |
| FSQC360* | BPA360 | 3P+T (PE) | 380/500V | 63A |
| FSQC460* | BPA460 | 3P+N+T (PE) | 380/500V | 63A |

*Threaded hole ØF: 1-1/2" NPT

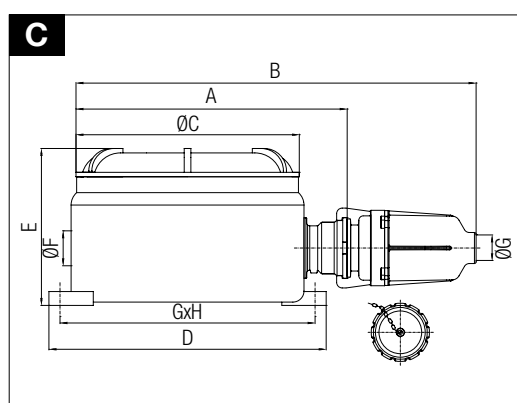
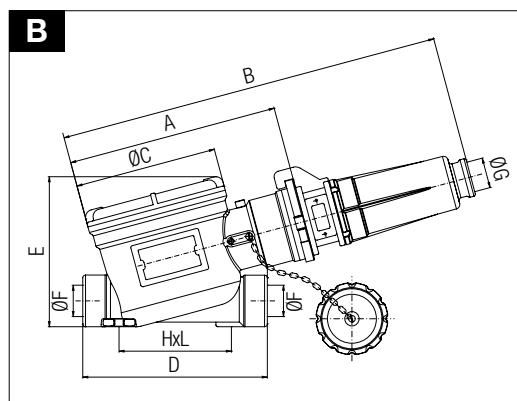
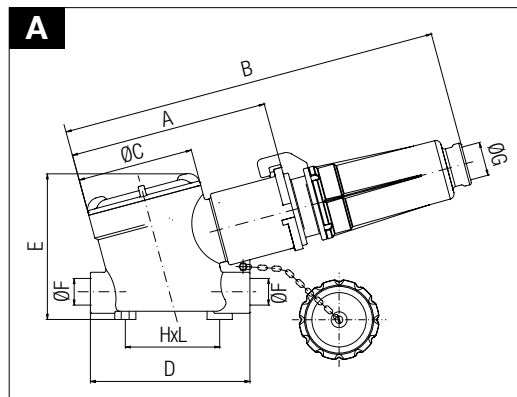
| 125A INTERLOCKED SOCKETS AND PLUGS | | | | |
|------------------------------------|-----------|-----------|-------------------|---------|
| SOCKET CODE | PLUG CODE | POLES | VOLTAGE (50/60Hz) | CURRENT |
| FSQC125-3 | BP125-3 | 3P+T (PE) | 380/500V | 125A |
| FSQC125-4 | BP125-4 | 4P+T (PE) | 380/500V | 125A |

Sockets and plugs colour marking for industrial applications

| NOMINAL WORKING VOLTAGE | COLOUR |
|-------------------------|--------|
| 20-25V | VIOLET |
| 40-50V | WHITE |
| 100-130V | YELLOW |
| 200-250V | BLUE |
| 380-480V | RED |
| 480-500V | BLACK |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ Ex II 2 G Ex db IIC T6...T4 Gb ⊗ Ex II 2 D Ex tb IIIC T85°C...T135°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0, EN/IEC 60079-1, EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 18 ATEX 0016X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | <p>IECEX: IECEX INE 18.0010X</p> <p>EAC: TC RU C-IT.ГБ08.B.01324 (-60°C ÷ +60°C)</p> <p>RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280</p> |

Mechanical characteristics

| | |
|--------|--|
| Body | marine grade copper free aluminium light alloy |
| Cover | marine grade copper free aluminium light alloy |
| Screws | stainless steel |
| Pins | brass |














On Request Accessories:







- External epoxy painting with colour on request
- Cable entries with different threads from standards

Technical Features

| CODE | A [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|-----------------|--------|-------------------------|---------------------------|-------------|--------|
| CPSCP*/CPH | 243 | T6 | T85°C | 1,50 | A |
| FSQCP*/BP | 255 | T6 | T85°C | 2,00 | B |
| FSQCP125*/BP125 | 310 | T6 | T85°C | 5,00 | C |

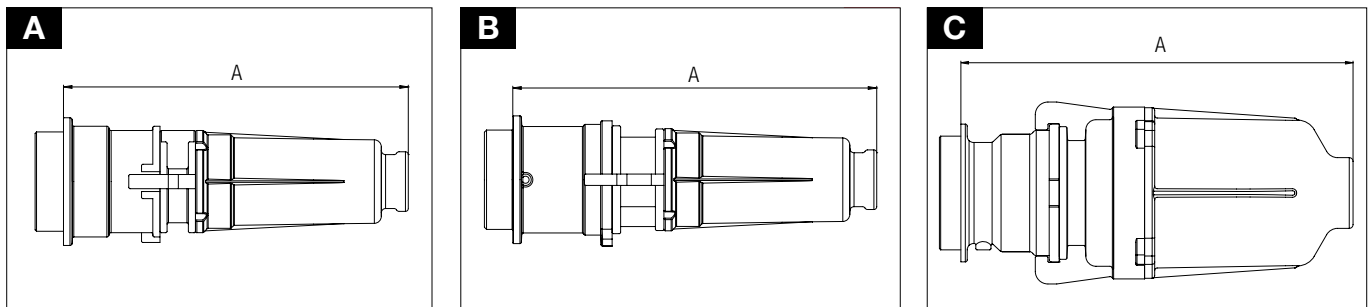
*WITHOUT ENCLOSURE (TO BE ORDERED SEPARATELY)

| INTERLOCKED SOCKETS | | | | |
|---------------------|-------------|-------------------|---|---------|
| SOCKET CODE | POLES | VOLTAGE (50/60Hz) | | CURRENT |
| CPSCP224 | 2P+T (PE) | 24V |  | 16A |
| CPSCP224-25A | 2P+T (PE) | 24V |  | 25A |
| CPSCP248 | 2P+T (PE) | 48V |  | 16A |
| CPSCP248-25A | 2P+T (PE) | 48V |  | 25A |
| CPSCP211 | 2P+T (PE) | 110/130V |  | 16A |
| CPSCP211-25A | 2P+T (PE) | 110/130V |  | 25A |
| CPSCP222 | 2P+T (PE) | 220/250V |  | 16A |
| CPSCP222-25A | 2P+T (PE) | 220/250V |  | 25A |
| CPSCP338 | 2P+T (PE) | 380/500V |  | 16A |
| CPSCP338-25A | 3P+T (PE) | 380/500V |  | 25A |
| CPSCP438-25A | 3P+N+T (PE) | 380/500V |  | 25A |

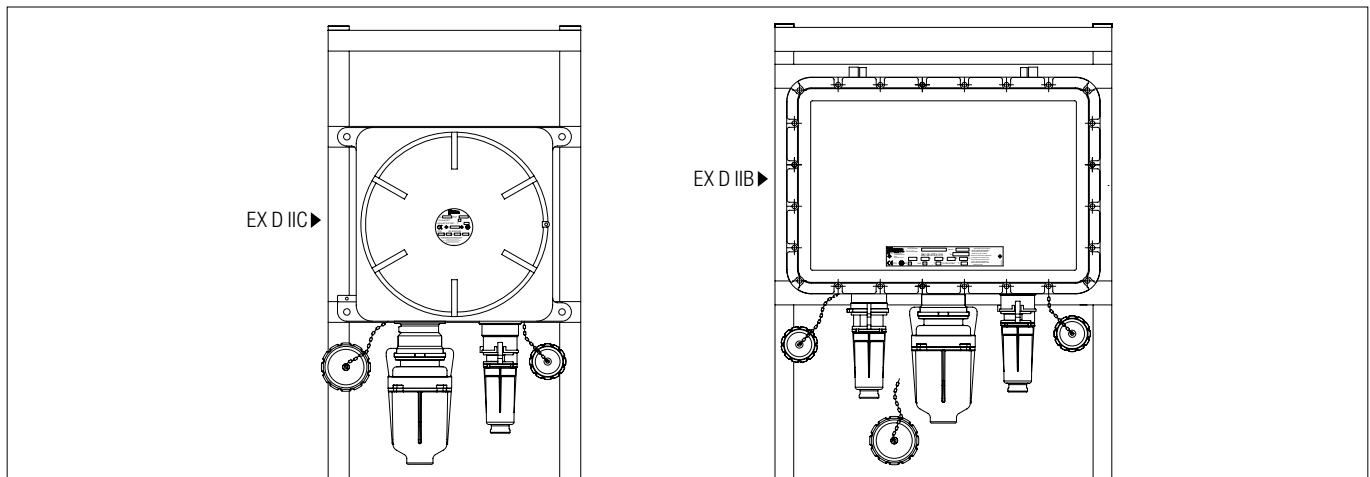
| INTERLOCKED SOCKETS WITH CIRCUIT BREAKER | | | | |
|--|-----------|-------------------|---|---------|
| SOCKET CODE | POLES | VOLTAGE (50/60Hz) | | CURRENT |
| FSQCP235 | 2P+T (PE) | 220/250V |  | 32A |
| FSQCP335 | 3P+T (PE) | 380/415V |  | 32A |
| FSQCP435 | 4P+T (PE) | 380/500V |  | 32A |
| FSQCP260 | 2P+T (PE) | 220/250V |  | 63A |
| FSQCP360 | 3P+T (PE) | 380/500V |  | 63A |
| FSQCP460 | 4P+T (PE) | 380/500V |  | 63A |

| 125A INTERLOCKED SOCKETS AND PLUGS | | | | |
|------------------------------------|-----------|-----------|-------------------|---------|
| SOCKET CODE | PLUG CODE | POLES | VOLTAGE (50/60Hz) | CURRENT |
| FSQCP125-3 | BP125-3 | 3P+T (PE) | 380/500V | 125A |
| FSQCP125-4 | BP125-4 | 4P+T (PE) | 380/500V | 125A |

NOTE: Please refer to cpsc/fsqc bulletin for industrial application sockets and plugs colour marking



Typical assembling



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





EX EARTHING CLAMPS





Installation: hazardous areas - Zone 1 / 2 (Gases)

Classification: Group II - Category 2G



REFERENCE STANDARDS

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | ⊗ II 2 G Ex d IIC T6 |
| RULES OF COMPLIANCE | EN 50014: 1997 + A1 and A2; EN 50018:2000 + A1 |
| EC Type-Examination Certificate | CESI 05 ATEX 005 |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -20°C ÷ +55°C |
| OTHER AVAILABLE CERTIFICATES | EAC: TC RU C-IT.ГБ08.B. 01324 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

Mechanical characteristics

| | |
|-----------------|---|
| Haft | nylon shock proof insulating |
| Contacts | elastic phosphor bronze, suitable for fastening on tank tails 8-11 mm |
| Contact support | brass |
| Cable entry | marine brass gland |
| Earthing cable | external diameter 8-11mm (NOT SUPPLIED) |

APPLICATIONS

IT 25... earthing clamps is used to connect tankers to ground during loading and unloading operations.

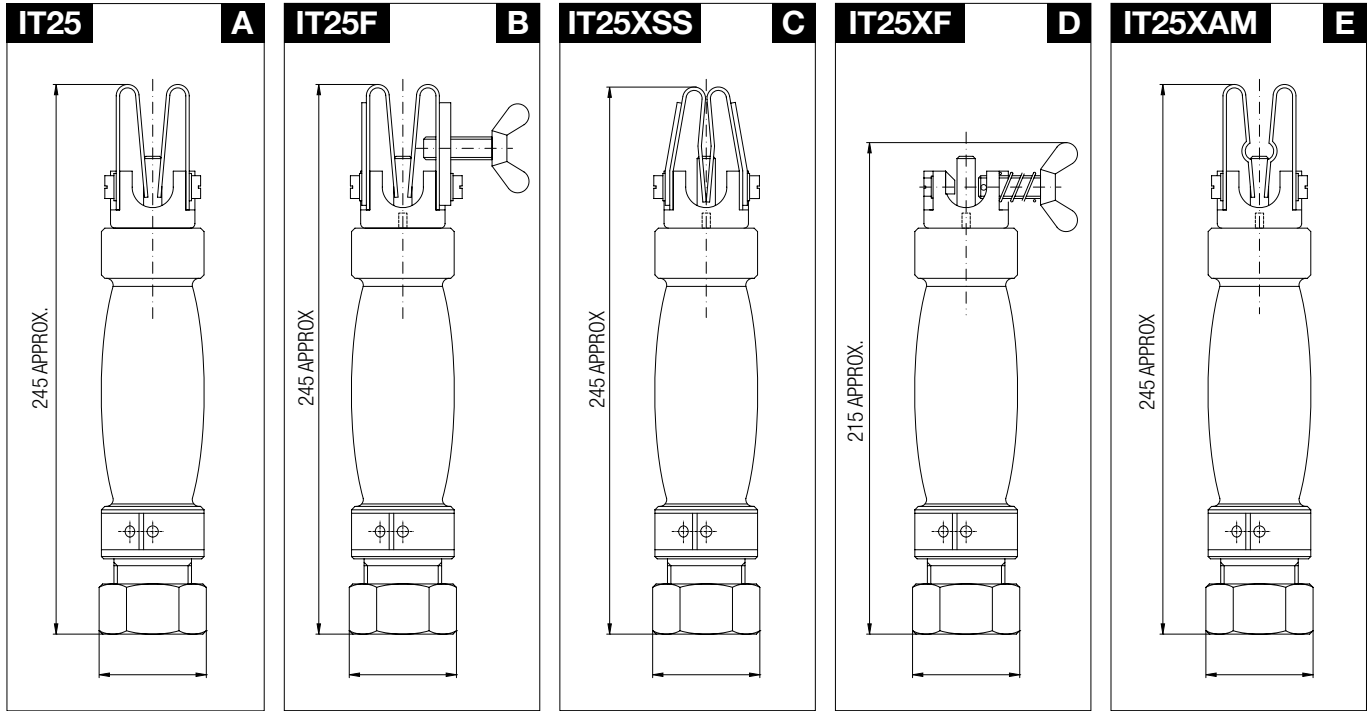
Connecting the clamp to tank tail, the grounding circuits is automatically closed.



Technical Features

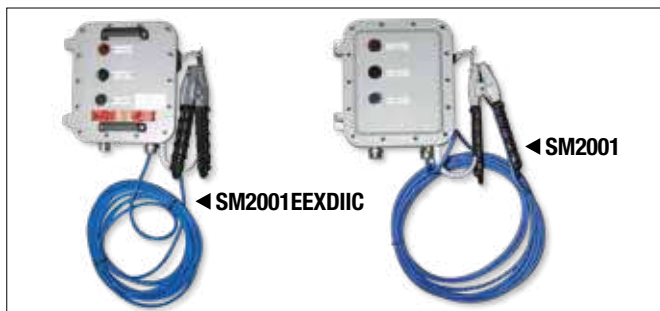
| TYPE | TYPE OF CONNECTION DESCRIPTION | WEIGHT [Kg] | DETAIL |
|---------|-------------------------------------|-------------|--------|
| IT25 | NORMAL SPRING CLAMPING | 0,7 | A |
| IT25F | SPRING CLAMPING & MECHANICAL FIXING | 0,7 | B |
| IT25XSS | THIN STRUCTURE CLAMPING | 0,7 | C |
| IT25XF | METAL BARREL CLAMPING | 0,7 | D |
| IT25XAM | ROUND SHAPED EARTHING FIXING | 0,7 | E |

Reference details



REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)

Classification: Group II - Category 2G



REFERENCE STANDARDS

SM2001 ELECTRONIC SYSTEM

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | (⊕ II 2 G) Ex db IIA or IIB or IIB+H2 T6...T3 (⊕ II 2 G) Ex db [Ia/Ib IIA or IIB or IIC Ga] IIA or IIB or IIB+H2 T6 (⊕ II 2 D) Ex tb IIIC T85°C...T200°C (⊕ II 2 D) Ex tb [Ia Da/Ib] IIIC T85°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 13 ATEX 0058X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9022U IECEx: IECEx INE 13_0078X Component: IECEx INE 13_0079U INMETRO: CEPEL 12.2138 EAC: TC RU C-IT.ГБ08.B.01324 RINA: ELE18111CS_003 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 NEC 505: UL 20141125-E344596 - Type rating NEMA 1, 12, 4 and 4X KC: 16-KA4BO-(from 119X to 0141X) KC (component): 16-KA4BO-(from 0063U to 0084U) CCOE-PESO: P405708/10 |

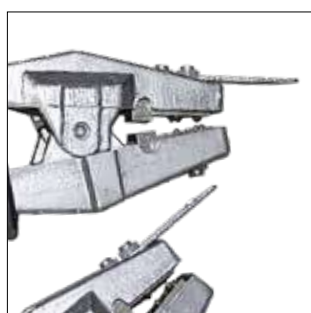
SM2001EEXDIIC ELECTRONIC SYSTEM

Directive 2014/34/EU

| | |
|---------------------------------|--|
| EXECUTION | (⊕ II 2 G) Ex db IIC T6...T3 (⊕ II 2 G) Ex db [Ia/Ib/Ic IIA or IIB or IIC Ga/Gc] IIC T6...T3 (⊕ II 2 D) Ex tb IIIC T85°C...T200°C (⊕ II 2 D) Ex tb [Ia Da/Ib/Ic Dc] IIIC T85°C...T200°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-11; EN/IEC 60079-31; |
| EC Type-Examination Certificate | INERIS 13 ATEX 0059X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +80°C |
| OTHER AVAILABLE CERTIFICATES | Component: INERIS 13 ATEX 9023U IECEx: IECEx INE 13.0080X Component: IECEx INE 13.0081U INMETRO: CEPEL 12.2136 EAC: TC RU C-IT.ГБ08.B.01468 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 13.03524.315 CCOE-PESO: P405708/9 |

Mechanical characteristics

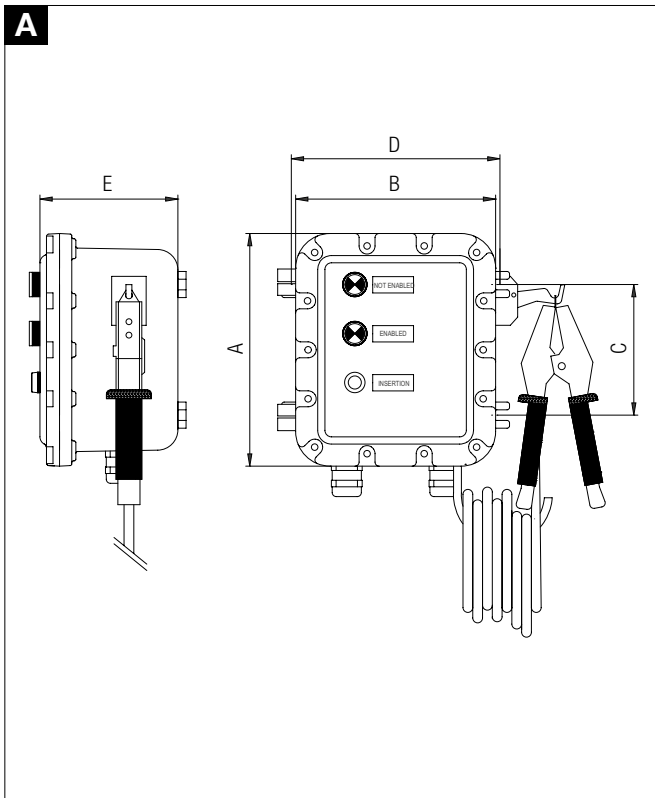
| | |
|-------------------|--|
| Body | marine grade copper free aluminum light alloy |
| Cover | marine grade copper free aluminum light alloy |
| Screws | stainless steel |
| Internal plate | hot dip galvanized steel |
| External Painting | epoxy powders RAL-9006 Grey coloured |
| Hinges | casted on enclosure's body and cover (SM2021F) |



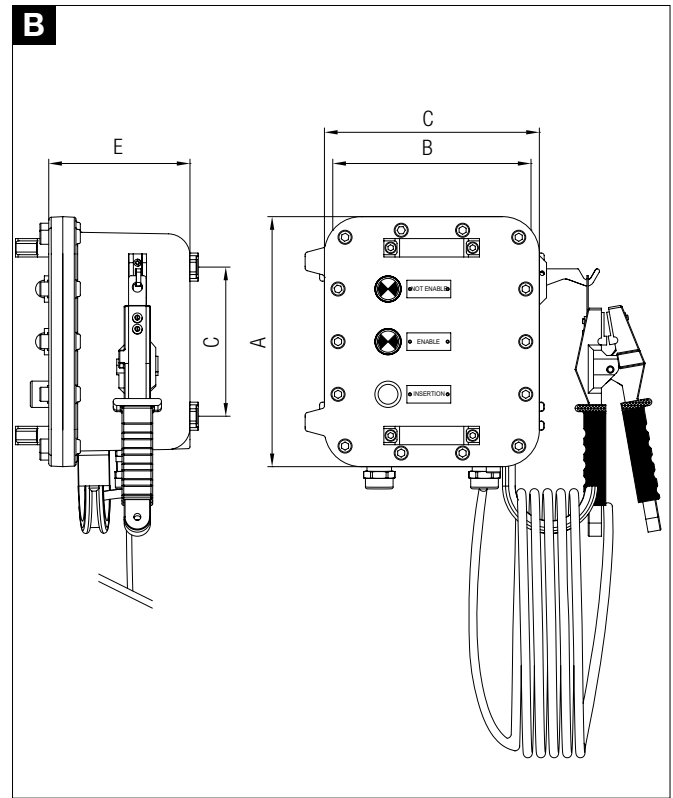
Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | WEIGHT [Kg] | DETAIL |
|-----------|--------|--------|--------|--------|--------|-------------|--------|
| SM2021F | 285 | 245 | 160 | 276 | 169 | 12 | A |
| SM2021IIC | 285 | 245 | 169 | 226 | 170 | 13 | B |

Reference Details



Reference Details



APPLICATIONS

They are used to control grounding continuity during tanks loading and unloading operations. Tanks normally arrive electrostatically loaded, and an imperfect earthing might cause fire originated by a spark in presence of gas. The earthing control system is composed of a marine grade copper free aluminium enclosure, as above described, inside fitted with the earthing control electronic circuit SM-2001, which is normally set at 20 ohm, and authorize tanks loading/unloading when resistance is less than 20 ohm.

An intrinsically safety barrier placed inside the equipment and connected via the included cable clamp kit to the electronic system allows the on and only verification of the correct / perfect ground connection of the tank.

The tank ground connection is to made only with proper grounding clamp series IT (not included).

Enclosure is provided with: NOT AVAILABLE red light – AVAILABLE green light - INSERTION push button.

Red electronic system SM.. pilot light remain lit till grounding clamp IT series (not included) is perfect connected to vehicle's earthing bar.

Insertion push button is pressed for at least 2sec.

If the resistance measured by electronic circuit is less than 20ohm, SM electronic system allows for loading and unloading operations.

Earthing clamp for verification is normally complete with 8m of cable.

FOR GROUNDING TANKS CONNECTIONS, PLEASE USE EARTHING CLAMPS IT.. SERIES SHOWED ON PREVIOUS BULLETIN

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts)
Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

ACOUSTIC SIGNALERS ETH9...

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | ⊗ II 2 G Ex d IIC T6 Gb ⊗ II 2 D Ex tb IIIC T85°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 15 ATEX 0011X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx IINE 15_0012X EAC: TC RU C-IT.Г508.B.01324 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

MULTI-TONE ELECTRONIC SIREN EFST

Directive 2014/34/EU

| | |
|---------------------------------|---|
| EXECUTION | II 2 G Ex db IIC T6 II 2 D Ex tb IIIC T85°C |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | EXA 14 ATEX 0045 |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx EXA 14.0002 EAC: TC RU C-IT.Г508.B.01324 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02551.280 |

Mechanical characteristics

| | |
|--------|---|
| Body | marine grade copper free aluminum light alloy |
| Cover | marine grade copper free aluminum light alloy |
| Screws | stainless steel |



On Request Accessories:

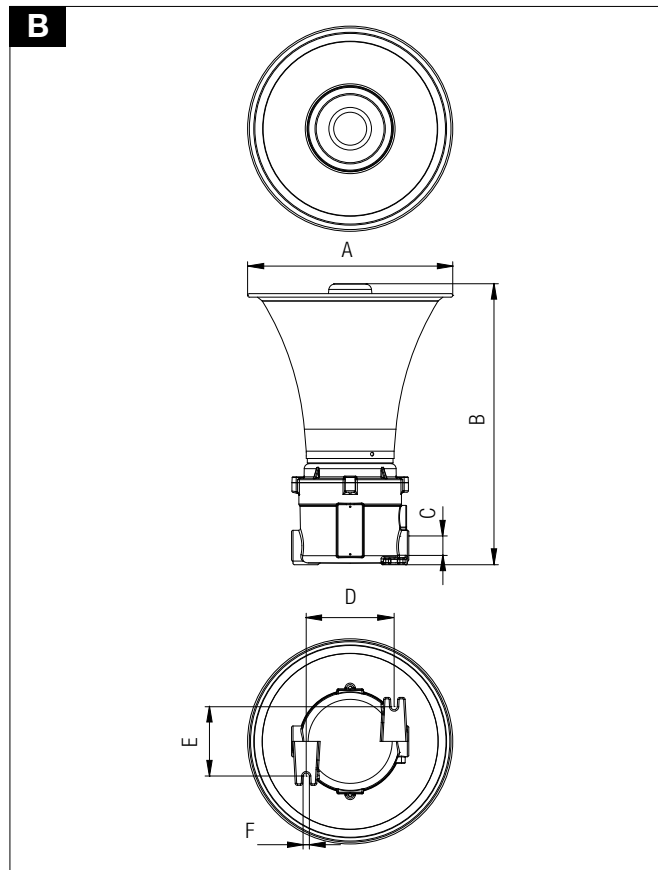
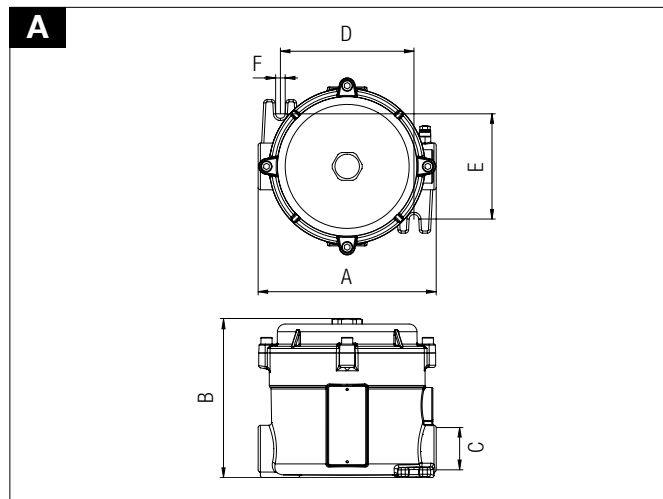
- External epoxy painting (any colours)
- Threaded cable entry different than standard

Technical Features

| CODE | A [mm] | B [mm] | ØC [mm] | D [mm] | E [mm] | F [mm] | TEMPERATURE CLASS (GAS) | TEMPERATURE CLASS (DUSTS) | WEIGHT [Kg] | DETAIL |
|------|--------|--------|----------|--------|--------|--------|-------------------------|---------------------------|-------------|--------|
| ETH9 | 160 | 143 | NPT 3/4" | 120 | 95 | 9 | T6 | T85°C | 2 | A |
| EFST | 280 | 383 | NPT 3/4" | 120 | 95 | 9 | T6 | T85°C | 2,6 | B |

| TYPE | VOLTAGE | CONSUMPTION | DUTY | SOUND INTENSITY [db] |
|-------------------|------------------------|-------------|------------|----------------------|
| ETH9#012AC | 12V - 50/60Hz | 13VA | CONTINUOUS | 80 |
| ETH9#024AC | 24V - 50/60Hz | 13VA | CONTINUOUS | 80 |
| ETH9#110AC | 110V - 50/60Hz | 13VA | CONTINUOUS | 80 |
| ETH9#230AC | 230V - 50/60Hz | 13VA | CONTINUOUS | 80 |
| ETH9#012DC | 12V - DC | 8VA | CONTINUOUS | 80 |
| ETH9#024DC | 24V - DC | 8VA | CONTINUOUS | 80 |
| ETH9#110DC | 110V - DC | 8VA | CONTINUOUS | 80 |
| EFST7-12/24VAC/DC | 12/24V DC - AC 50/60Hz | 10W - 710mA | CONTINUOUS | 100 |
| EFST7-110-230VAC | 110-230V - 50/60Hz | 10W - 710mA | CONTINUOUS | 100 |

Reference Details

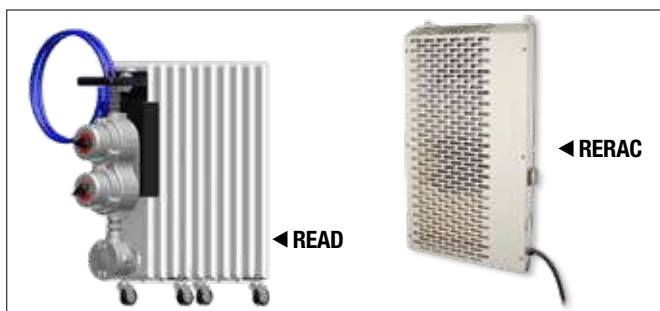


EFST MULTI-TONE ELECTRONIC SIREN - SOUND FEATURES

| | |
|------------------------------|--|
| LEVEL | 100 db @ 1m |
| FREQUENCY | 440 ÷ 1600 Hz |
| AVAILABLE MODULATIONS | 5 |
| 1 - TWO TONE | 400 Hz / 0,1 sec. - 554 Hz / 0,1 sec. |
| 2 - YELP | 750 Hz / 2 sec. ON - 2 sec. OFF |
| 3 - WAIL | 400÷800 Hz / 2.5 sec. UP - 2.5 sec. DOWN |
| 4 - PULSED | 554 Hz / 1 sec. ON - 1 sec. OFF |
| 5 - FIX TONE | 554 Hz |

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



Installation: hazardous areas - Zone 1 / 2 (Gases)

Zone 21 / 22 (Dusts) Safe Areas

Classification: Group II - Category 2G 2D



REFERENCE STANDARDS

FLAME PROOF ELECTRIC RADIATORS - READ (SWITCH)

| | |
|---------------------------------|---|
| EXECUTION | <ul style="list-style-type: none"> ⊗ II 2 G Ex d IIC T6 Gb ⊗ II 2 D Ex tb IIIC T85°C Db |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31 |
| EC Type-Examination Certificate | INERIS 04 ATEX 0076X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 11.0033X INMETRO: CEPEL 13.2255X EAC: TC RU C-IT.Г508.B.01324 |

FLAME PROOF ELECTRIC RADIATORS - READ (HEATER)

| | |
|---------------------------------|--|
| EXECUTION | II 2 G Ex d IIC T4, T3, T2, T1 Gb |
| RULES OF COMPLIANCE | EN/IEC 60079-0; EN/IEC 60079-1; |
| EC Type-Examination Certificate | CESI 03 ATEX 082X |
| PROTECTION DEGREE | IP66 |
| AMBIENT TEMPERATURE | -60°C ÷ +60°C |
| OTHER AVAILABLE CERTIFICATES | IECEx: IECEx INE 11.0013X INMETRO: NCC 13.02431 X EAC: TC RU C-IT.Г505.B.00189 |

INDUSTRIAL ELECTRIC HEATER - RERAC

| | |
|---------------------------------|---|
| EXECUTION | INDUSTRIAL WEATHERPROOF |
| RULES OF COMPLIANCE | CEI / EN 60598-1 |
| EC Type-Examination Certificate | - |
| PROTECTION DEGREE | IP20 (RERAC-L) IP44/IP55 (RERAC / RERAC-C) |
| AMBIENT TEMPERATURE | - |
| OTHER AVAILABLE CERTIFICATES | - |



Mechanical characteristics READ

| | |
|-----------------------|---|
| Control box | marine grade copper free aluminum light alloy |
| Heating unit | stamped and welded steel sheets |
| Control box painting | epoxy powders grey RAL-9006 colour |
| Heating unit painting | epoxy powders grey RAL-7035 colour |

Mechanical characteristics RERAC

| | |
|-----------------------------------|---|
| Box | welded steel 8/10mm th. |
| front upper and inferior surfaces | steel sheet 15/10mm th. with oblong holes |
| Painting | ivory RAL-1015 colour |

On Request Accessories:

- Different supply from standard
- Protection degree IP40 (RERAC..)

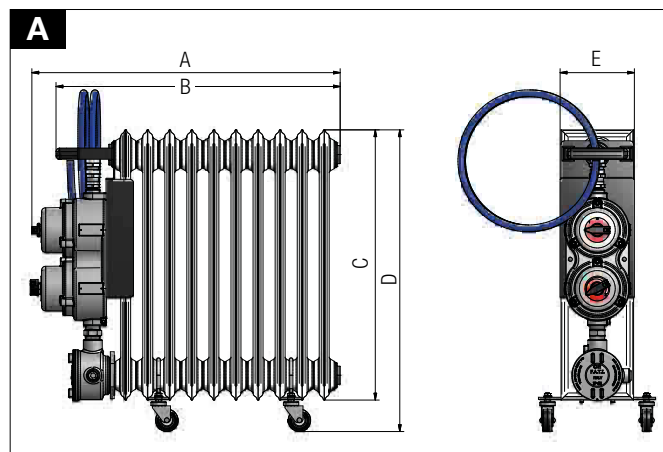
Technical Features

| CODE | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | WEIGHT [Kg] | DETAIL |
|-------------|--------|--------|--------|--------|--------|-------------|--------|
| READ1000W | 640 | 510 | 600 | 675 | 165 | 39 | A |
| READ2000W | 1140 | 1010 | 600 | 675 | 165 | 74 | A |
| RERAC21000 | 520 | 715 | 490 | 695 | 133 | 11 | B |
| RERAC31500 | 520 | 715 | 490 | 695 | 133 | 11,05 | B |
| RERAC42000 | 520 | 715 | 490 | 695 | 133 | 12 | B |
| RERACC2500 | 315 | 700 | 288 | 680 | 108 | 6,6 | B |
| RERACC2800 | 315 | 700 | 288 | 680 | 108 | 6,9 | B |
| RERACC3750 | 315 | 700 | 288 | 680 | 108 | 7,2 | B |
| RERACL1900 | 1060 | 395 | 1040 | 375 | 107 | 9,1 | C |
| RERACL21800 | 1060 | 395 | 1040 | 375 | 107 | 9,6 | C |

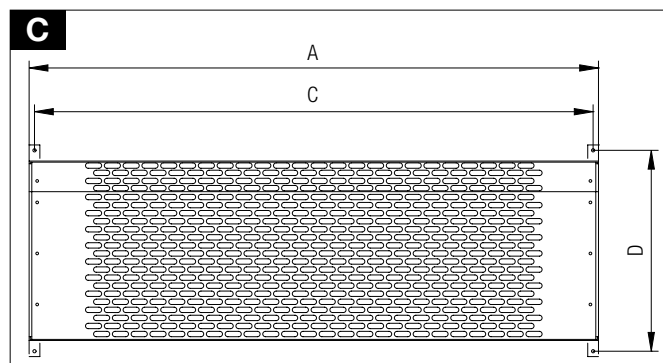
| CODE | TENSION | POWER [W] | DETAIL |
|-----------|----------------|-----------|--------|
| READ1000W | 230V - 50/60Hz | 1000 | A |
| READ2000W | 230V - 50/60Hz | 2000 | A |

| CODE | TENSION | POWER LEVELS [W] | | DETAIL |
|-------------|----------------|------------------|------|--------|
| | | I | II | |
| RERAC21000 | 230V - 50/60Hz | 500 | 1000 | B |
| RERAC31500 | 230V - 50/60Hz | 1000 | 1500 | B |
| RERAC42000 | 230V - 50/60Hz | 1000 | 2000 | B |
| RERACC2500 | 230V - 50/60Hz | 250 | 500 | B |
| RERACC2800 | 230V - 50/60Hz | 550 | 800 | B |
| RERACC3750 | 230V - 50/60Hz | 500 | 750 | B |
| RERACL1900 | 230V - 50/60Hz | 900 | - | C |
| RERACL21800 | 230V - 50/60Hz | 900 | 1800 | C |

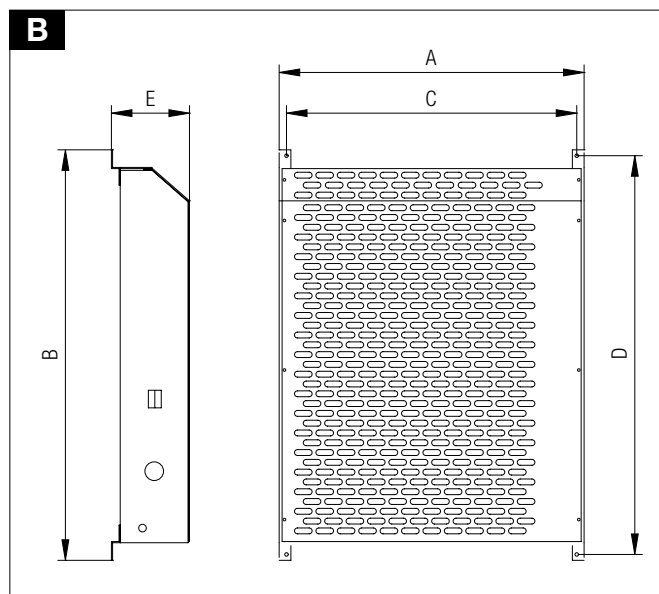
Reference Details



Reference Details



Reference Details



CONSTRUCTION FEATURES:

Electric heater, oil field, movable on pivoting wheels or to be fixed by special supports on the floor or to the wall.
 Two electric armoured resistances unit provided with incorporated thermal circuit breaker located inside one.
 Resistance thermal exchange: 2W/sqcm
 Control gear box containing a three positions change over switch: 0 – 50% - 100% power.
 Adjustable thermostat. Certified cable gland for a feeding armoured 2 Mt. cable 3x2.5sqmm
 Heating system is composed with a group of finned armoured electric resistance, electrically connected to have two heating levels (only RERAC...).

REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.





Installation: safe area
Classification: IP55



REFERENCE STANDARDS

ELECTRICAL PANEL

CEI / IEC

| | |
|---------------------|--|
| EXECUTION | INDUSTRIAL WATERPROOF |
| RULES OF COMPLIANCE | -40°C ÷ +70°C |
| PROTECTION DEGREE | IP55 |
| CERTIFICATE REF. | - |
| RULES OF COMPLIANCE | CEI EN 60439-1 (CEI 17-13/1) CEI EN 90529 |

Mechanical characteristics

| | |
|---------------------|--|
| Framework And Panel | 15-20/10 thick sheet steel with galvanic or sendzimir treatment |
| Glass (On Request) | tempered glass (5mm thickness) complete with silicon rubber gasket |
| Screws | stainless steel |

Mechanical characteristics RERAC

| | |
|---|-------------------------|
| Maximum rating | 600A |
| Insulating voltage | 690V |
| Test voltage | 50Hz 2500V for 1 minute |
| Frequency | 50/60Hz |
| Short circuit withstand strenght on plate | Max 35 kA for 1 minute |
| Distribution bars | Ipk=73,5 kA peak |

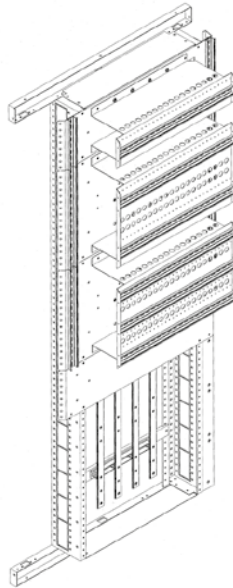


On Request Accessories:

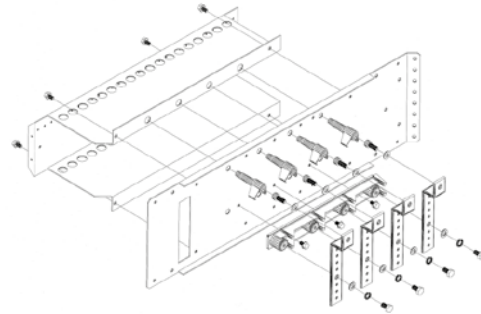
- Other degree protection level
- Stainless steel AISI316L framework and interior panel

Weatherproof sheet steel or stainless steel 304/316 control panel, interchangeable plate version

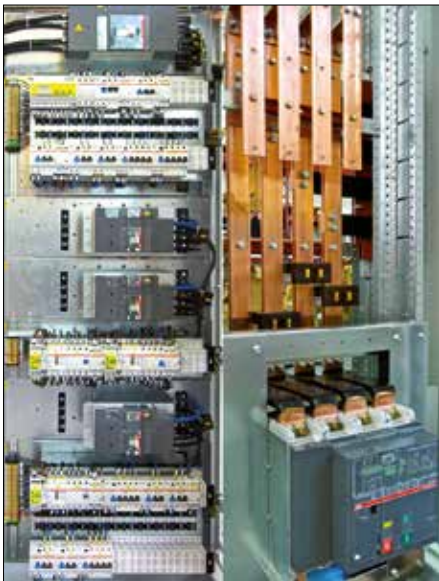
Flexibility



The system is designed so that the standard type (circuit breakers) can be integrated with other types (contactors) with no need to adapt other (different) structures to the primary system to support the different types.



Safety



The control panel has been designed so that no live part can come into contact with the operator's body even with the main door open, according to the degree of protection IP XX B of standard IEC 529.

Interchangeability



In case of breakdown the plates (the system's main characteristic) can be easily replaced with new ones of the same type with a very simple operation.
The plates can be prepared by Nuova ASP, wired or already fitted and shipped to destination.

REMARK:

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