

ELECTRICAL SAFETY SOLUTIONS





## ELECTRICAL SAFETY SOLUTIONS

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ELECTRICAL SAFETY SOLUTIONS
















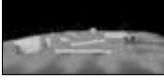


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EX CABLE GLANDS

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EX CONDUIT FITTINGS

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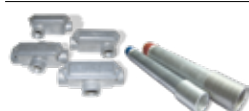
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## EX LIGHTING

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**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"> <li>⊗ Ex db eb IIC T6 Gb</li> <li>⊗ Ex db op is IIC T6 Gb (for PCB LED type only)</li> <li>⊗ Ex db eb op is IIC T6 Gb (for PCB LED type only)</li> <li>⊗ Ex tb IIC T85°C Db</li> <li>⊗ Ex op is tb IIC T85°C Db (for PCB LED type only)</li> </ul>
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 12 ATEX 023X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 13.0055X INMETRO: CEPEL 13.2291X EAC: TC RU C-IT.BH02.B.00602 (-45°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110÷240Vac - 50/60 Hz) - (110÷240Vdc)</b>						
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)

<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220÷240V 50/60Hz</b>						
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

<b>LIGHTING FIXTURES FOR LED STRIPES LAMP ("TR" VERSION) - CCT: 5000K / CRI: 80 - POWER SUPPLY 220÷240Vac</b>						
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

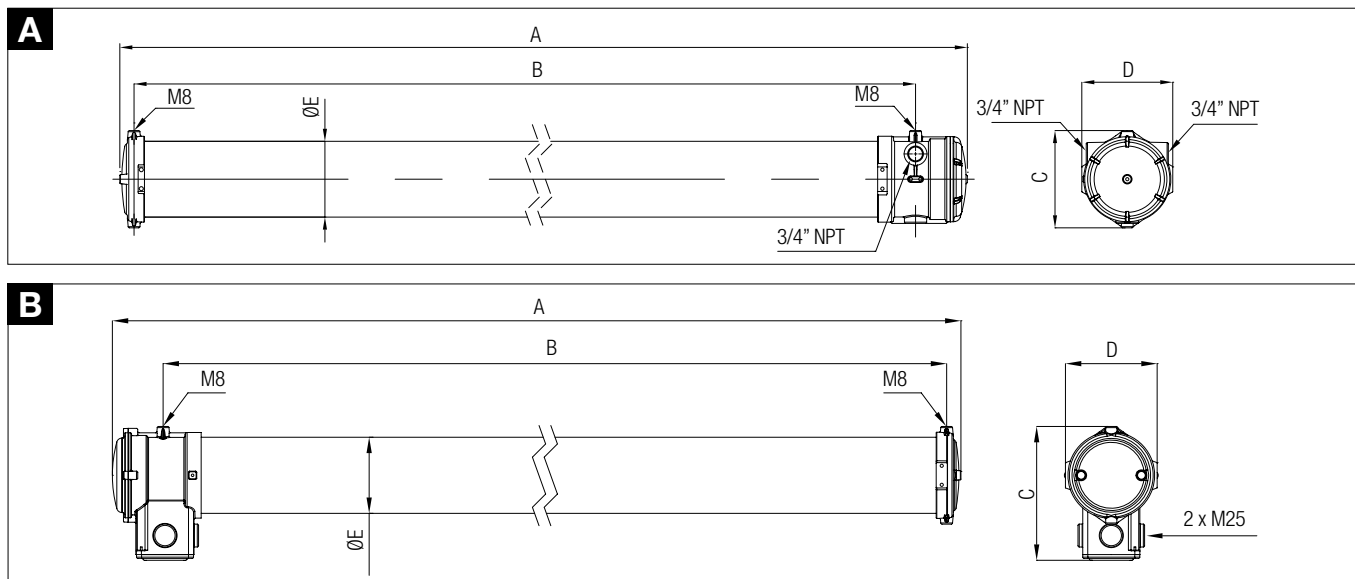
EMERGENCY OPERATING WITH 66 LED UNITS ONLY AS STANDARD

<b>LIGHTING FIXTURES FOR LED STRIPES LAMP („AT" VERSION) - CCT : 4000K / CRI : 70 - POWER SUPPLY 220÷240Vac</b>						
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)

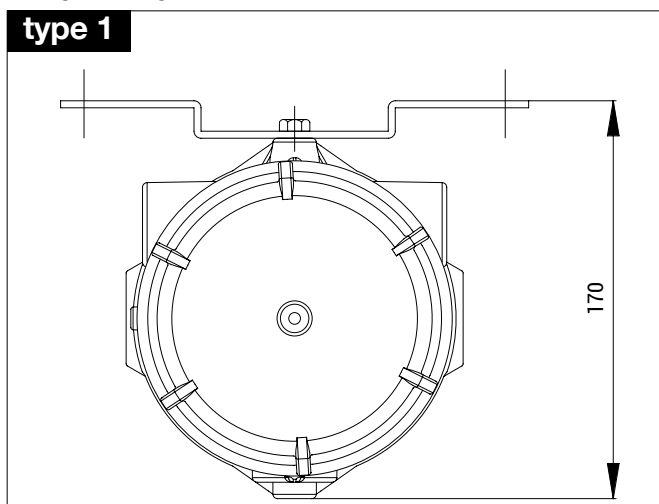
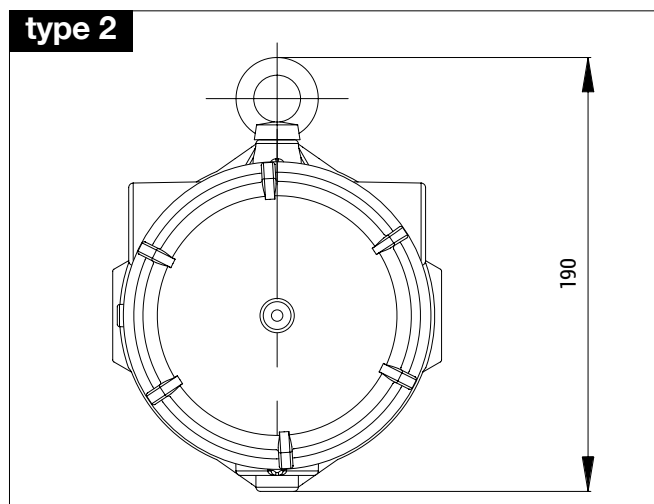
**Note:** LED stripes lamps included along with lighting fixtures

EMERGENCY OPERATING WITH 40 LED UNITS ONLY AS STANDARD

**Reference details**

**Technical features**

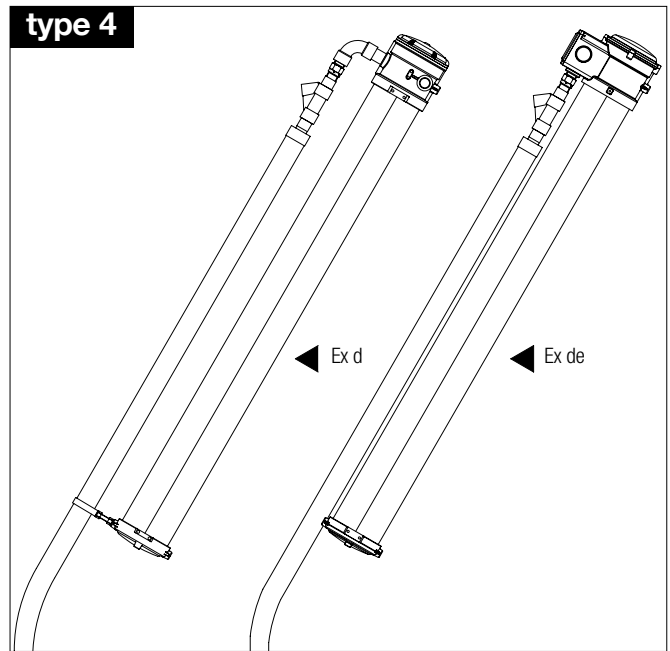
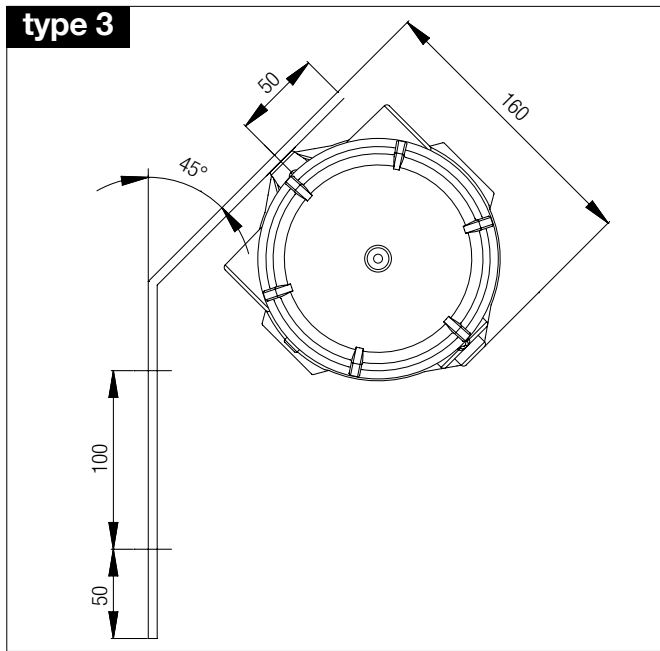
CODE	A [mm]	B [mm]	C [mm]	D [mm]	ØE [mm]	WEIGHT [kg] **	CABLE ENTRY	DETAIL
EVFGd*8	495	390	154	145	120	3,50	2 x 3/4"	A
EVFGdE*8						4,50		
EVFGd*18 / **LED_A / 66LED_T	745	640	154	145	120	5,50	2 x 3/4"	A
EVFGdE*18 / 40LED_A / 66LED_T						5,50		
EVFGd*36 / 132LED_T	1345	1240	154	145	120	9,00	2 x 3/4"	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**


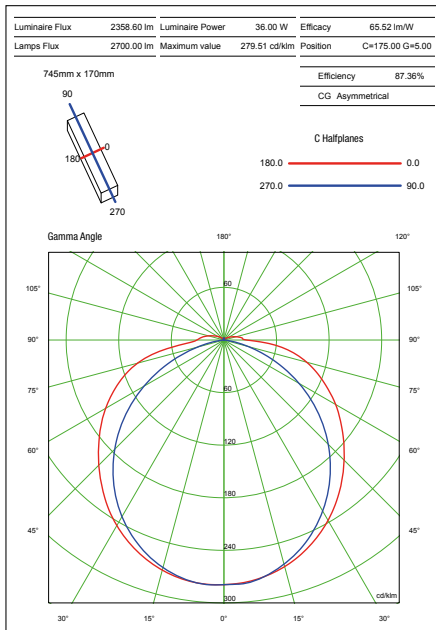
Wall/structure mounting

Pole mounting  
Assemblig detail with pole (typical)

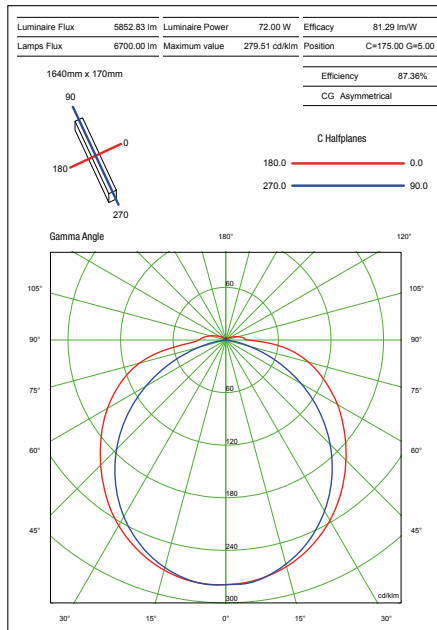


EVFG Polar diagrams – photometric data

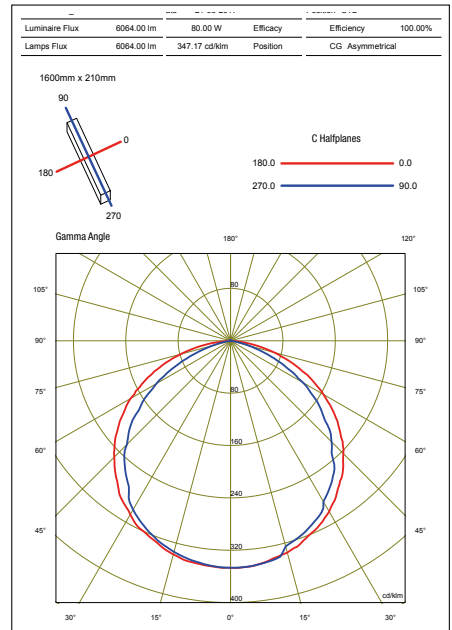
EVFG218



EVFG236



EVFG80LED\_A



On request accessories

CODE	DESCRIPTION	INSTALLATION	MATERIAL
GUARDEVFG18	PROTECTION GUARD FOR 18W FL and LED LIGHTING FIXTURES SIZE 40, 48, 66, 80	-	H.D. GALVANIZED STEEL
GUARDEVFG36	PROTECTION GUARD FOR 36W FL and LED LIGHTING FIXTURES SIZE 132	-	H.D. GALVANIZED STEEL
GUARDEVFG58	PROTECTION GUARD FOR 58W FL	-	H.D. GALVANIZED STEEL
GUARDEVFG18IX	PROTECTION GUARD FOR 18W FL and LED LIGHTING FIXTURES SIZE 40, 48, 66, 80	-	STAINLESS STEEL
GUARDEVFG36IX	PROTECTION GUARD FOR 36W FL and LED LIGHTING FIXTURES SIZE 132	-	STAINLESS STEEL
GUARDEVFG58IX	PROTECTION GUARD FOR 58W FL	-	STAINLESS STEEL
20302.0121	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	GALVANIZED STEEL
20302.0103	PENDANT MOUNTING KIT C/W HARDWARE	TYPE 2	GALVANIZED STEEL
20302.0128	WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0163	POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE	TYPE 4	GALVANIZED STEEL
20301.0162	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 0054X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 13.0075X INMETRO: CEPTEL 14.2311X EAC: TC RU C-IT.BH02.B.00602 RINA: ELE18111CS_015 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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 (PRC)	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 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
<b>LIGHTING FIXTURE FOR INCANDESCENT LAMPS* - POWER SUPPLY 230V-50Hz</b>						
EVAC101	100 W	T4	T 135°C	E-27	1 x 3/4"	A
EVAC100	100 W	T4	T 135°C	E-27	2 x 3/4"	B
EVAC201	200 W	T4 / T3	T 135°C / T 160°C	E-27	1 x 3/4"	A
EVAC200	200 W	T4 / T3	T 135°C / T 160°C	E-27	2 x 3/4"	B
EVAC301	300 W	T4 / T3	T 135°C / T 160°C	E-40	1 x 3/4"	A
EVAC300	300 W	T4 / T3	T 135°C / T 160°C	E-40	2 x 3/4"	B
EVAC501	500 W	T3	T 160°C / T 190°C	E-40	1 x 3/4"	A
EVAC500	500 W	T3	T 160°C / T 190°C	E-40	2 x 3/4"	B

\*lamp not included.

<b>LIGHTING FIXTURE FOR HALOGEN LAMP* - POWER SUPPLY 230V-50Hz</b>						
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.

<b>LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V-50Hz</b>						
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

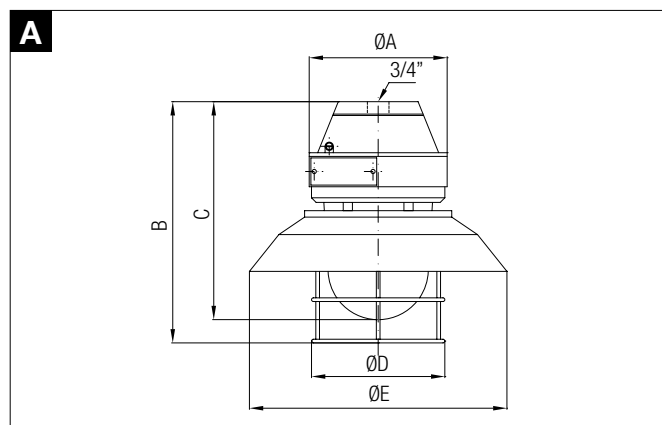
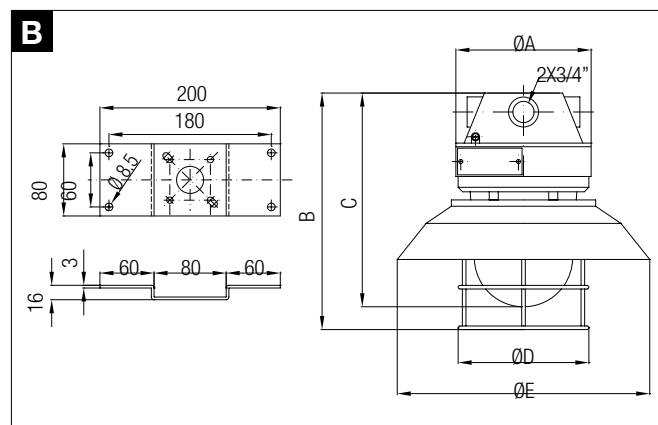
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V-50Hz</b>						
EVAC101-70HPNA	70 W	T4	T 135°C	E-27	2 x 3/4"	C2
EVAC101-C70HPNA					1 x 3/4"	C1
EVAC301-100HPNA	100 W	T3	T 140°C / T 160°C	E-40	2 x 3/4"	C2
EVAC301-C100HPNA					1 x 3/4"	C1
EVAC301-150HPNA	150 W	T4	T 135°C	E-40	2 x 3/4"	C2
EVAC301-C150HPNA					1 x 3/4"	C1
EVAC301-250HPNA	250 W	T3	T 160°C / T 190°C	E-40	2 x 3/4"	C2
EVAC301-C250HPNA					1 x 3/4"	C1
EVAC501-400HPNA	400 W	T3	T 190°C	E-40	2 x 3/4"	C2

<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V-50Hz</b>						
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

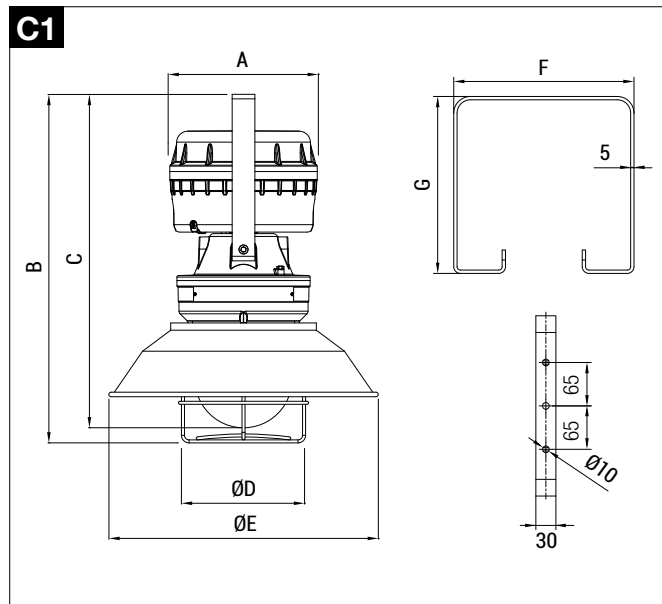
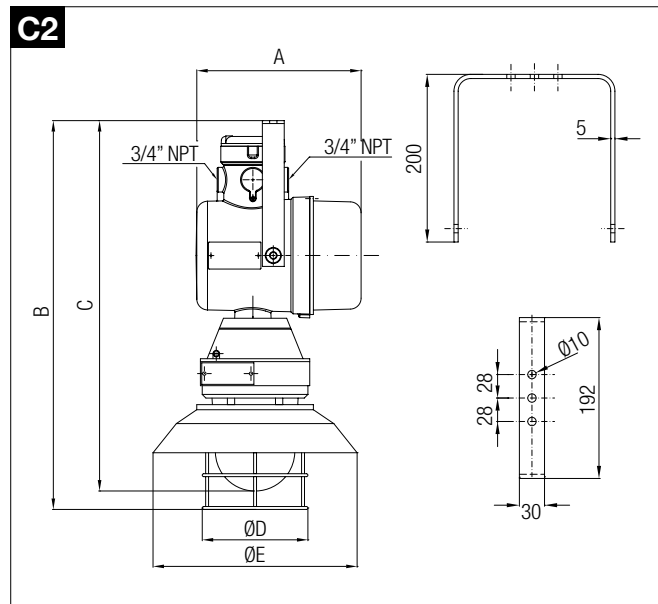
<b>LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V-50Hz</b>						
EVAC201-160MLL	160 W	T3	T 140°C / T 160°C	E-27	1 x 3/4"	A
EVAC200-160MLL	160 W	T3	T 140°C / T 160°C	E-27	2 x 3/4"	B
EVAC301-250MLL	250 W	T3	T 160°C / T 190°C	E-40	1 x 3/4"	A
EVAC300-250MLL	250 W	T3	T 160°C / T 190°C	E-40	2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

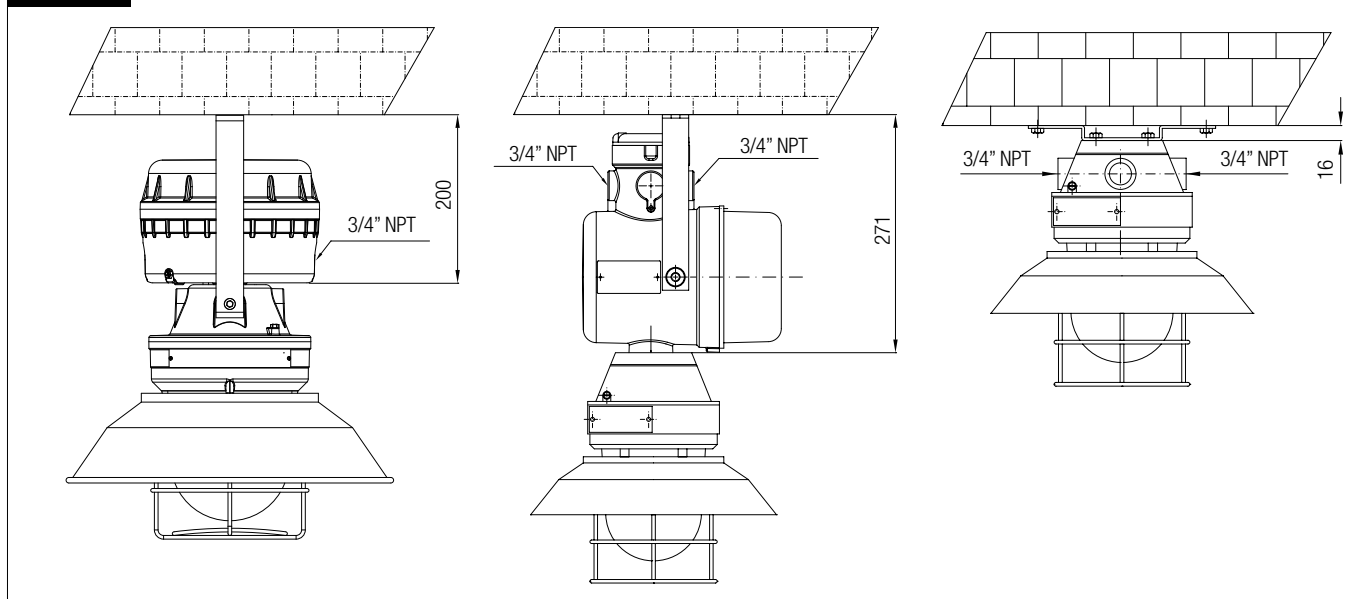
**Reference details**

**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-..HPNA; EVAC101-..MH	227	545	515	145	280	210	220	7,00	2 x 3/4"	C2
EVAC101-C-..HG; EVAC101-C-..HPNA; 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-..HPNA; EVAC301-..MH	227	635	610	290	402	270	265	12,00	2 x 3/4"	C2
EVAC301C-..HPNA; EVAC301-C-..MH	250	590	555	290	402	270	265	12,00	1 x 3/4"	C1
EVAC501-..HG; EVAC501-..HPNA; EVAC501-..MH	227	695	670	255	515	/	/	15,50	2 x 3/4"	C2

**Reference details**

**Reference details**


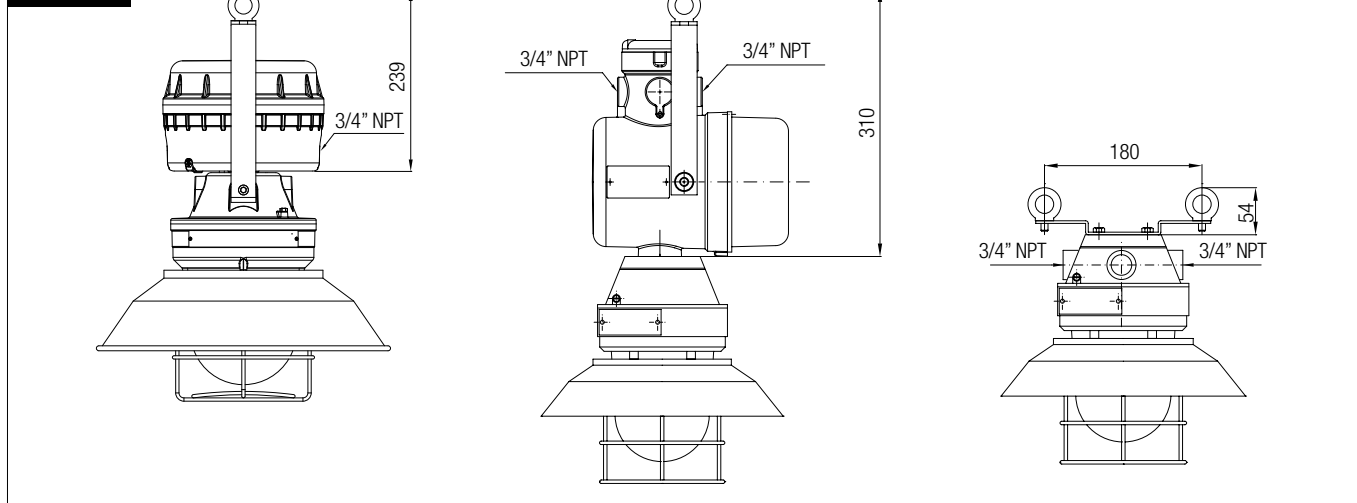
Ceiling mounting

type 1



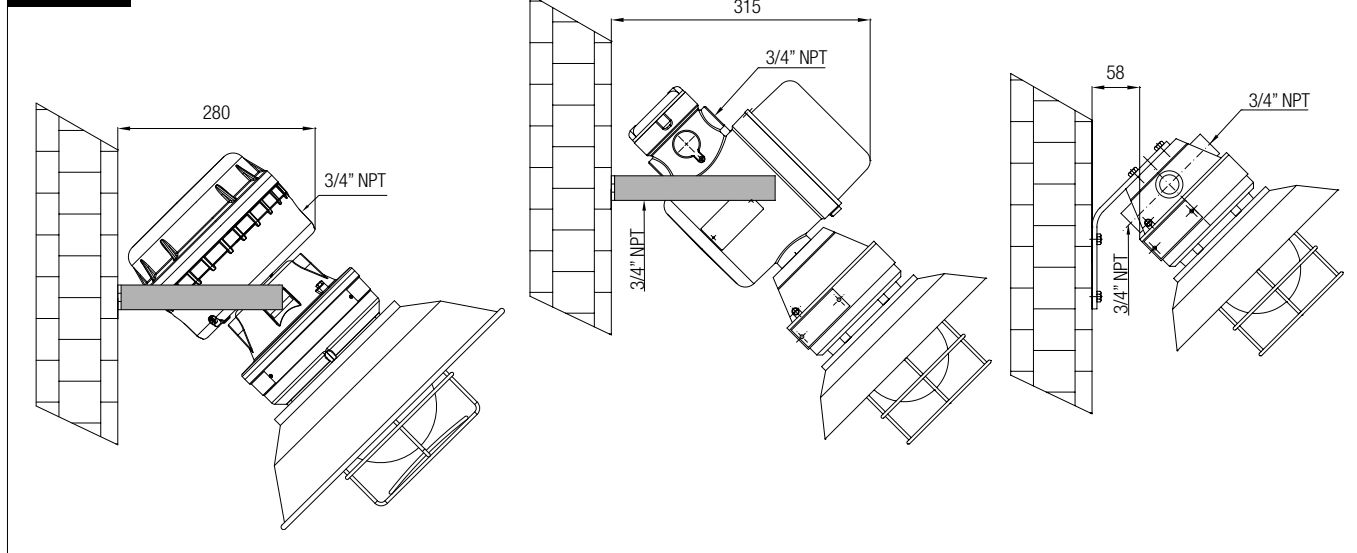
Pendant mounting

type 2

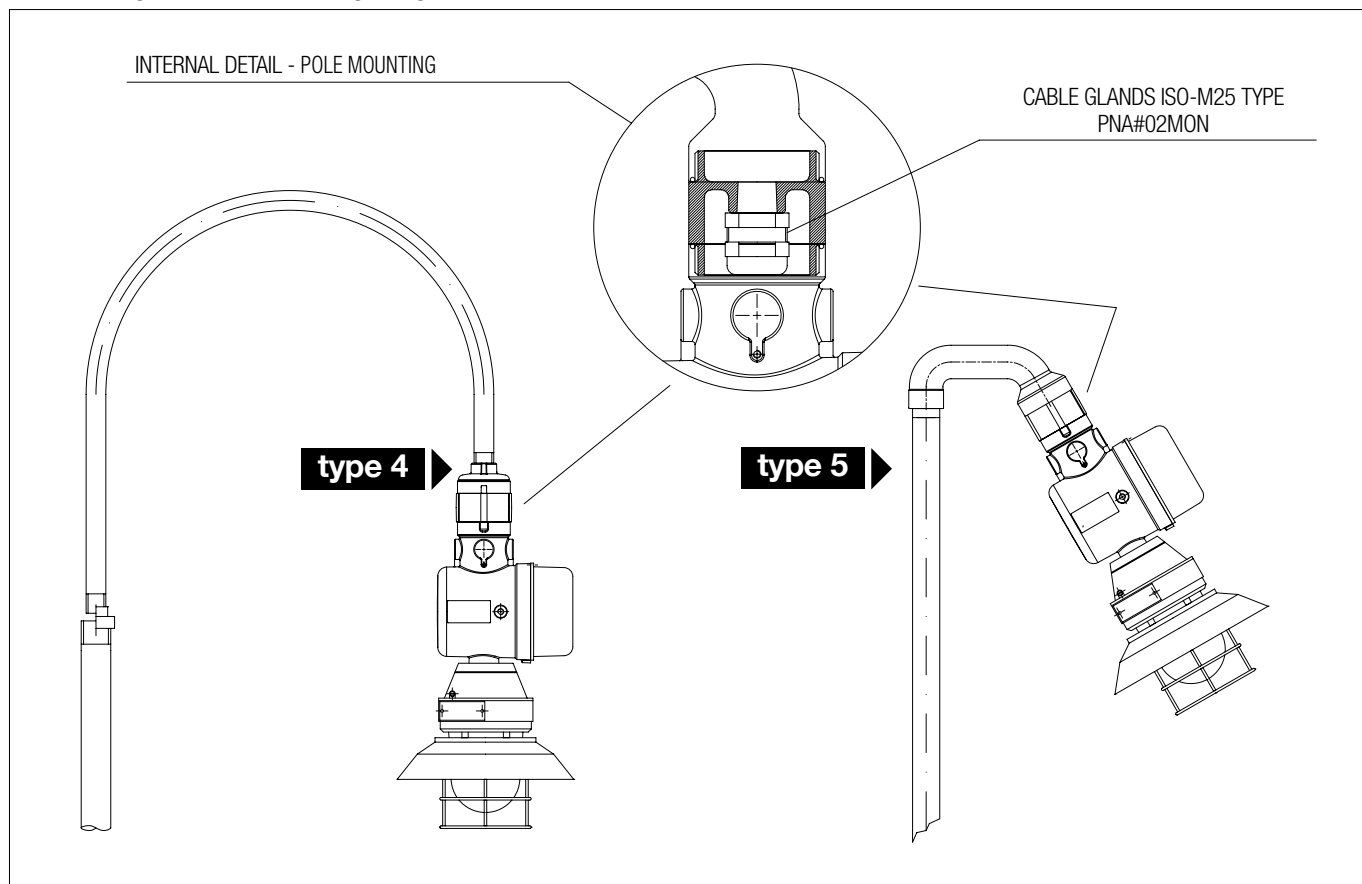


Wall/structure mounting

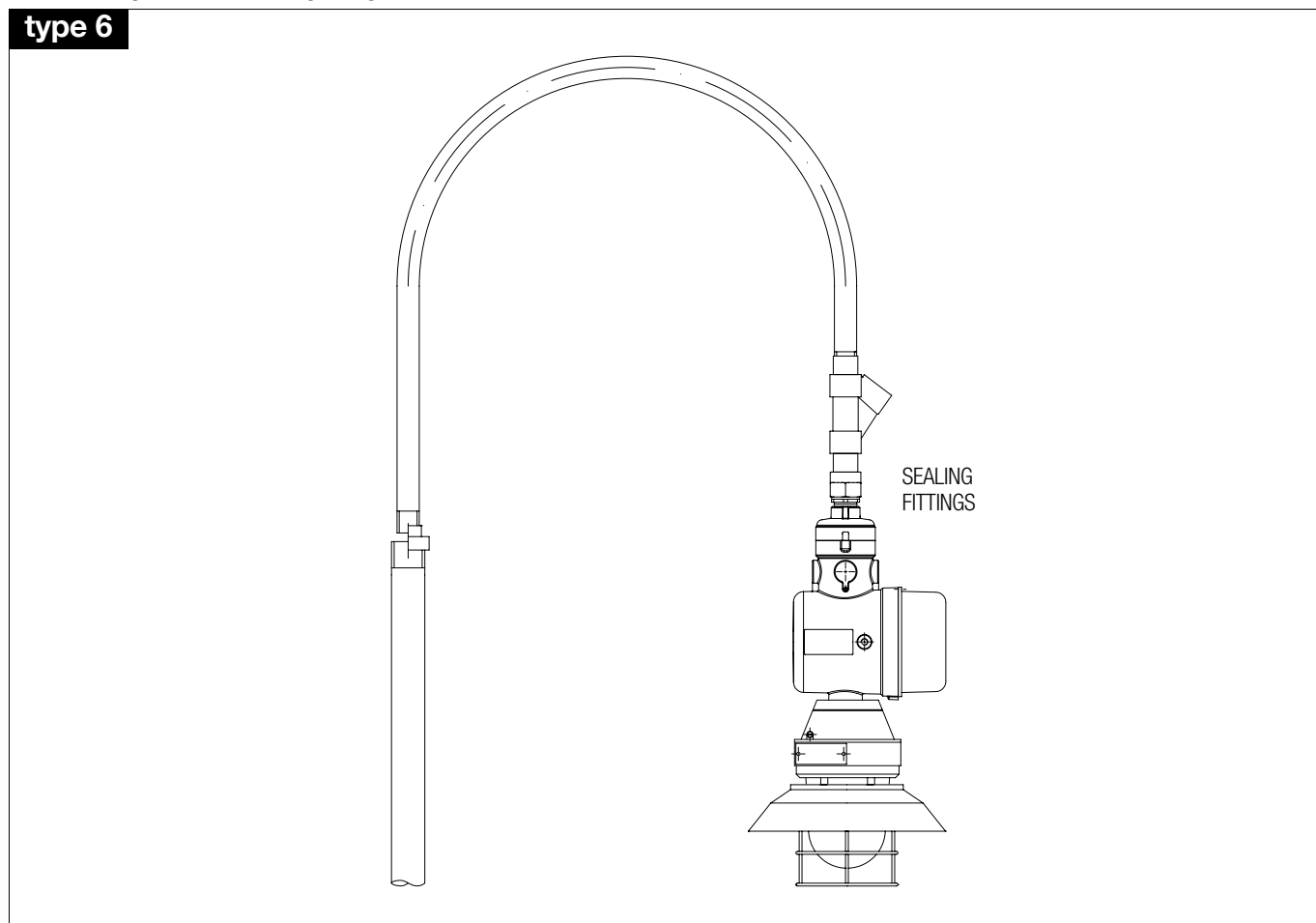
type 3



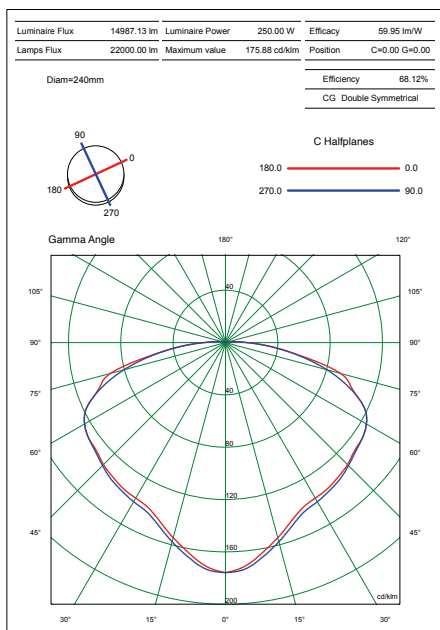
**Pole Mounting – Without add sealing fitting**



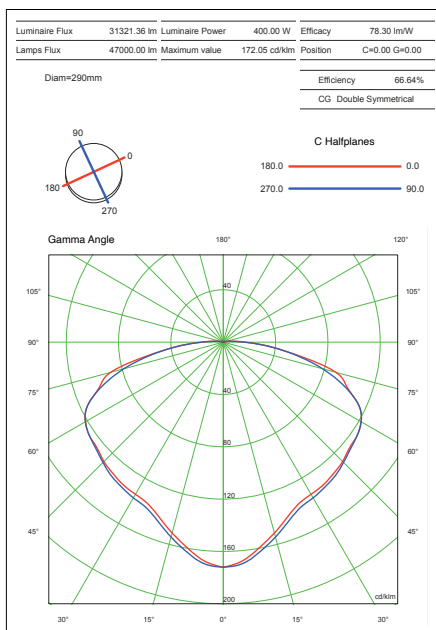
**Pole Mounting – With add sealing fitting**



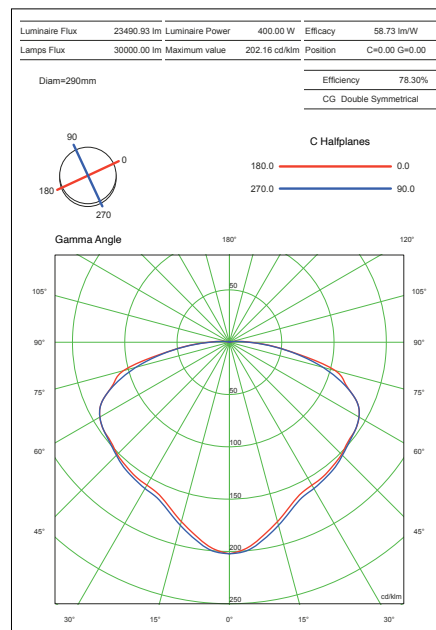
**EVAC301-250HPNA**



**EVAC501-400HPNA**



**EVAC501-400MH**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0070	EVAC 100 / 101 SIZE STANDARD REFLECTOR	-	WHITE STOVE ENAMELLED ALUMINIUM
20302.0071	EVAC 200 / 201 SIZE STANDARD REFLECTOR	-	WHITE STOVE ENAMELLED ALUMINIUM
20302.0072	EVAC 300 / 301 SIZE STANDARD REFLECTOR	-	WHITE STOVE ENAMELLED ALUMINIUM
20302.0073	EVAC 500 / 501 SIZE STANDARD REFLECTOR	-	WHITE STOVE ENAMELLED ALUMINIUM
20302.0025	EVAC 100 / 101 SIZE STAINLESS STEEL REFLECTOR	-	STAINLESS STEEL
20302.0026	EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR	-	STAINLESS STEEL
20302.0027	EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR	-	STAINLESS STEEL
20302.0028	EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR	-	STAINLESS STEEL
20302.0074	EVAC 100 / 101 SIZE STANDARD PROTECTION GUARD	-	GALVANIZED STEEL
20302.0075	EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD	-	GALVANIZED STEEL
20302.0076	EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD	-	GALVANIZED STEEL
20302.0077	EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD	-	GALVANIZED STEEL
20302.0037	EVAC 100 / 101 SIZE STAINLESS STEEL PROTECTION GUARD	-	STAINLESS STEEL
20302.0038	EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD	-	STAINLESS STEEL
20302.0039	EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD	-	STAINLESS STEEL
20302.0040	EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD	-	STAINLESS STEEL
20302.0078*	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	STAINLESS STEEL
20302.0103	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	GALVANIZED STEEL
20302.0079*	45° WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0171	POLE MOUNTING KIT - WITHOUT SEALING FITTINGS	TYPE 4	ALUMINIUM
20303.0124 + 20301.0169	25° POLE MOUNTING KIT WITH BRACKET - WITHOUT SEALING FITTINGS	TYPE 5	ALUMINIUM
	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 IIC 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 0054X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 13.0075X INMETRO: CEPEL 14.2311X EAC: TC RU C-IT.BH02.B.00602 RINA: ELE18111CS_015 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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	POWER [W]	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	NUMBER OF LED	NOMINAL OUTPUT (lm)	LAMP TYPE	CABLE ENTRY SIZE
<b>LED LIGHTING FIXTURES - POWER SUPPLY 120 ÷ 277 VAC 50/60 HZ</b>							
EVAC201-32LED EVAC201L-004	32W	T5 / T4	T 85°C / T 105°C	4	2120	POWER LED	1 x 1" 2 x 3/4"
EVAC201-48LED EVAC201L-006	48W	T5 / T4	T 85°C / T 105°C	6	3918	POWER LED	1 x 1" 2 x 3/4"
<b>LED LIGHTING FIXTURES - POWER SUPPLY 120 ÷ 277 VAC 50/60 HZ</b>							
EVAC501-64LED EVAC501L-008	64W	T6 / T5	T 95°C	8	4265	POWER LED	1 x 1" 2 x 3/4"
EVAC501L-012	96W	T6 / T5	T 95°C	12	7392	POWER LED	2 x 3/4"

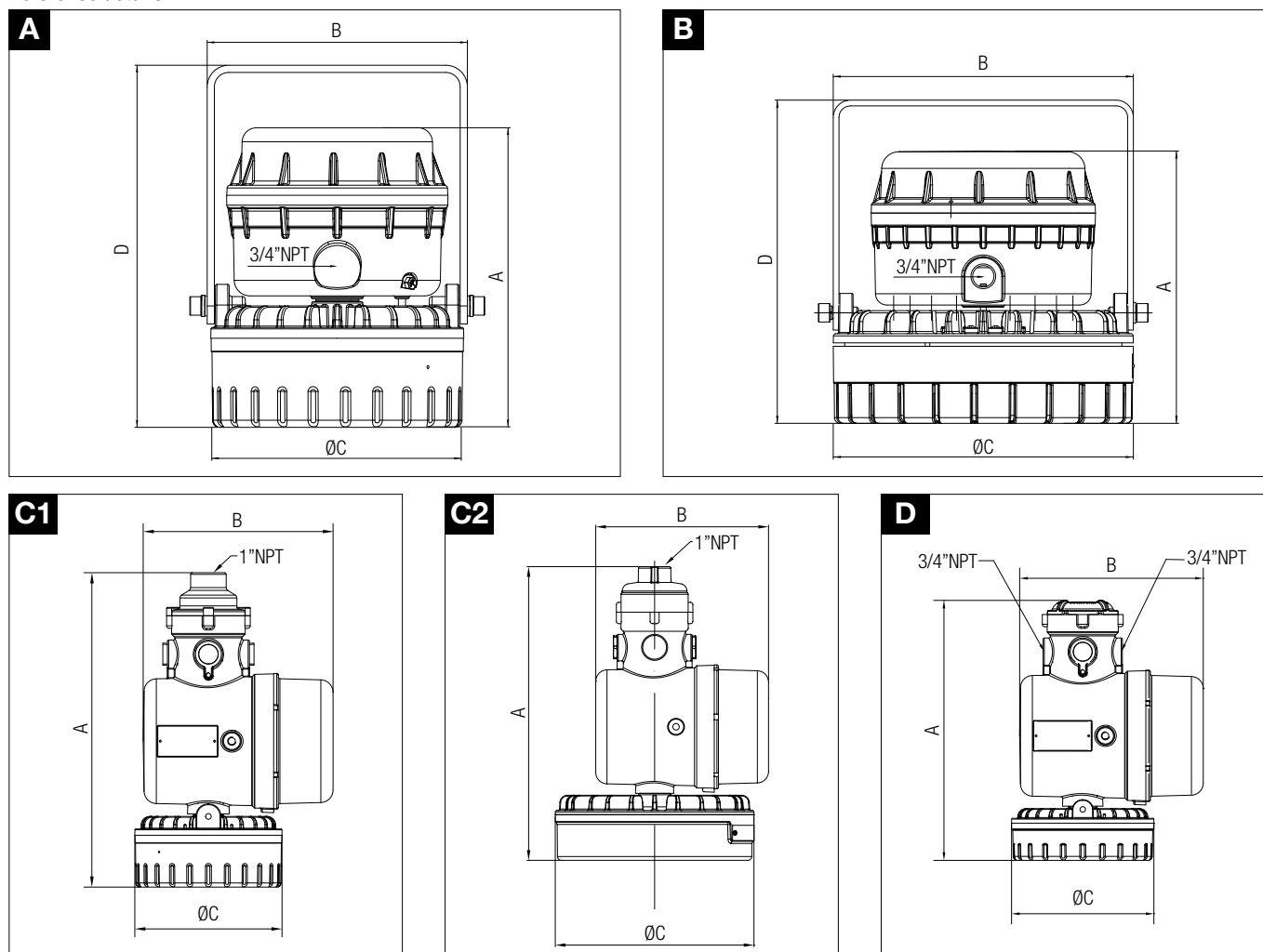
**Note:** LED lens lamp included along with lighting fixtures

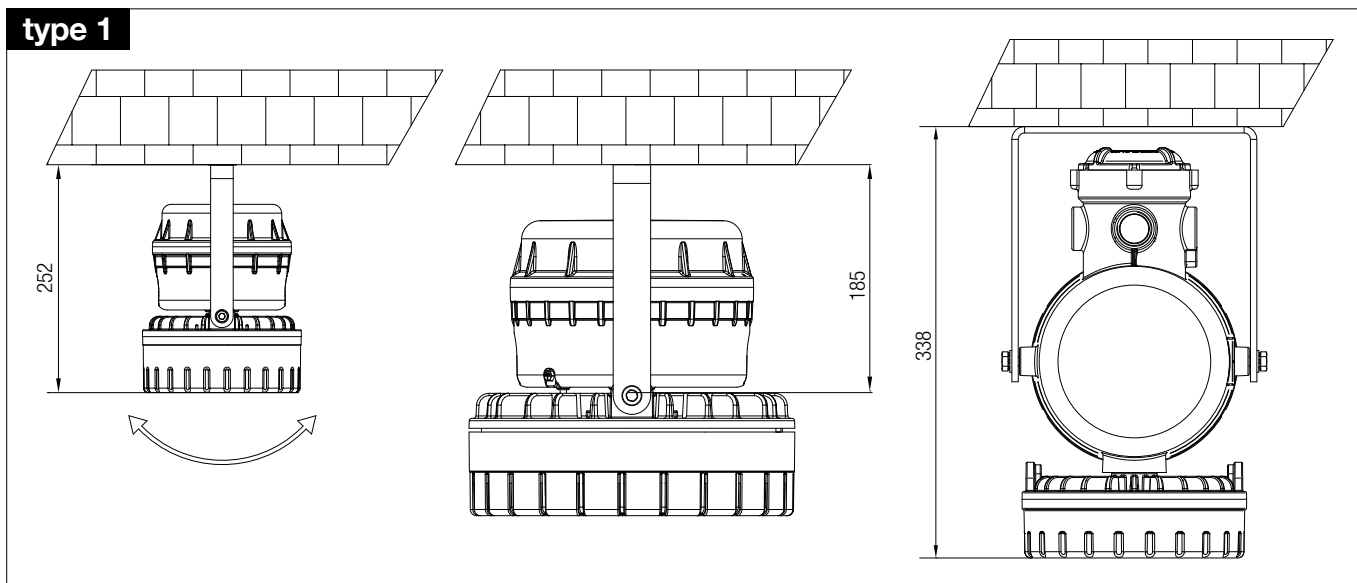
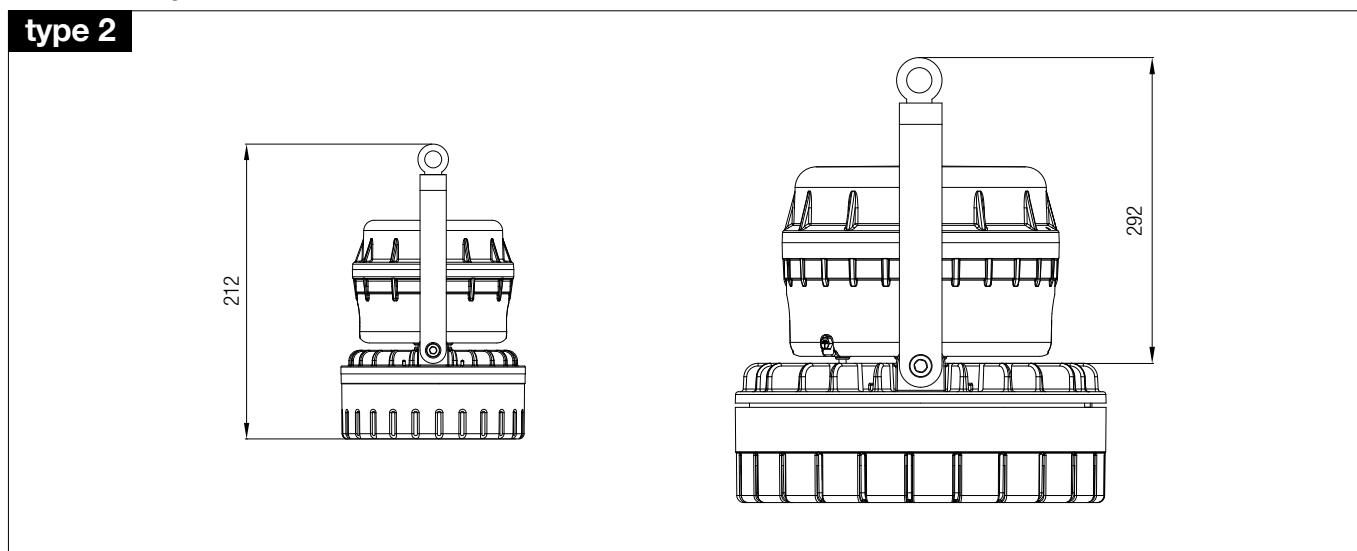
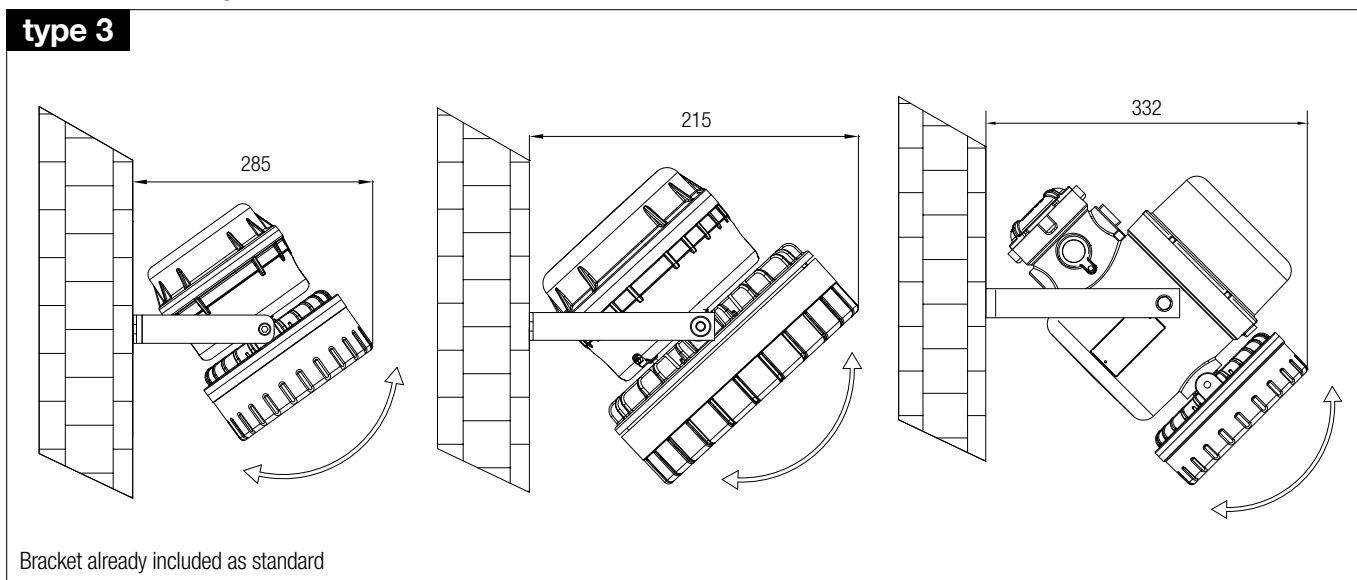
<b>EMERGENCY LED LIGHTING FIXTURES - POWER SUPPLY 220-240 VAC 50/60 HZ</b>							
CODE	POWER [W]	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	NUMBER OF LED	NOMINAL OUTPUT (lm)	LAMP TYPE	EMERGENCY UNIT
EVAC201LPE#00400	32W	T5 / T4	T85°C / T105°C	4	2120	POWER LED	autonomy: 180min

**Technical features**

CODE	A [mm]	B [mm]	ØC [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
EVAC201-32LED	376	227	176	252	4,50	1 x 1"	C1
EVAC201L-004	210	181				2 x 3/4"	A
EVAC201-48LED	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
EVAC501-64LED	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

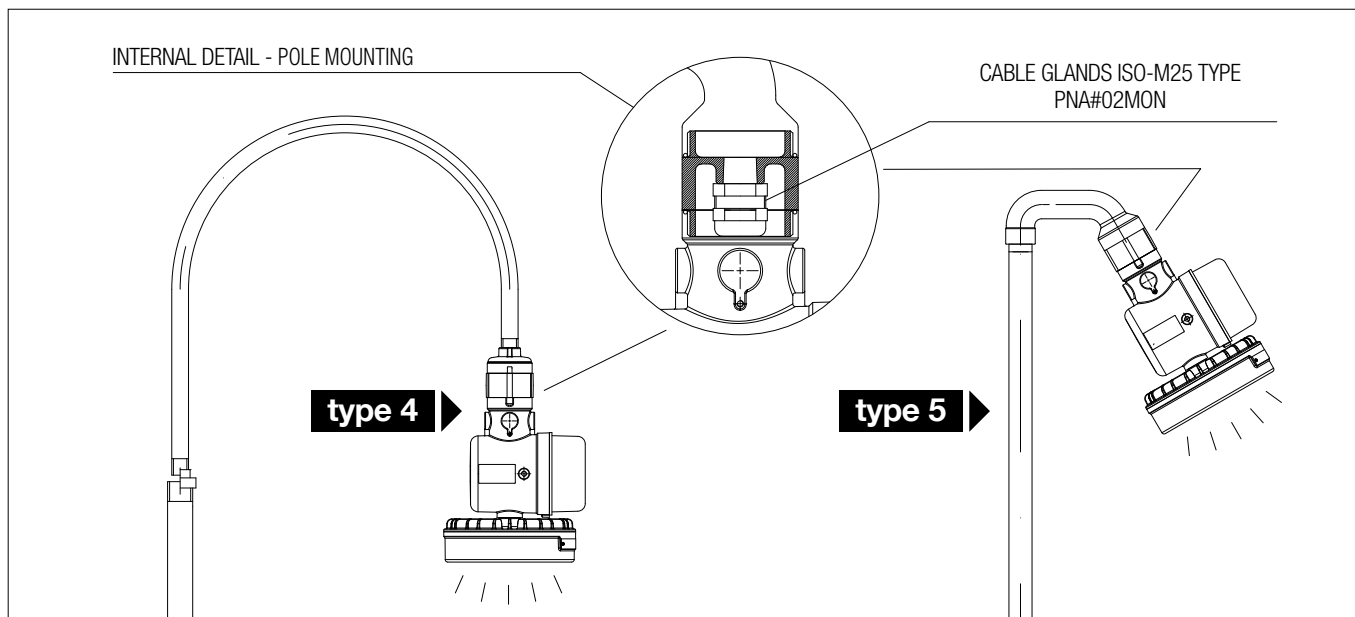
**Reference details**



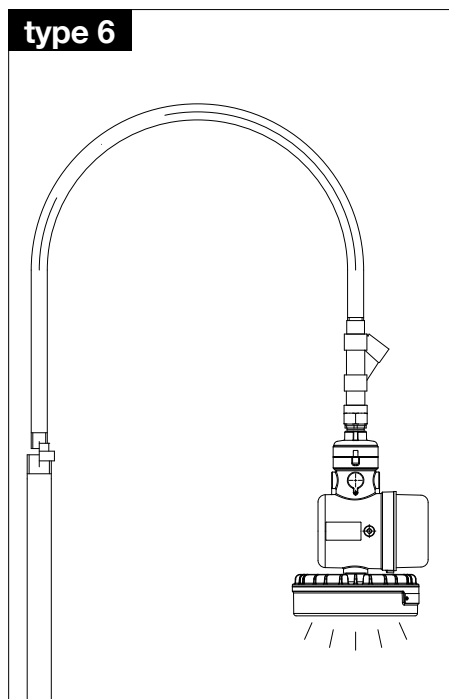
**Ceiling mounting****type 1****Pendant mounting****type 2****Wall/structure mounting****type 3**



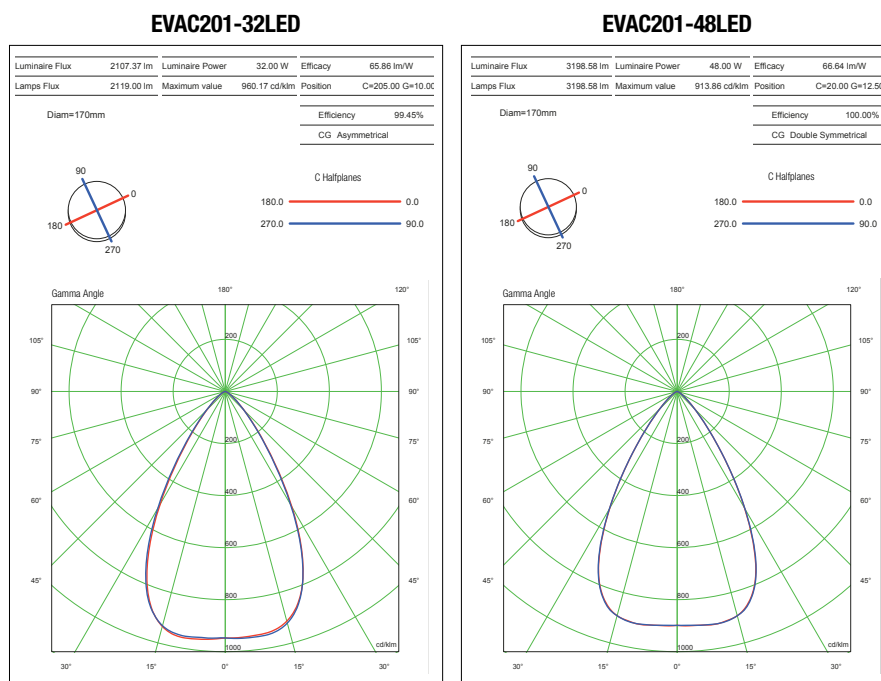
Pole Mounting – Without add sealing fitting



Pole Mounting – With add sealing fitting



EVAC-LED Polar diagrams – photometric data



EVAC-LED On request accessories

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0078*	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	STAINLESS STEEL
20302.0103	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	GALVANIZED STEEL
20302.0079*	45° WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0169	POLE MOUNTING KIT - WITHOUT SEALING FITTINGS	TYPE 4	ALUMINIUM
20303.0124 + 20301.0169	25° POLE MOUNTING KIT WITH BRACKET - WITHOUT SEALING FITTINGS	TYPE 5	ALUMINIUM
	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 0054X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 13.0075X INMETRO: CEPEL 14.2311X EAC: TC RU C-IT.BH02.B.00602 RINA: ELE18111CS_015 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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**

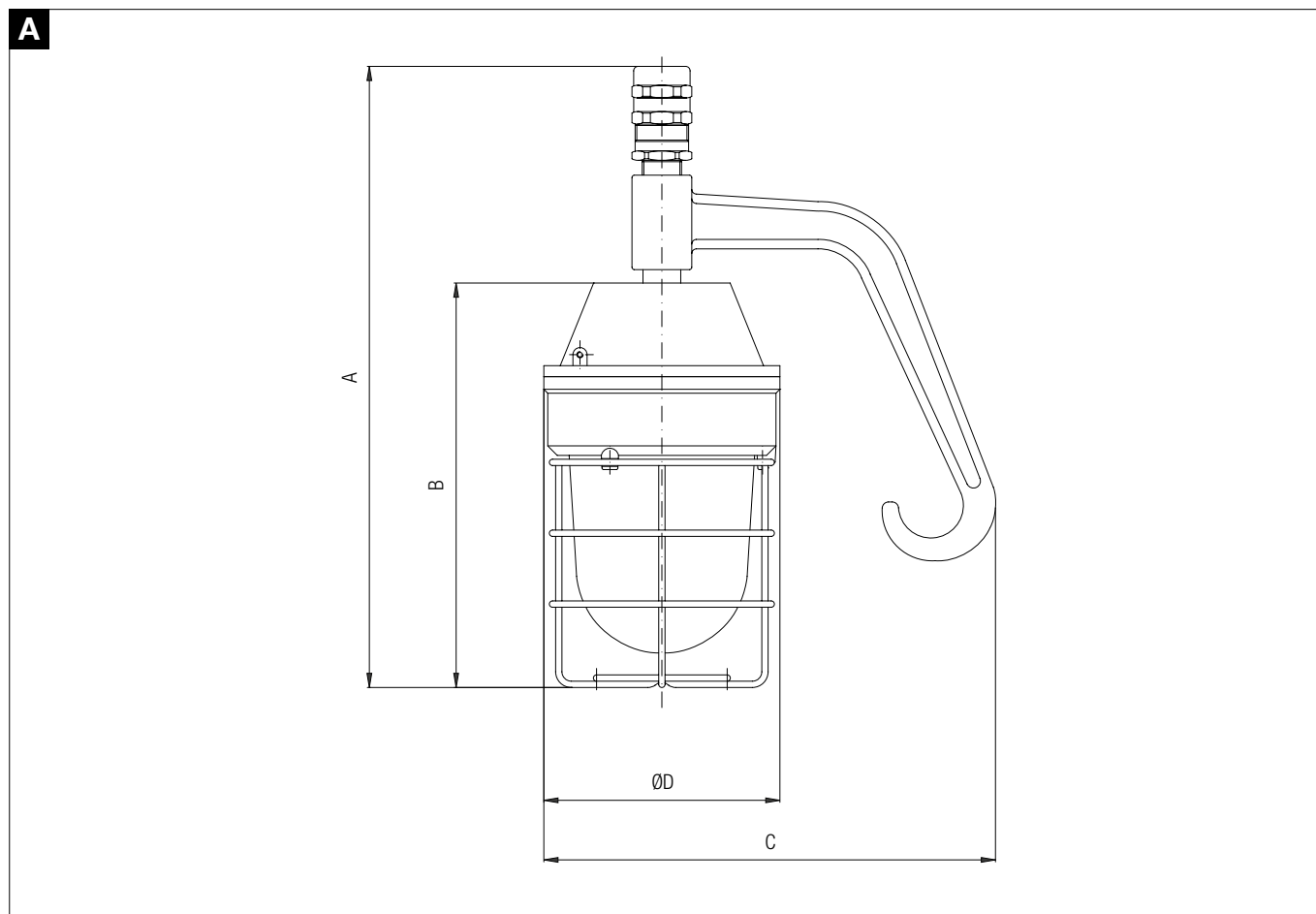
CODE	LAMP POWER	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS ( DUSTS )	LAMPHOLDER SIZE	CABLE ENTRY SIZE	DETAIL
<b>LIGHTING FIXTURE FOR INCANDESCENT* / LED / HALOGEN* / FLUORESCENT LAMP - POWER SUPPLY 230V-50Hz</b>						
EVP100	100 W	T4	T 135°C	E-27	CABLE GLAND 1/2" NPT	A

\*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 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 01 ATEX 0054X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 13.0075X INMETRO: CEPPEL 14.2311X EAC: TC RU C-IT.BH02.B.00602 RINA: ELE18111CS_015 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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	<b>flashing</b> obstruction light 1450 / 2000 cd intensity (over than 45mt distance)
low intensity	<b>steady</b> obstruction light 30 cd intensity (less than 45mt distance)
construction	single awl - twin awl (1 main + 1 spare) <b>in according to ICAO directive</b>


**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

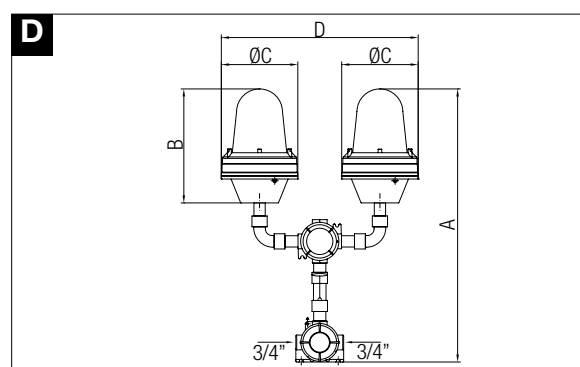
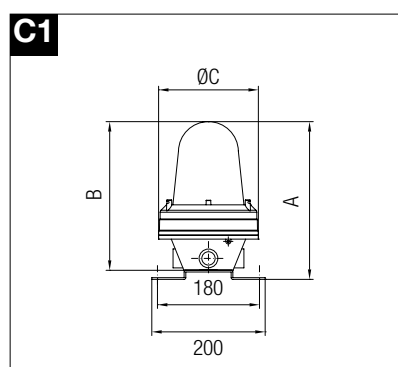
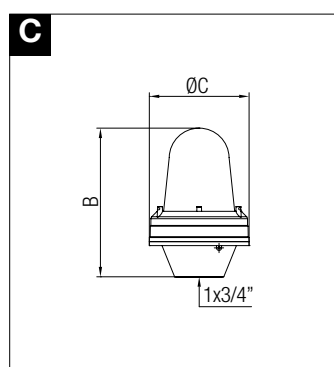
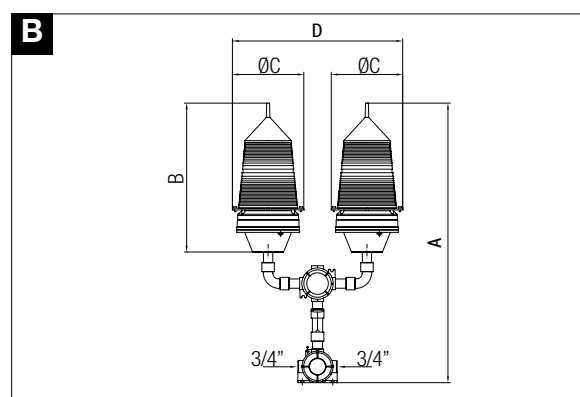
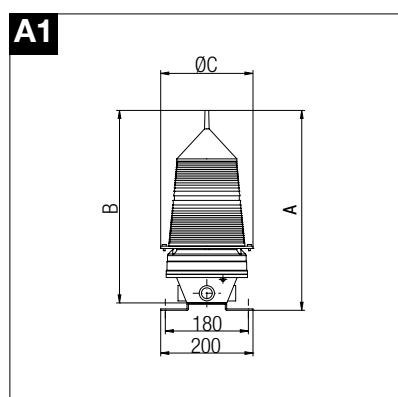
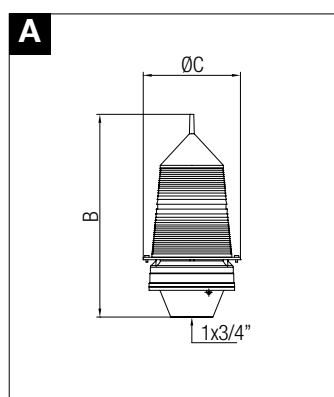
**Technical data**

CODE	LAMP TYPE	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS (DUSTS)	FLASHING [x/min.]	LAMPHOLDER	CABLE ENTRY SIZE	DETAIL
EVAC201-F	100W INCANDESCENT*	T4	T 135°C	-	E-27	1 x 3/4"	A
EVAC200-F	100W INCANDESCENT*	T4	T 135°C	-	E-27	2 x 3/4"	A-1
EVAC201-XF	2J XENOFASH	T6	T 85°C	65 ±10	E-27	1 x 3/4"	C
EVAC200-XF	2J XENOFASH	T6	T 85°C	65 ±10	E-27	2 x 3/4"	C-1
EVAC201-F2R	2 x 100W INCANDESCENT*	T4	T 135°C	-	E-27	2 x 3/4"	B
EVAC201-XF2R	2 x 2J XENOFASH	T6	T 85°C	65 ±10	E-27	2 x 3/4"	D
EVAC301-25R	40W INCANDESCENT*	T4	T 135°C	-	E-27	1 x 3/4"	C
EVAC300-25R	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
EVAC201-F	-	415	200	-	4,50	1 x 3/4"	A
EVAC200-F	430	415	200	-	4,50	2 x 3/4"	A-1
EVAC201-XF	-	260	176	-	4,50	1 x 3/4"	C
EVAC200-XF	280	260	176	-	4,00	2 x 3/4"	C-1
EVAC201-F2R	790	415	200	475	9,00	2 x 3/4"	B
EVAC201-XF2R	630	260	176	453	8,00	2 x 3/4"	D
EVAC301-25R	345	322	197	-	7,00	1 x 3/4"	C
EVAC300-25R	-	322	197	-	7,00	2 x 3/4"	C-1



**On request accessories**

CODE	DESCRIPTION	MATERIAL
20302.0075	EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD	GALVANIZED STEEL
20302.0076	EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD	GALVANIZED STEEL
20302.0038	EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD	STAINLESS STEEL
20302.0039	EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD	STAINLESS STEEL
20302.0078	STRUCTURE MOUNTING KIT C/W HARDWARE	STAINLESS STEEL
1030.00055	RED FRESNEL LEN Ø155mm	ACRYLIC
1030.00186	ORANGE FRESNEL LEN Ø155mm	ACRYLIC
1030.00211	GREEN FRESNEL LEN Ø155mm	ACRYLIC
1030.00213	WHITE FRESNEL LEN Ø155mm	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 0054X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 13.0075X

#### INTERNATIONAL REGULATIONS COMPLIANCY FOR VISUAL AIDS

INMETRO: CEPEL 14.2311X
EAC: TC RU C-IT.BH02.B.00602
RINA: ELE18111CS_015
RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280
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°
Efficency	> 91% - pfc factor 0,99
Expetancy 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
<b>LOW INTENSITY OBSTRUCTION WARNING LIGHTS (LIOL)*</b>							
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
LIOL-A-D	> 10 cd x 2	RED STEADY	Ex-d	T6	T85°C	1 x 3/4"	B
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
LIOL-B-D	> 32 cd x 2	RED STEADY	Ex-d	T6	T85°C	1 x 3/4"	B

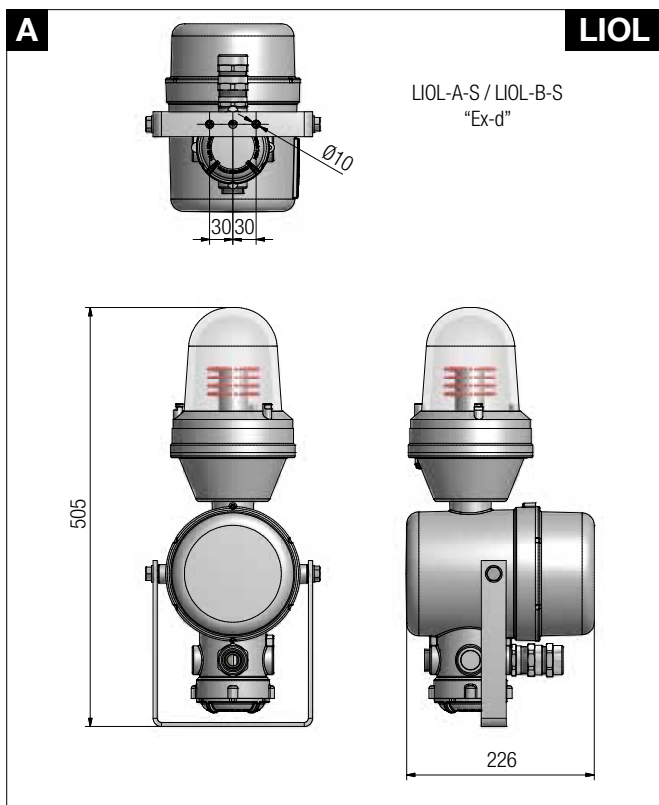
Note: S= single AWL - D= twin AWL  
 \*Incandescent/halogen lamp not included.

<b>MEDIUM INTENSITY OBSTRUCTION WARNING LIGHTS (MIOL)*</b>							
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
MIOL-A-D	= 20.000 cd x 2	WHITE FLASHING	Ex-d	T5	T100°C	1 x 3/4"	D
			weatherproof	-	-	E	
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
MIOL-B-D	= 2.000 cd x 2	RED FLASHING	Ex-d	T5	T100°C	1 x 3/4"	D
			weatherproof	-	-	E	
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
MIOL-C-D	= 2.000 cd x 2	RED STEADY	Ex-d	T5	T100°C	1 x 3/4"	D
			weatherproof	-	-	E	

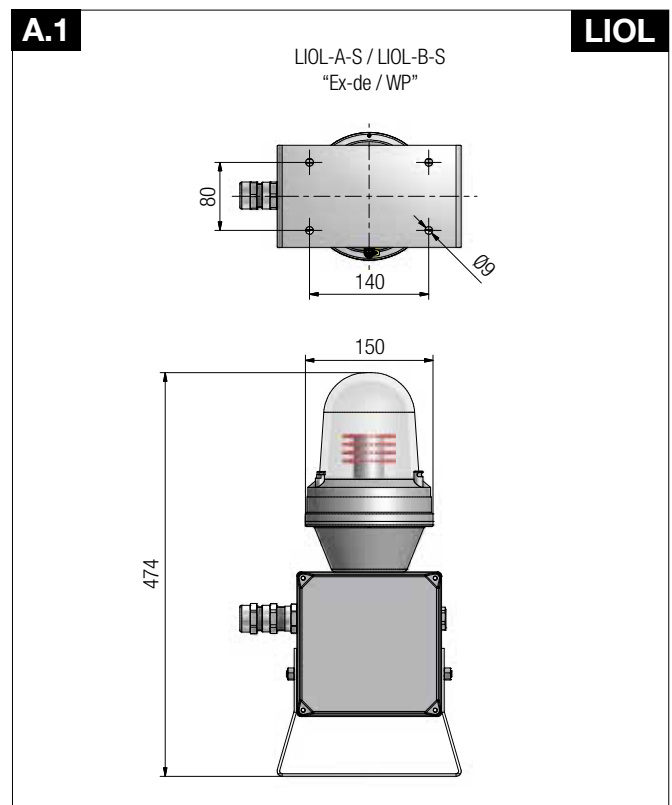
Note: S= single AWL - D= twin AWL  
 \*Incandescent/halogen lamp not included.

Technical features

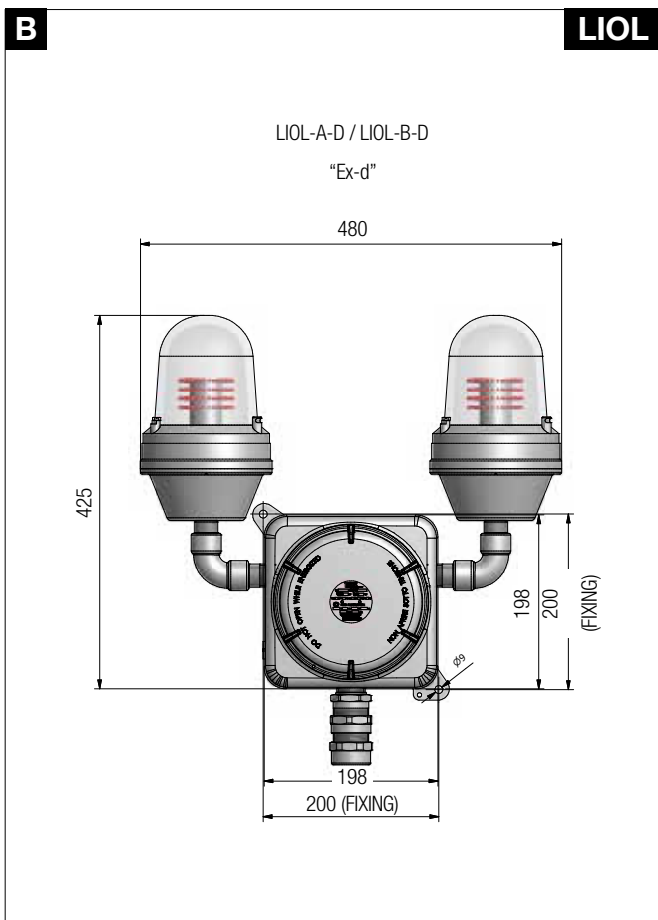
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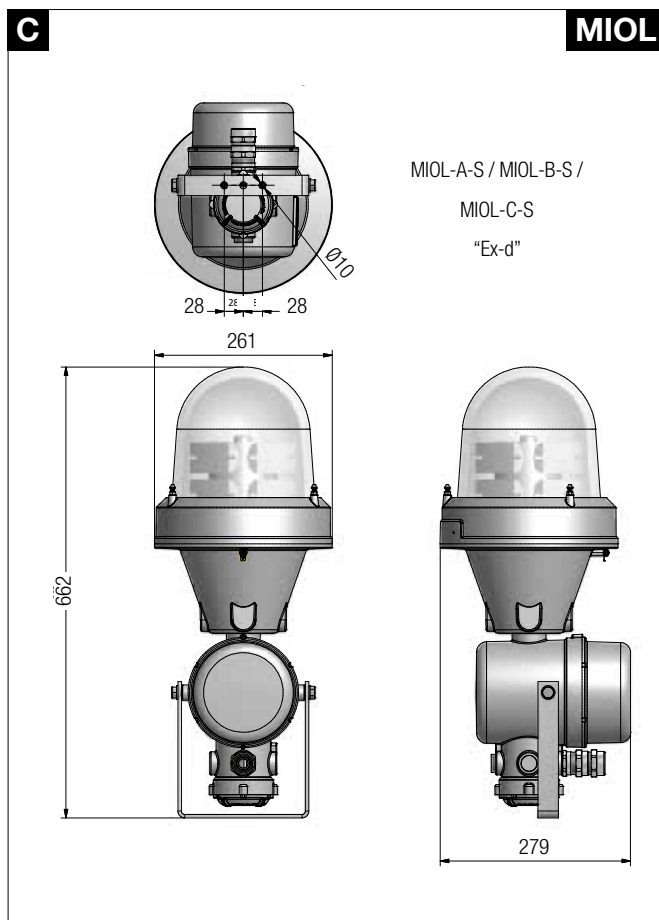
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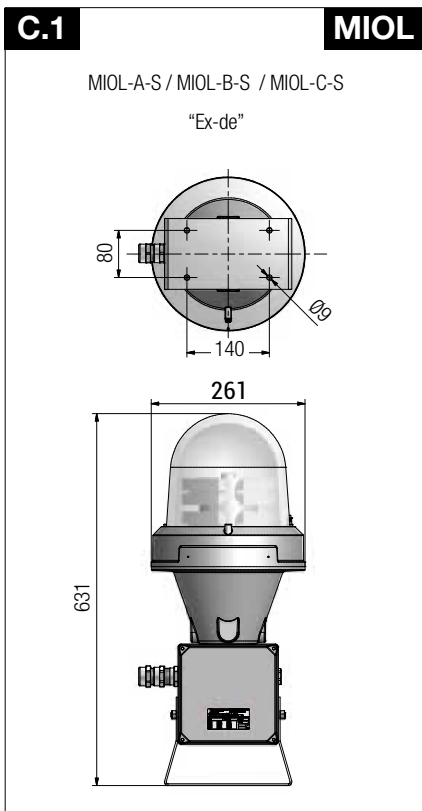
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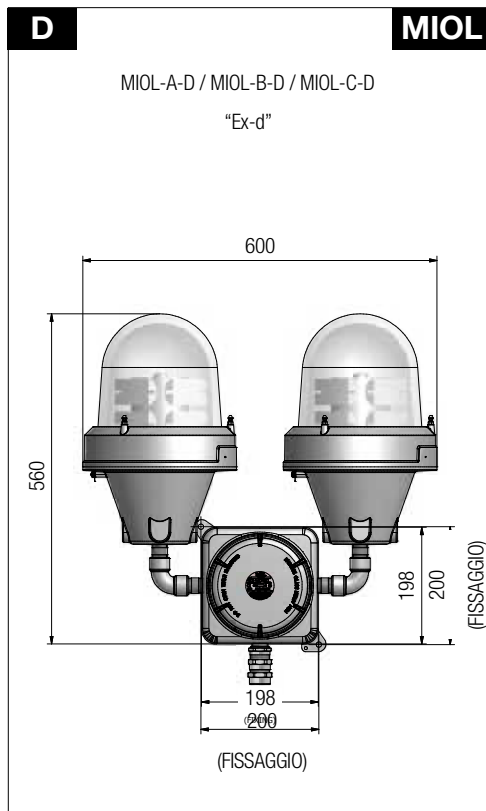
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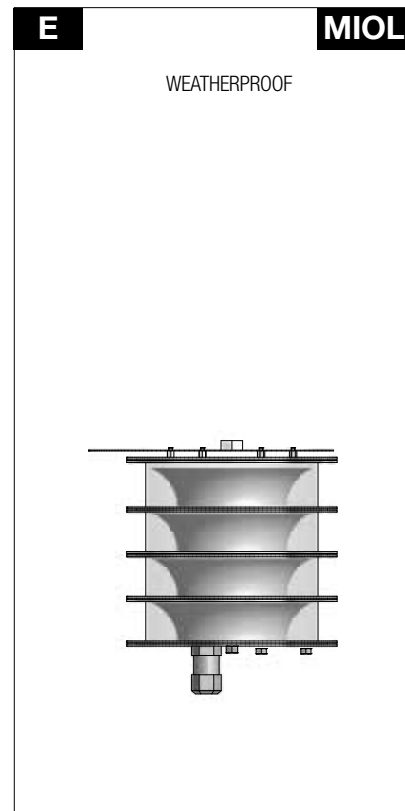
Reference details



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)

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

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- 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)

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- 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)

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

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- 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

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- 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)

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- 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

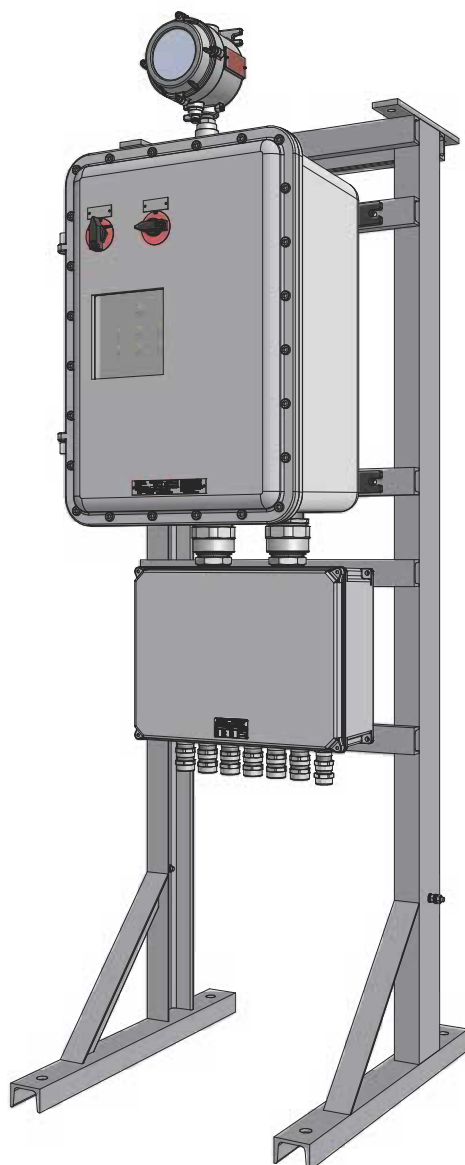
(ICAO: Aerodromes - Annex 14 - Vol. 1 - Ch. 6.3.33)

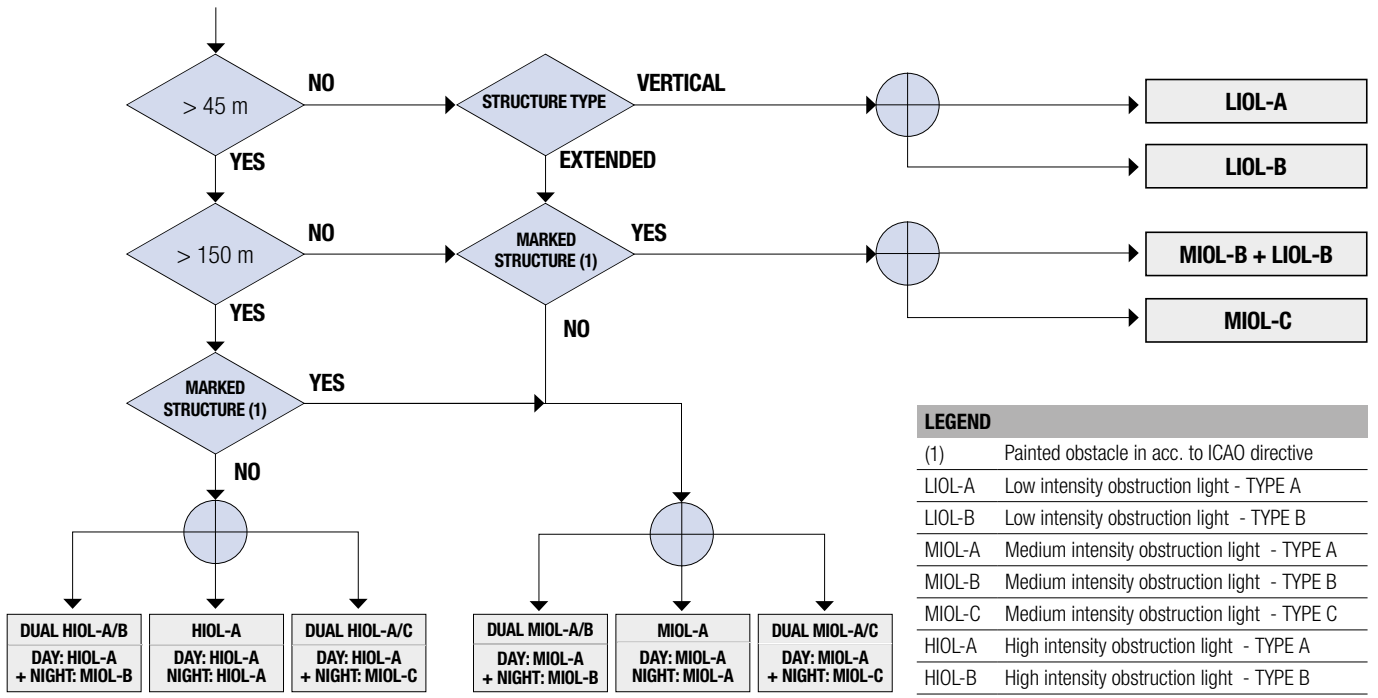
**HIOL-A** High Intensity Obstacle Lights Type-A, located on an obstacle, shall be flash simultaneously

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

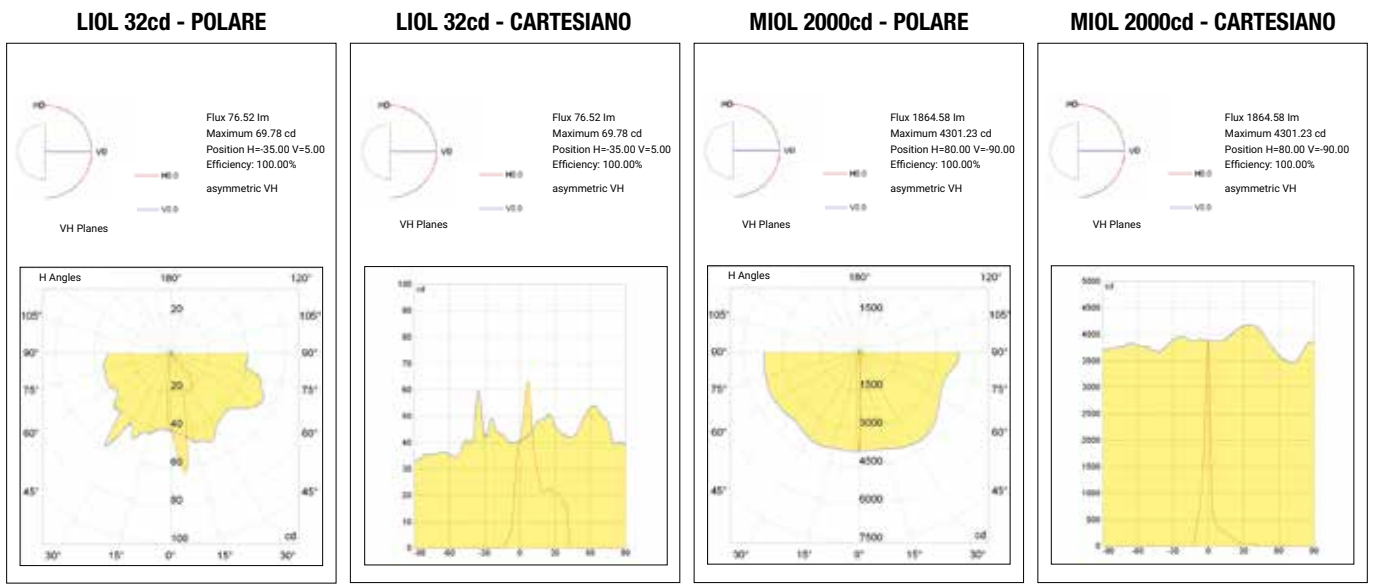
**HIOL-B** High Intensity Obstacle Lights Type-B, indicating the presence of tower supporting overhead wires, an others.. shall be flash sequentially

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

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



MIOL - LOL 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 0018
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 15.0003X INMETRO: CEPEL 15.2363X EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C) RINA: ELE18111CS_014 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

### 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 $\rho \geq 0,95$ )
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
<b>LIGHTING FIXTURE FOR HALOGEN LAMP* - POWER SUPPLY 230V-50Hz</b>						
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.

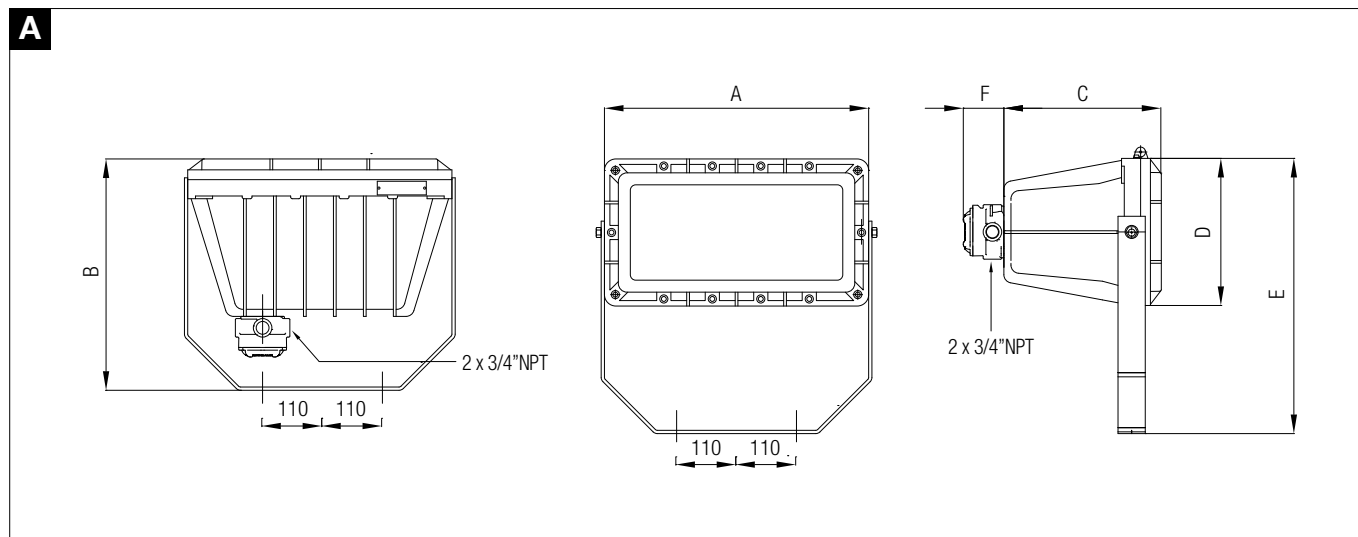
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz</b>						
SFD150HPNA	150 W	T3	T 200°C	E-40	2 x 3/4" NPT	A
SFDE150HPNA					2 x ISO-M25	B
SFD250HPNA	250 W	T3 / T2	T 200°C / T 210°C	E-40	2 x 3/4" NPT	A
SFDE250HPNA					2 x ISO-M25	B
SFD400HPNA	400 W	T3 / T2	T 200°C / T 210°C / T 220°C	E-40	2 x 3/4" NPT	A
SFDE400HPNA					2 x ISO-M25	B
SFDE600HPNA	600 W	T3	T 200°C	E-40	2 x 3/4" NPT	C

<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz</b>						
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

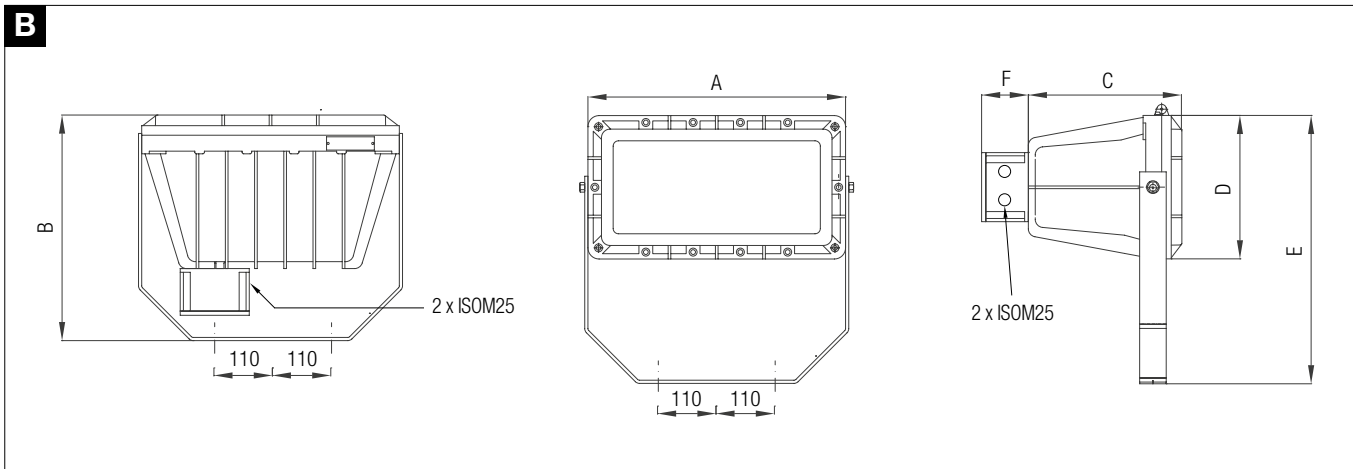
**Technical features**

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
SFDE600HPNA	485	590	290	270	420	240	30,00	2 x 3/4" NPT	C

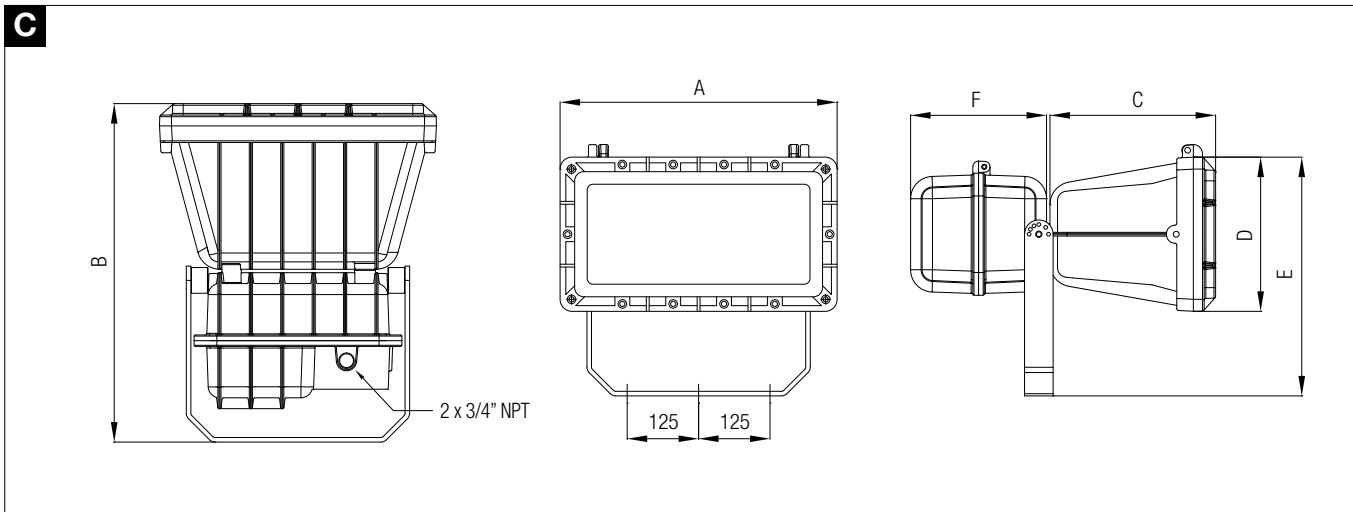
**Reference details**



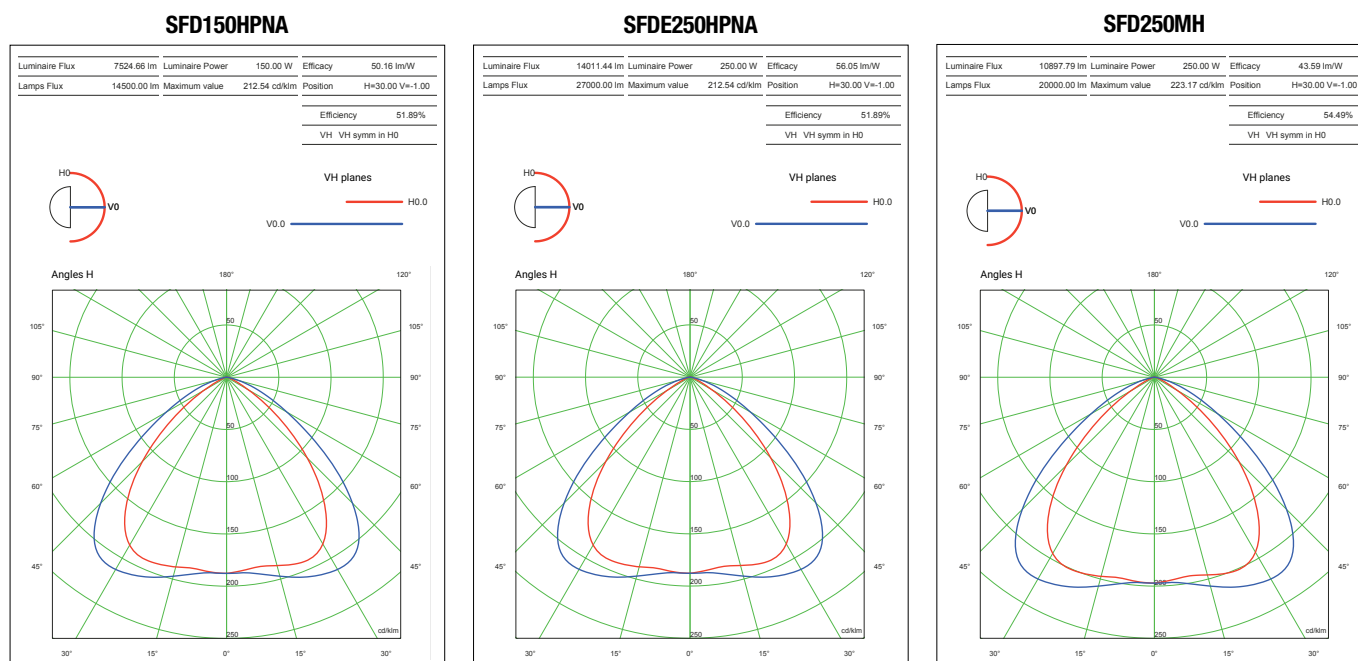
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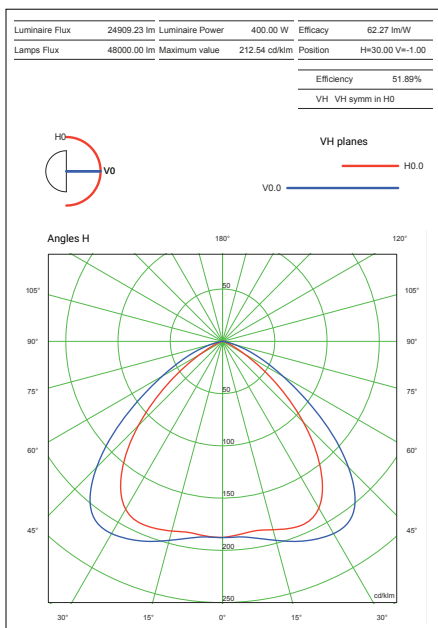
Reference details



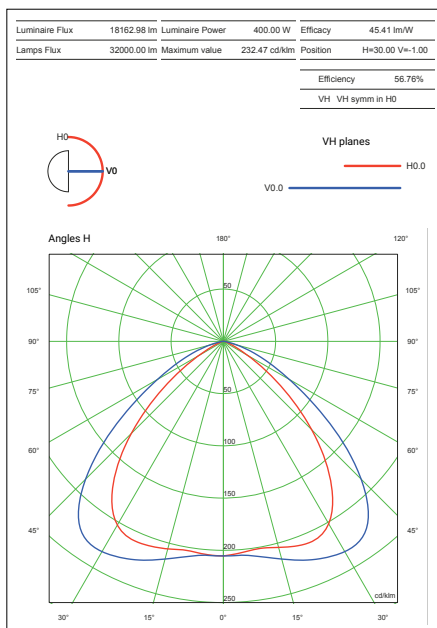
SFD-SFDE Polar diagrams – photometric data



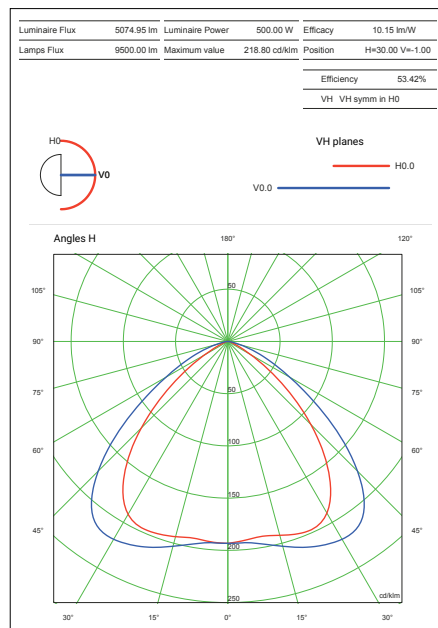
**SFD400HPNA**



**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 01 ATEX 0018
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 15.0003X INMETRO: CEPEL 15.2363X EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C) RINA: ELE18111CS_014 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

### 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



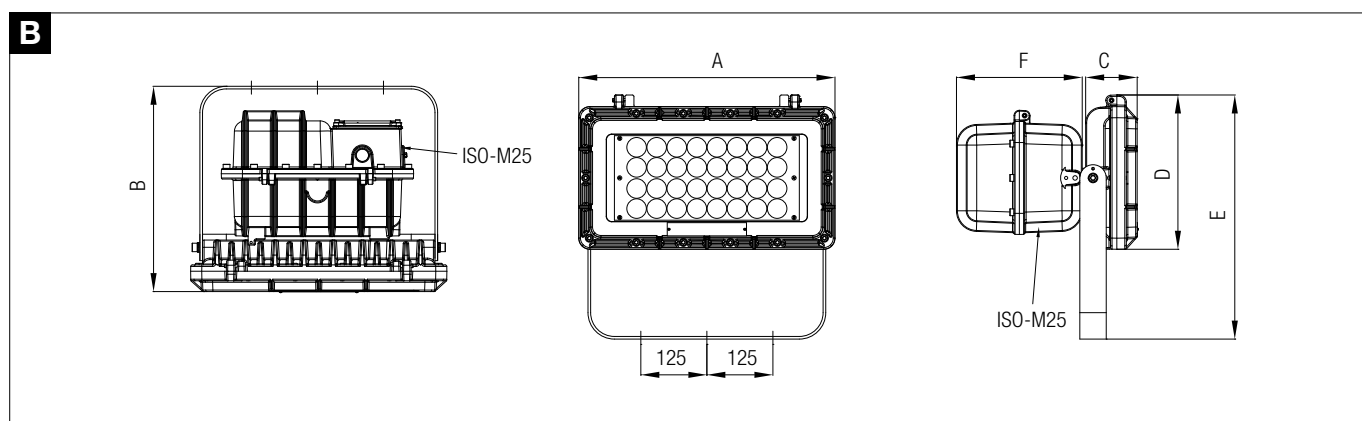
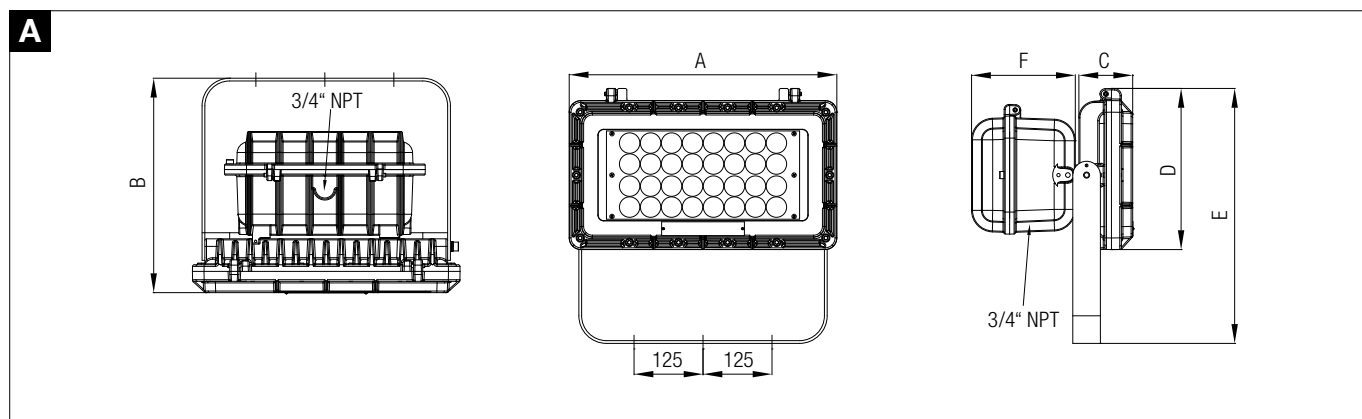
**Technical data**

CODE	POWER LAMP	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	NOMINAL OUTPUT (lm)	LAMP TYPE	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 120-277 Vac - 50/60 Hz</b>							
SFD160-LED	160 W	T6 (Ta = -20°C / +40°C)	T 85°C	12705	POWER LED	2 x 3/4" NPT	A
SFDE160-LED		T5 (Ta = -20°C / +50°C)	T 100°C			2 x ISO-M25	B
SFD192-LED	192W	T4 (Ta = -20°C / +60°C)	T135°C	17680		2 x 3/4" NPT	A
SFDE192-LED						2 x ISO-M25	B
SFD224-LED	224 W	T6 (Ta = -20°C / +40°C)	T 85°C	19360		2 x 3/4" NPT	A
SFDE224-LED		T5 (Ta = -20°C / +50°C)	T 100°C			2 x ISO-M25	B
		T4 (Ta = -20°C / +60°C)	T 135°C				

**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
SFD160-LED SFD192-LED SFD224-LED	485	390	100	292	462	190	25,00	2 x 3/4" NPT	A
SFDE160-LED SFDE192-LED SFDE224-LED	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 0004X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20°C ÷ +52°C
OTHER AVAILABLE CERTIFICATES	EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C)  IRUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

### 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:

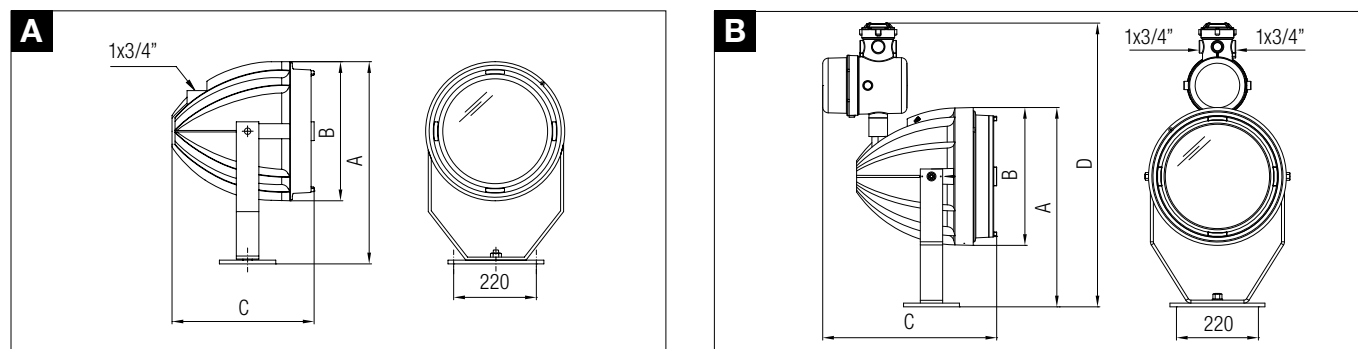
- External painting colour on request
- Control gear with voltage supply different than standard
- Threaded cable entry different than standard

Technical data

CODE	LAMP	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS ( DUSTS )	LAMPHOLDER SIZE	CABLE ENTRY SIZE	DETAIL
<b>LIGHTING FIXTURE FOR INCANDESCENT LAMP* - POWER SUPPLY 230V-50Hz</b>						
RCDE500	500 W	T2	T230°C	E-40	1x3/4"	A
RCDE500	300 W	T3	T160°C	E-40	1x3/4"	A
*lamp not included.						
<b>LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V 50Hz</b>						
RCDE500	500 W	T3 / T2	T200°C / T230°C	E-40	1x3/4"	A
<b>LIGHTING FIXTURE FOR BLENDED LIGHT LAMP - POWER SUPPLY 230V 50Hz</b>						
RCDE250HG	250 W	T3	T160°C	E-40	2x3/4"	B
RCDE400HG	400 W	T3	T200°C	E-40	2x3/4"	B
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz</b>						
RCDE250HPNA	250 W	T4 / T3	T135°C / T160°C	E-40	2x3/4"	B
RCDE400HPNA	400 W	T3	T200°C	E-40	2x3/4"	B
<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz</b>						
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

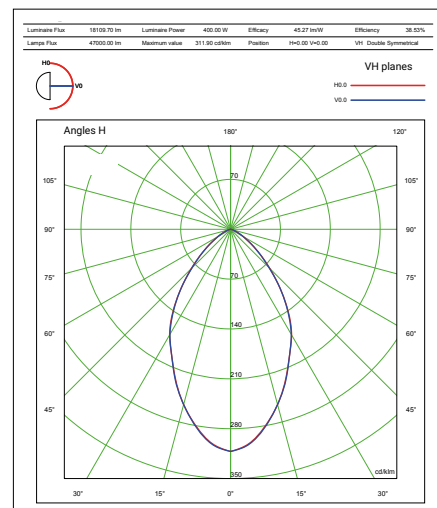
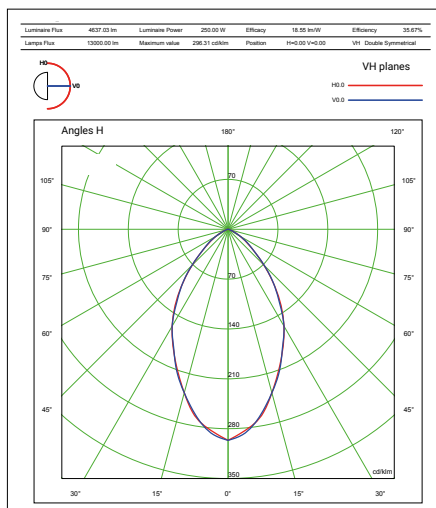
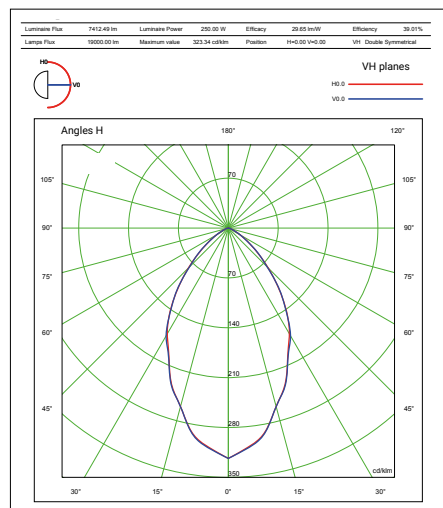
CODE	A [mm]	B [mm]	C [mm]	D [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
RCDE500	535	370	376	-	21,00	1 x 3/4"	A
RCDE250HG	535	370	406	700	29,00	2 x 3/4"	B
RCDE400HG	535	370	406	700	29,50	2 x 3/4"	B
RCDE250HPNA	535	370	406	700	31,00	2 x 3/4"	B
RCDE400HPNA	535	370	406	700	31,50	2 x 3/4"	B
RCDE250MH	535	370	406	700	26,50	2 x 3/4"	B
RCDE400MH	535	370	406	700	31,50	2 x 3/4"	B



RCDE250MH

RCDE250HG

RCDE400HPNA



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 17ATEX0046X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 17.0038X EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C)

**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

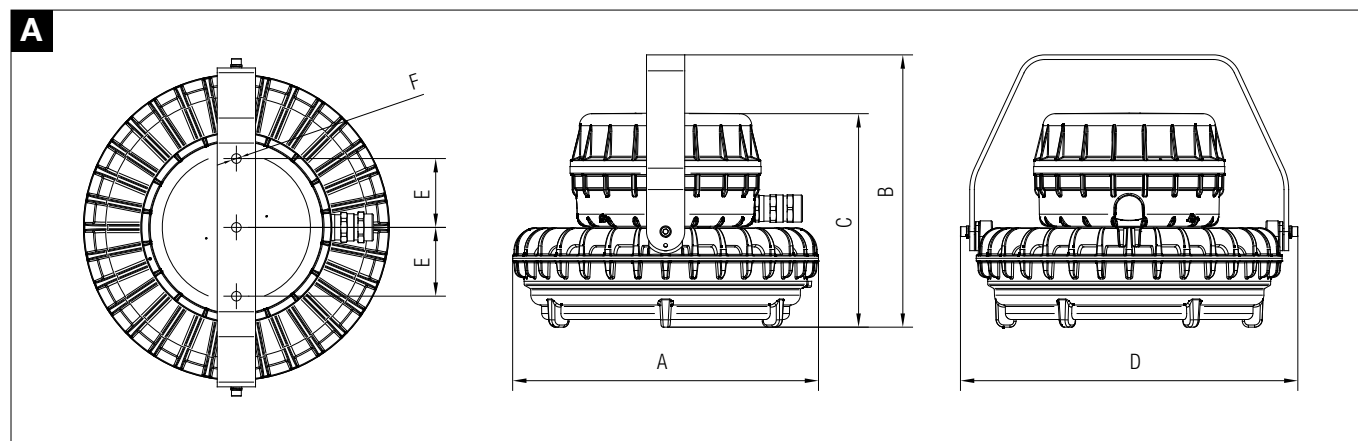
**Technical data**

CODE	LAMP	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS ( DUSTS )	NOMINAL OUTPUT (lm)	CABLE ENTRY SIZE	DETAIL
<b>LIGHTING FIXTURE FOR LED LAMP - POWER SUPPLY (100±240Vac - 50/60 Hz) - (127±250Vdc)</b>						
RCDE160LED	160 W	T5 (Ta +40°C) / T4 (Ta +60°C)	T100°C / T135°C	12135 lm	2 x 3/4" NPT	A
RCDE192LED	192 W	T5 (Ta +40°C) / T4 (Ta +60°C)	T100°C / T135°C	14563 lm	2 x 3/4" NPT	A

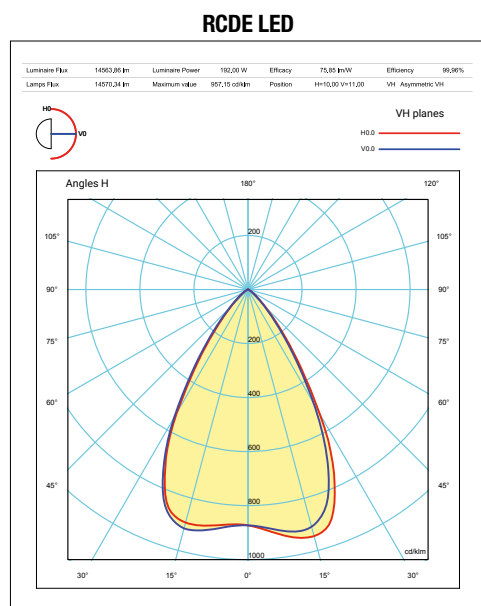
**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
RCDE160LED	400	356	279	441	90	Ø12,5	21,00	2 x 3/4" NPT	A
RCDE192LED							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	<b>EVO</b> ⊗ II 2 G Ex d IIC T6-T5-T3 Gb ⊗ II 2 D Ex tb IIIC T85°C-T100°C-T200°C Db
	<b>EVT</b> ⊗ II 2 G Ex d IIC T6-T4-T3 Gb ⊗ II 2 D Ex tb IIIC T85°C-T135°C-T150°C Db
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 0039X (EVO) INERIS 01 ATEX 0040 (EVT)
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C (EVO - EVT)
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 12.0018X (EVO) IECEX INE 12.0027X (EVT)  INMETRO: CEPEL 12.2157 (EVO) CEPEL 12.2155 (EVT)  EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C)  RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

### Mechanical characteristics

Body	marine grade copper free aluminium
Diffuser	borosilicate frontal glass (EVT)
Diffuser	tempered frontal glass (EVO)
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**

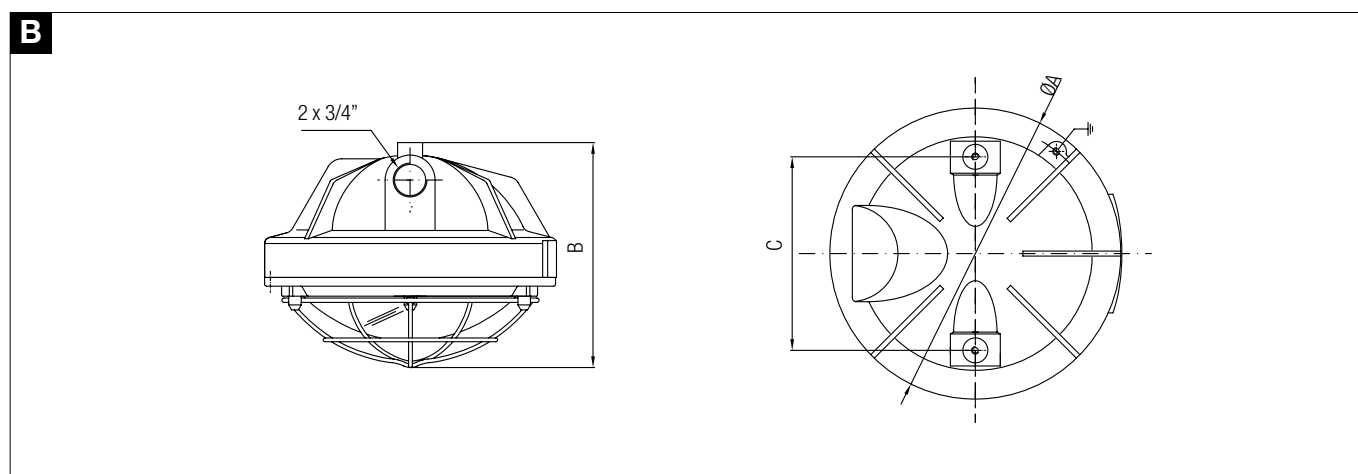
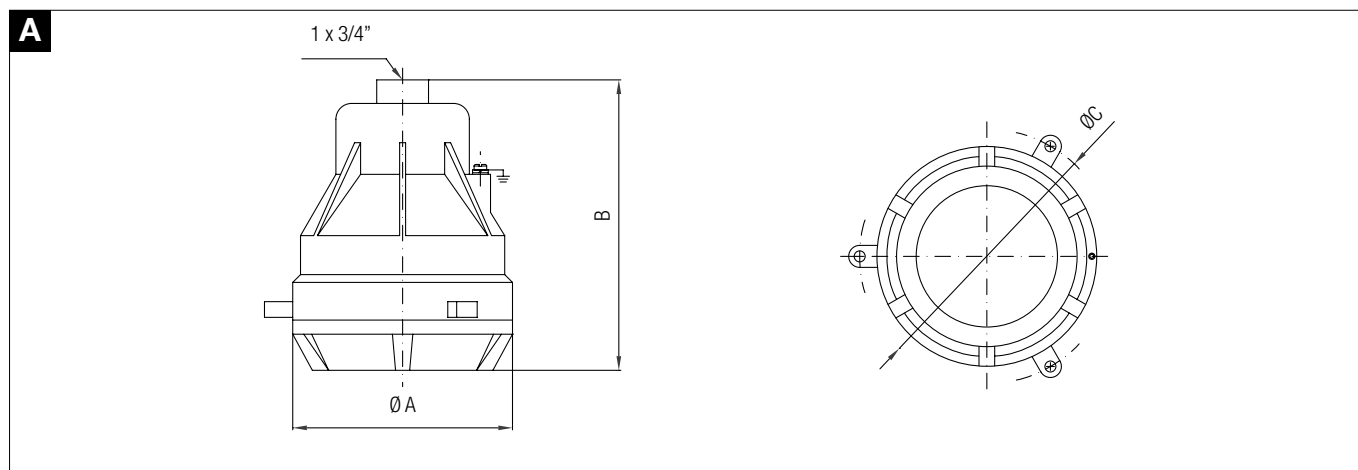
CODE	LAMP TYPE and POWER	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS ( DUSTS )	LAMPHOLDER SIZE	CABLE ENTRY SIZE	DETAIL
<b>LIGHTING FIXTURE DIRECTLY SUPPLIED - POWER SUPPLY 220/230V-50Hz</b>						
EVO100	100W INCANDESCENT*	T3	T 200°C	E-27	1x3/4"	A
	105W HALOGEN*	T3	T 200°C	E-27	1x3/4"	A
	12W LED	T6 / T5	T 85°C / T 100°C	E-27	1x3/4"	A
EVT100	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

\*lamp not included.

**Technical featurese**

CODE	A [mm]	B [mm]	C [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
EVO100	Ø140	185	Ø162	2,00	1 x 3/4"	A
EVT100	Ø233	180	155	4,00	2 x 3/4"	B

**Reference details**



REMARK:

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**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)	<ul style="list-style-type: none"> <li>⊗ Ex db IIB + H2 T6... T5 Gb</li> <li>⊗ Ex tb IIIC T85°C... T100°C Db</li> </ul>
	(led)	<ul style="list-style-type: none"> <li>⊗ Ex db op is IIB + H2 T6... T4 Gb</li> <li>⊗ Ex op is tb IIIC T85°C... T135°C Db</li> </ul>
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 0024X	
PROTECTION DEGREE	IP66	
AMBIENT TEMPERATURE	-60°C ÷ +80°C	
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 15_0030X INMETRO: CEPEL 15.2385X EAC: TC RU C-IT.BH02.B.00602 (-60°C ÷ +60°C) RINA: ELE18111CS_014 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280	

### 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-3 (Always On - Maintained):** 8W fluorescent lamp and electronic ballast 230V/240V AC

**EXL08E-3 (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

**EXL08LE-SA (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)



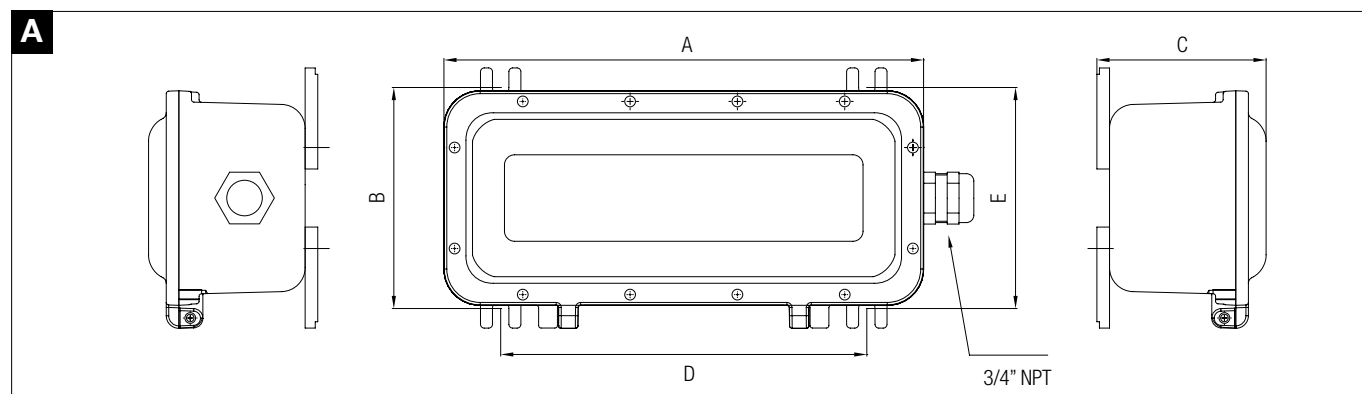
**Technical data**

CODE	POWER SUPPLY	LAMP	mA (LED)	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	EMERGENCY UNIT	AUTONOMY
<b>LIGHTING FIXTURES FOR FLUORESCENT TUBE LAMPS</b>							
EXL08	230 ÷ 240V AC	8 W	-	T6 - T5	T 85°C / T100°C	no	-
EXL08E-3	230 ÷ 240V AC	8 W	-	T6 - T5	T 85°C / T100°C	3,6V - 4A/h	180 min.
EXL08ESA-3	230 ÷ 240V AC	8 W	-	T6 - T5	T 85°C / T100°C	3,6V - 4A/h	180 min.
<b>LIGHTING FIXTURES FOR HIGH EFFICIENCY LED LAMPS</b>							
EXL08L	120 ÷ 240V AC	1W x 4	350	T6 - T5	T 85°C / T100°C	no	-
EXL08LE	100 ÷ 240V AC	1W x 4	350	T6 - T5	T 85°C / T100°C	6V - 4A/h	180 min.
EXL208L	120 ÷ 240V AC	(1W x 4) x 2	350	T6 - T5	T 85°C / T100°C	no	-
EXL08LE-SA	100 ÷ 240V AC	1W x 4	350	T6 - T5	T 85°C / T100°C	6V - 4A/h	180 min.

**Technical features**

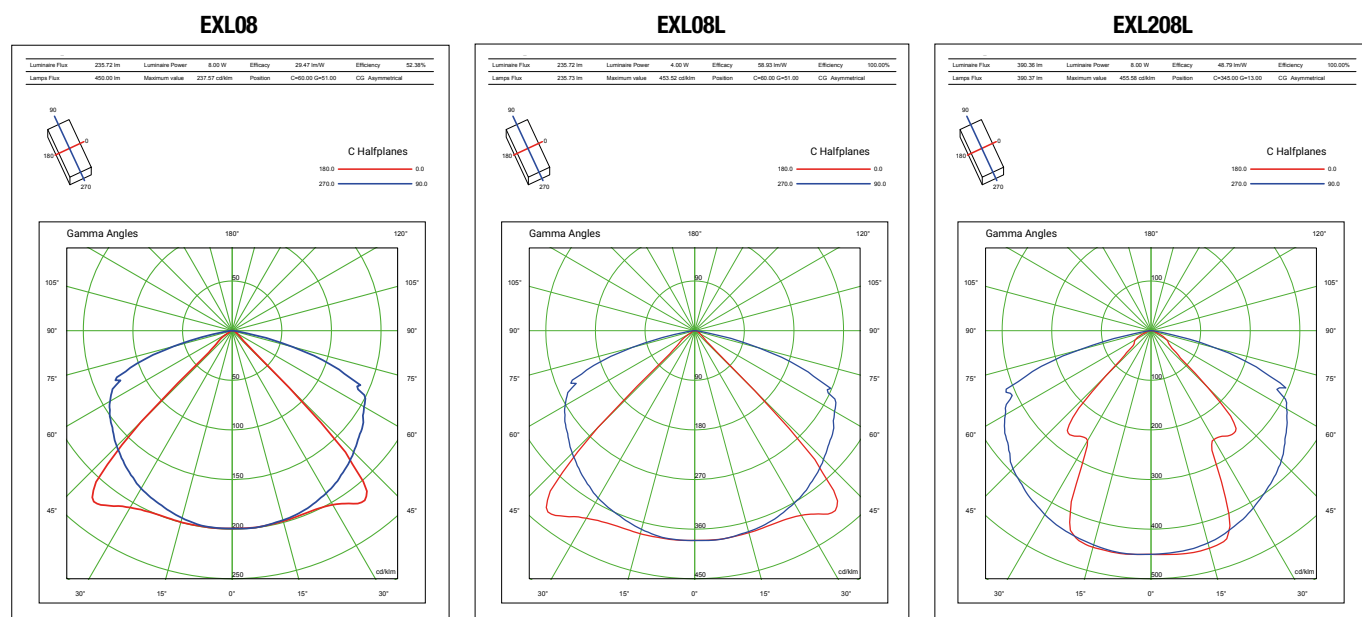
CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	WIGHT [kg]	CABLE ENTRY	DETAIL
EXL08...	380	170	125	270	156	8,00	1 x 3/4"	A

**Reference details**



**On request accessories**

CODE	DESCRIPTION	MATERIAL
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	⊗ 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 IIC T85°C Db
	⊗ Ex op is tb IIC 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: CEPEL 13.2291X
	EAC: TC-RU C-IT.Г Ё08.B.01342 (-45°C ÷ +60°C)
	RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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 (Ex-d)
	ISO-M25 size threaded (Ex-de)

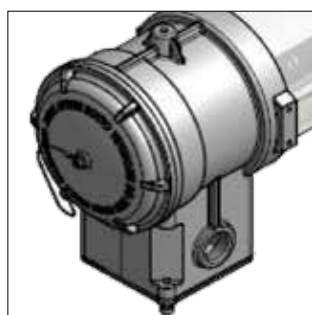
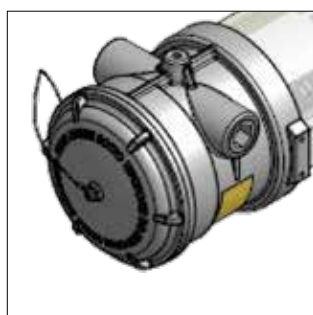
**Electrical characteristics**

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)

**Functional characteristics**

<b>EVFG** *8 (Network only)</b>	8W fluorescent lamp and electronic ballast 220V÷240Vac 50/60Hz 220V÷240Vdc
<b>EVFG** *8ESA-3 (Always On - Maintained)</b>	8W fluorescent lamp and electronic ballast 220V/240V AC
<b>EVFG** *8E-3 (Emergency only - Not Maintained)</b>	8W fluorescent lamp and electronic ballast 220V/240V AC
<b>EVFG** *8L (Network only)</b>	with high brightness LEDs (350mA - 4W) supply from 100V up to 240V AC
<b>EVFG** *8LE-SA (Always On - Maintained)</b>	with high brightness LEDs (350mA - 4W) supply from 110V up to 240V AC with charge status monitor LED system (GREEN: battery under charging)
<b>EVFG** *8LE (Emergency only - Not maintained)</b>	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
<b>LIGHTING FIXTURES FOR FLUORESCENT TUBE LAMPS</b>							
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	180 min.
EVFG**18ESA-3	220 ÷ 240V AC	8 W x 1	-	T6	T 85°C	3,6V - 4A/h	180 min.
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	180 min.

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

<b>LIGHTING FIXTURES FOR HIGH EFFICIENCY LED LAMPS</b>							
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	180 min.
EVFG**18LE-SA	110 ÷ 240V AC	1W x 4	350	T6	T 85°C	6V - 2,6A/h	180 min.
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	180 min.

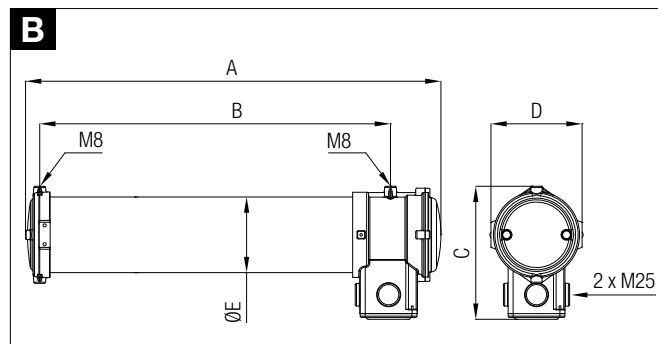
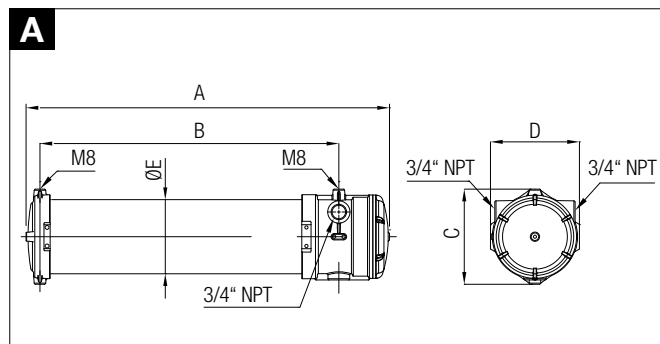
\*\* : with "d" for Exd version (Ex. EVFGd18) - without "d" for Exde version (Ex. EVFG28)

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 12 ATEX 3050X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX LCIE 12.0019X INMETRO: CEPPEL 15.2405X EAC: TC RU C-IT.BH02.B.00602 (-40°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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	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
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 96...254V AC 50/60Hz</b>								
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

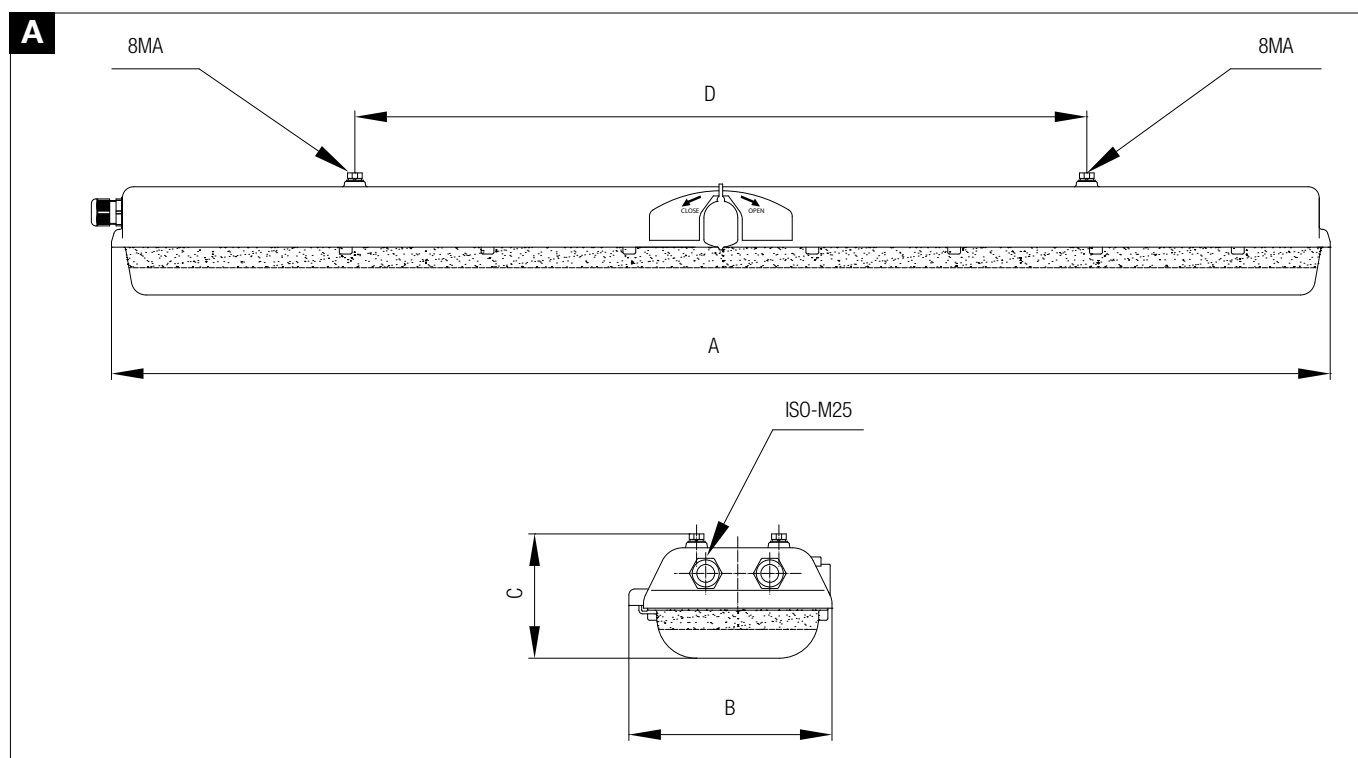
<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 230/240V AC 50/60Hz</b>								
AVCE218	2 x 18W	T4	T 80°C	G13	4 x ISO-M25	7.2 V - 6Ah	120 min	A
AVCE236	2 x 36W	T4	T 80°C	G13	4 x ISO-M25	7.2 V - 6Ah	120 min	A

**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

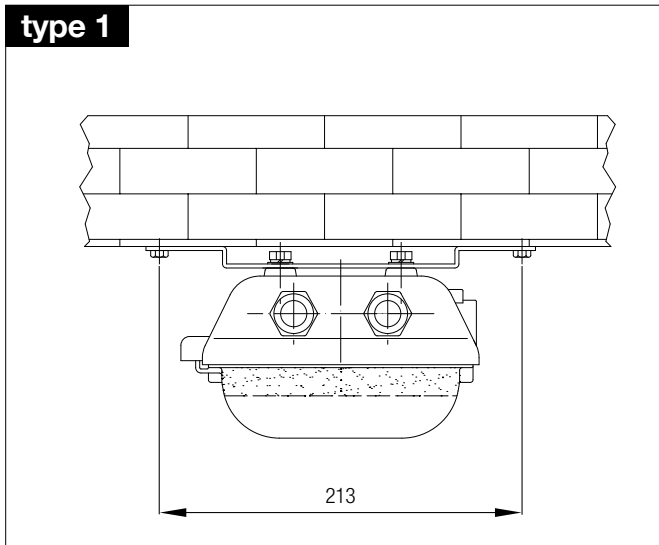
CODE	A [mm]	B [mm]	C [mm]	D [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
AVCE218	705	222	134	450	9,5	4 x ISO-M25	A
AVCE236	1335	222	134	800	13,5	4 x ISO-M25	A

**Reference details**



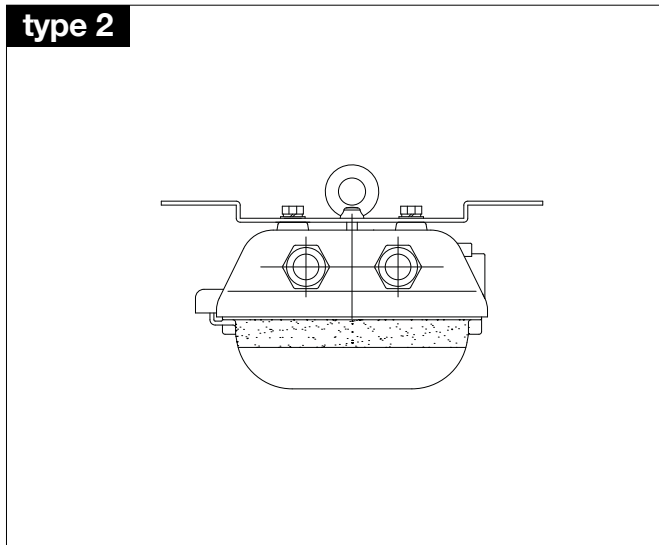
Ceiling mounting

type 1



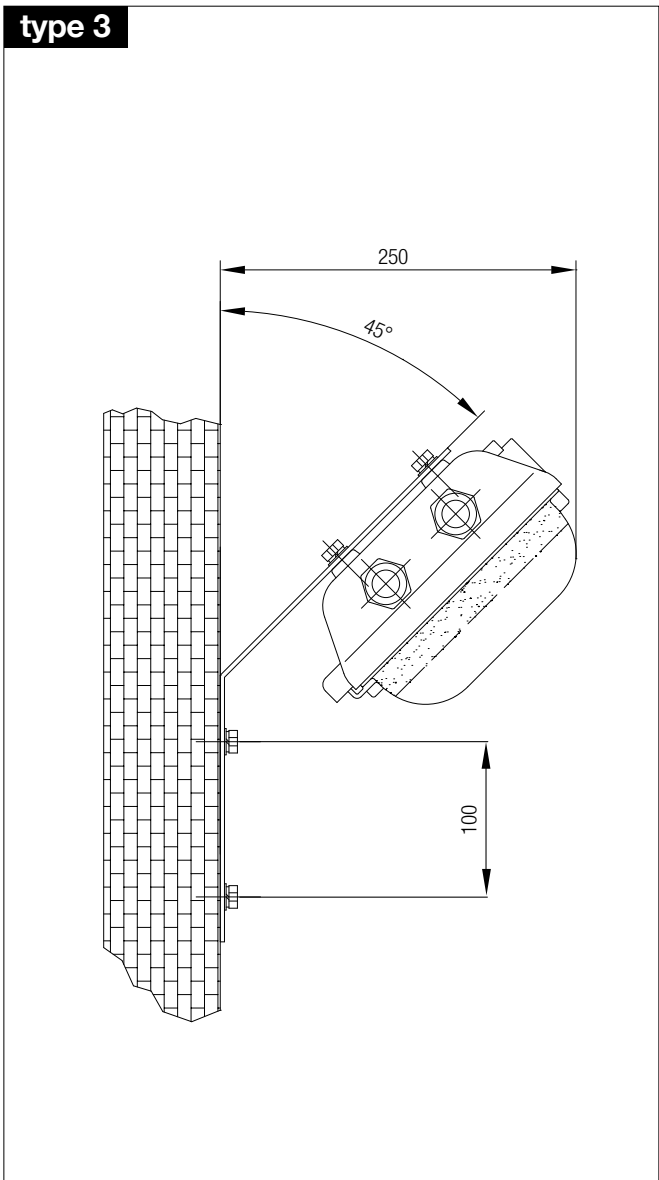
Pendant mounting

type 2



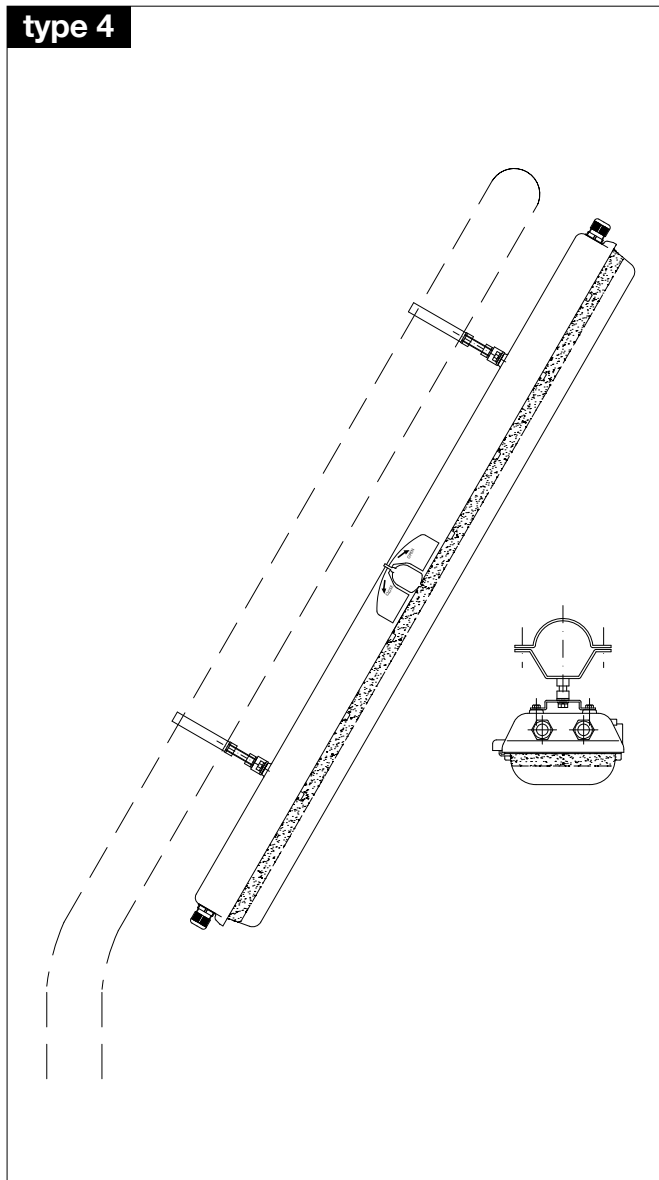
Wall/structure mounting

type 3

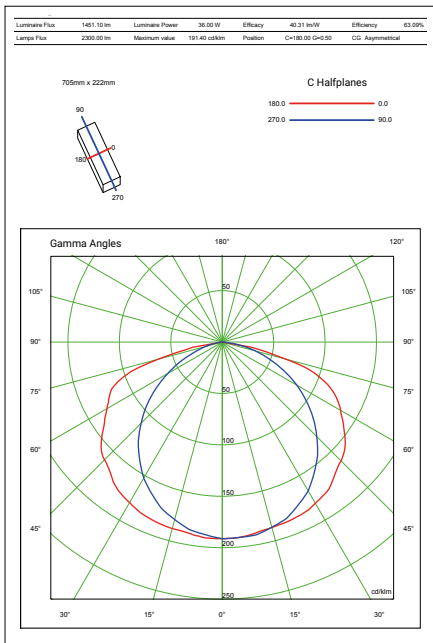


Pole mounting  
Assemblig detail with pole (typical)

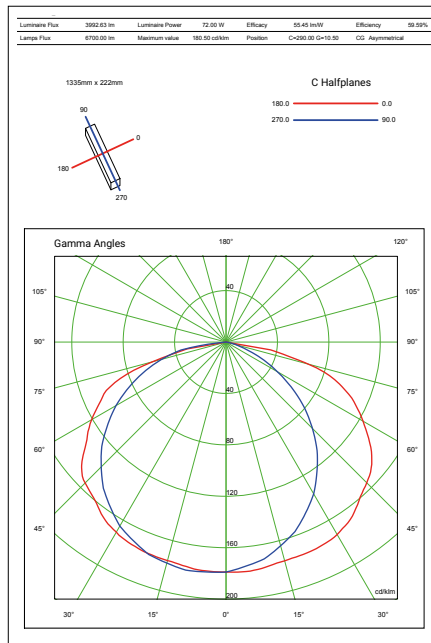
type 4



**AVC218**



**AVC236**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0142	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	STAINLESS STEEL
20302.0103	EYE-BOLTS MOUNTING KIT C/W HARDWARE	TYPE 2	GALVANIZED STEEL
20302.0140	WALL MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0162	POLE MOUNTING KIT Ø2" C/W HARDWARE	TYPE 4	GALVANIZED STEEL
20301.0163	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**

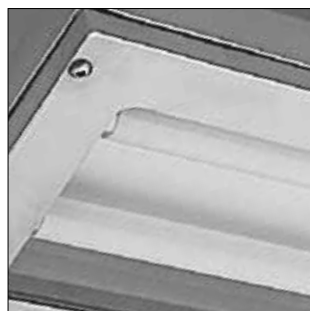
EXECUTION	⊗ II 2 G Ex e q IIC T4 Gb ⊗ II 2 D Ex tb IIIC T80°C Db
RULES OF COMPLIANCE	EN/IEC 60079-0; EN/IEC 60079-5; EN/IEC 60079-7; EN/IEC 60079-31
EC Type-Examination Certificate	LCIE 13 ATEX 3052
PROTECTION DEGREE	IP65
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX LCIE 13.0036  EAC: TC RU C-IT.BH02.B.00602 (-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
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 96...254V AC 50/60Hz</b>								
AVC-XG-118	1 x 18W	T4	T 80°C	G13	2 x Ø20,5	-	-	A
AVC-XG-136	1 x 36W	T4	T 80°C	G13	2 x Ø20,5	-	-	A
AVC-XG-218	2 x 18W	T4	T 80°C	G13	2 x Ø20,5	-	-	A
AVC-XG-236	2 x 36W	T4	T 80°C	G13	2 x Ø20,5	-	-	A

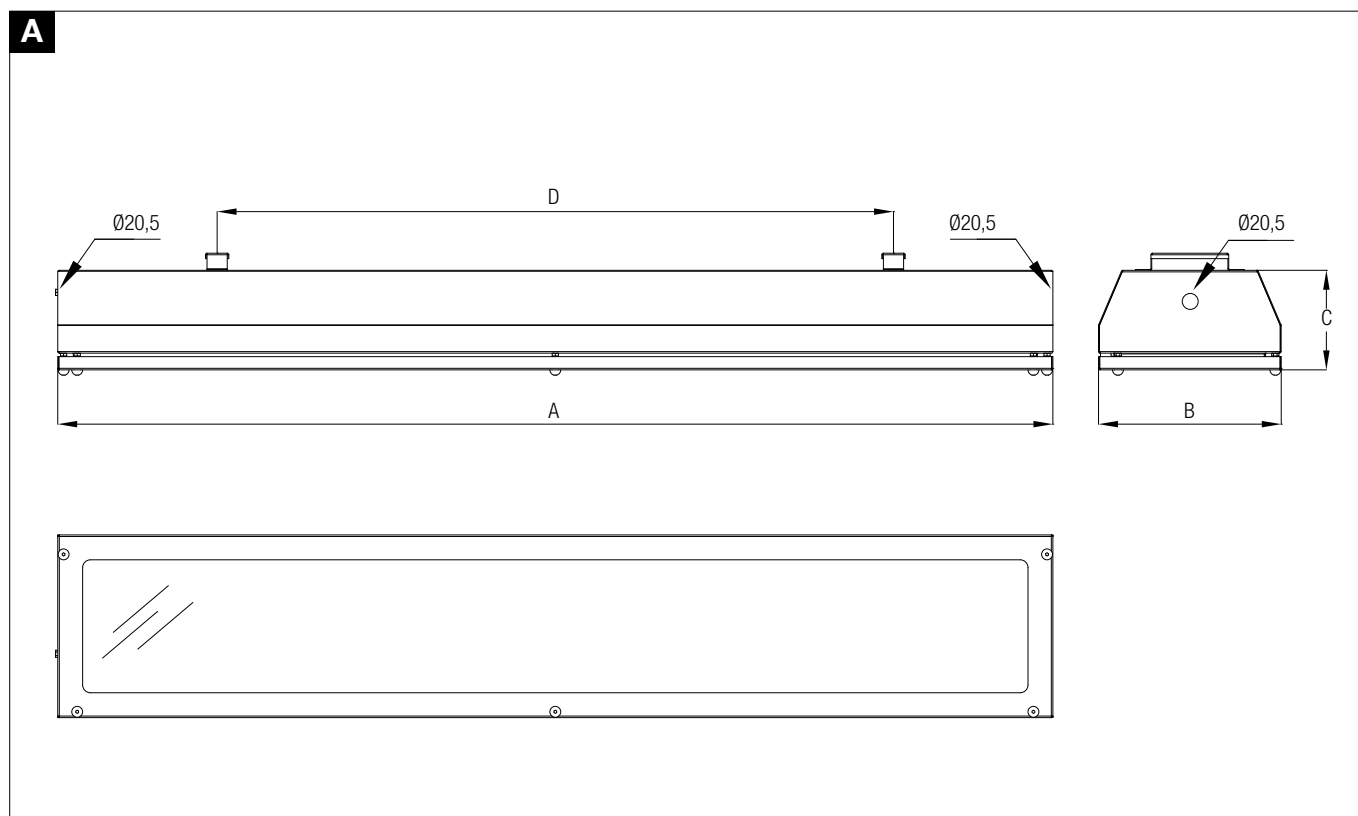
<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 230/240V AC 50/60Hz</b>								
AVCE-XG-118	1 x 18W	T4	T 80°C	G13	2 x Ø20,5	7.2 V - 6Ah	120 min	A
AVCE-XG-136	1 x 36W	T4	T 80°C	G13	2 x Ø20,5	7.2 V - 6Ah	120 min	A
AVCE-XG-218	2 x 18W	T4	T 80°C	G13	2 x Ø20,5	7.2 V - 6Ah	120 min	A
AVCE-XG-236	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
AVC*-XG-118	670	235	128	400	8	9	2 x Ø20,5	A
AVC*-XG-136	1280	235	128	870	15	16	2 x Ø20,5	A
AVC*-XG-218	705	235	128	400	8	9	2 x Ø20,5	A
AVC*-XG-236	1280	235	128	870	15	16	2 x Ø20,5	A

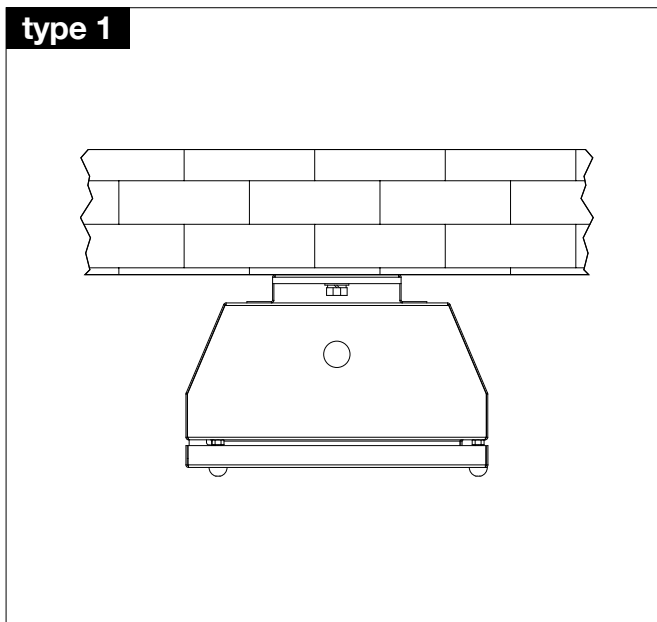
\*E: with emergency battery pack

**Reference details**



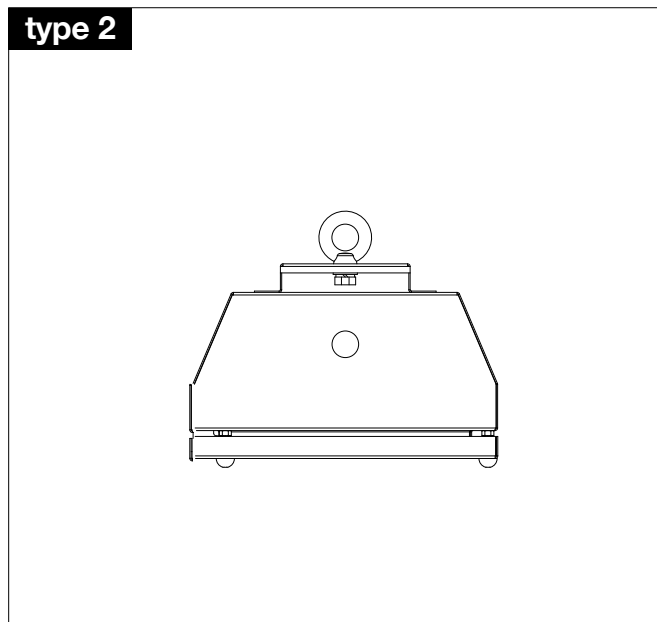
Ceiling mounting

type 1



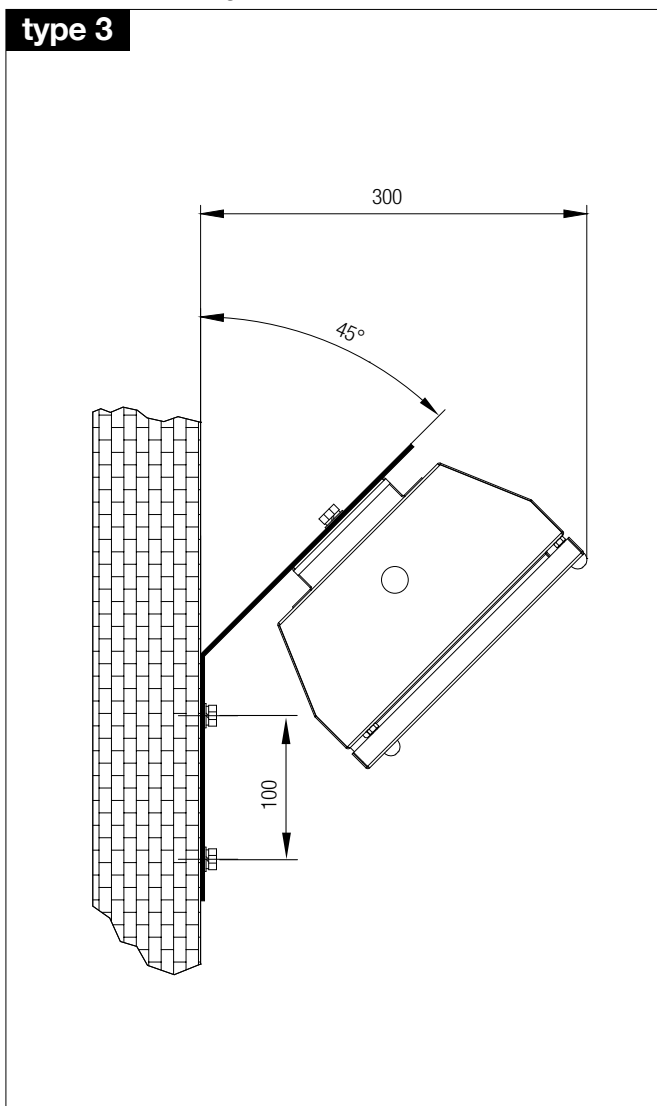
Pendant mounting

type 2



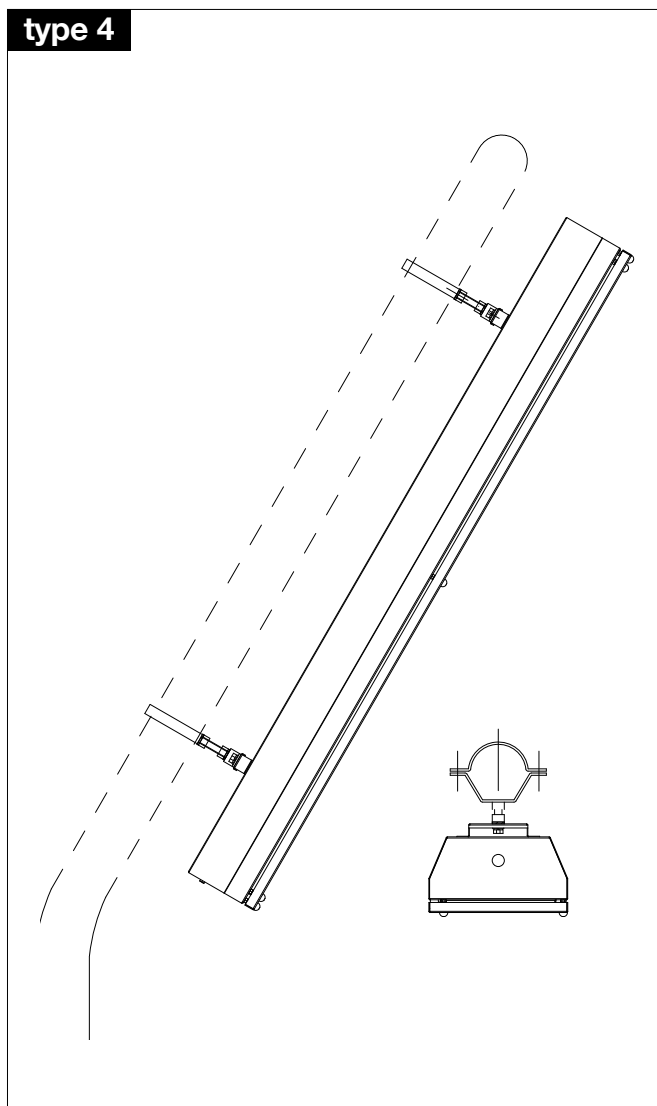
Wall/structure mounting

type 3

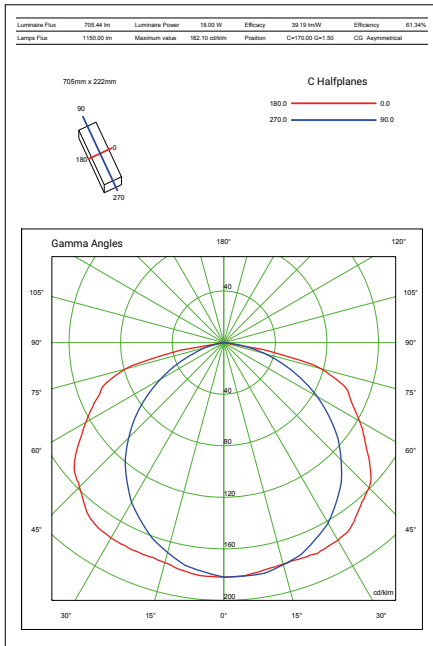


Pole mounting  
Assemblg detail with pole (typical)

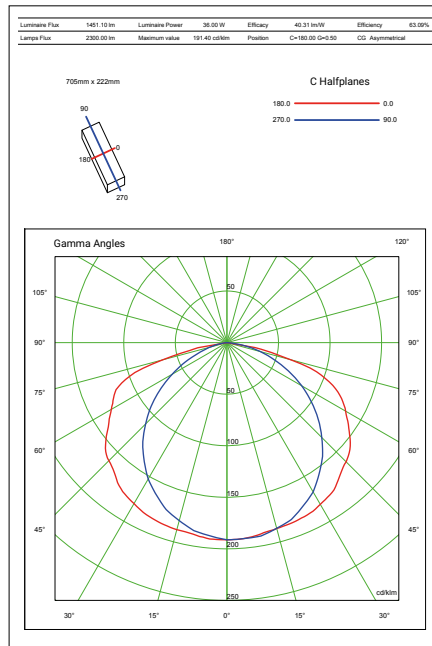
type 4



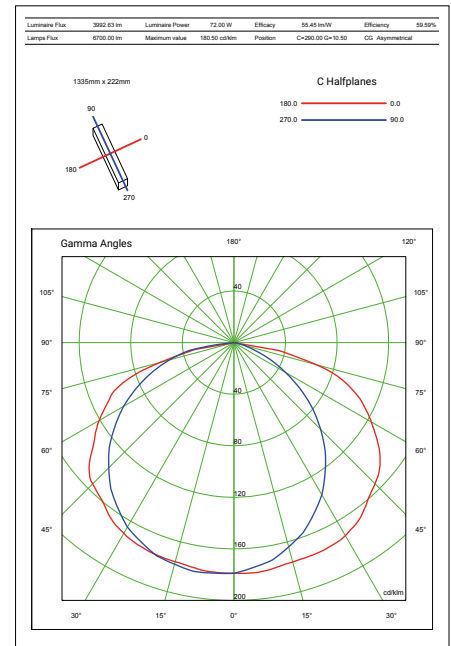
**AVC-XG-118**



**AVC-XG-218**



**AVC-XG-236**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0121	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	STAINLESS STEEL
20302.0103	EYE-BOLTS MOUNTING KIT C/W HARDWARE	TYPE 2	GALVANIZED STEEL
20302.0140	WALL MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0162	POLE MOUNTING KIT Ø2" C/W HARDWARE	TYPE 4	GALVANIZED STEEL
20301.0163	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"> <li>⊕ II 3 G Ex nA IIC T6/T5/T4 Gc</li> <li>⊕ II 3 D Ex tc IIIc T85°C/T100°C/T135°C Dc</li> </ul>
RULES OF COMPLIANCE	EN 60079-0; EN 60079-15; EN 60079-31
EC Type-Examination Certificate	self Certification only
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 M20 cable gland + 2 PVC M20 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

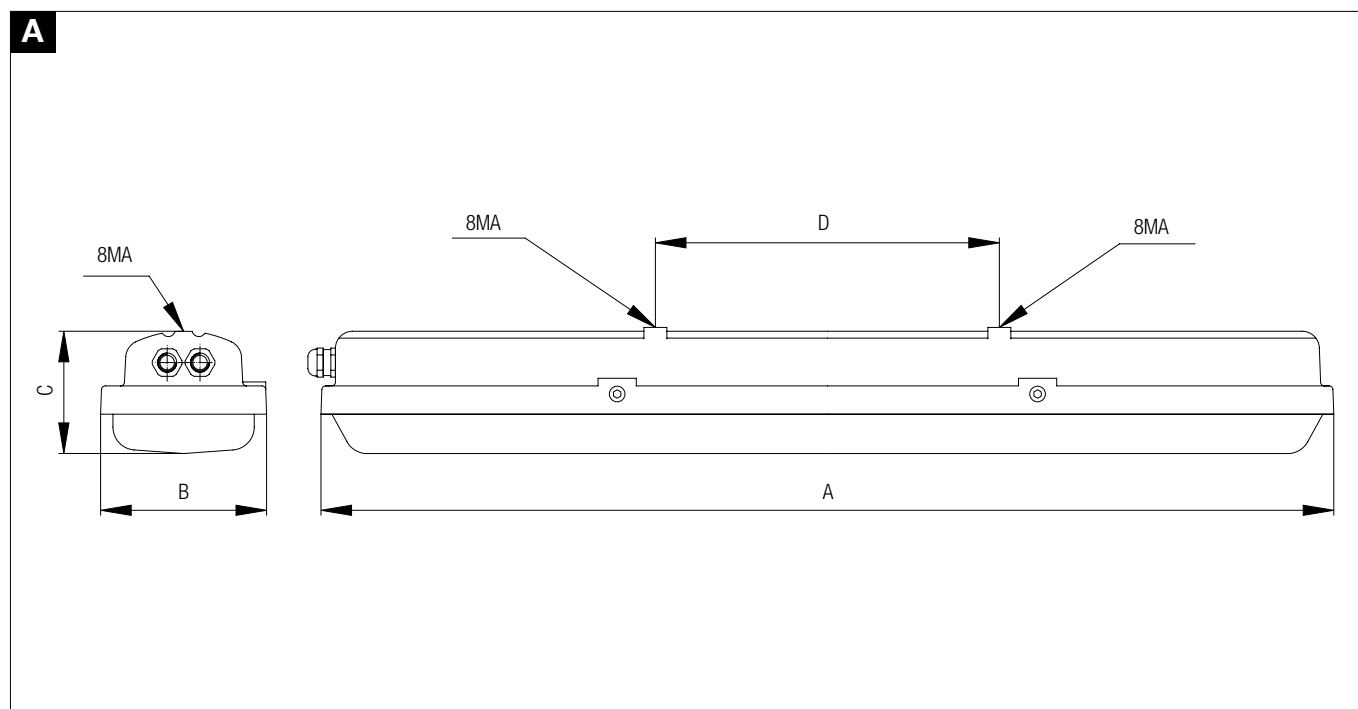
**Technical data**

CODE	LAMP	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER	ENTRY	DETAIL
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc)</b>						
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**

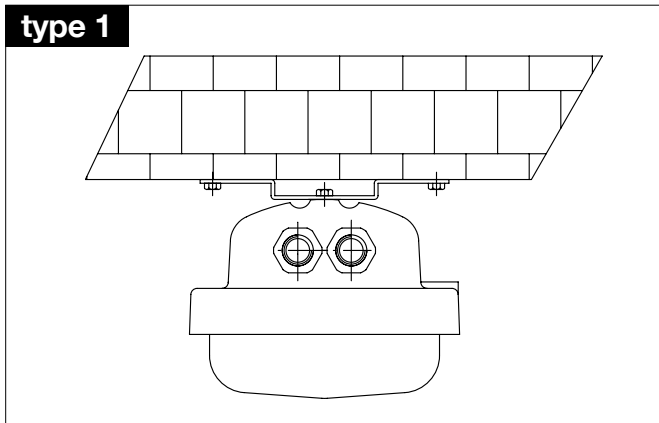
CODE	A [mm]	B [mm]	C [mm]	D [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
ZFL-118	730	215	160	400	6,00	4 x M20	A
ZFL-136	1340	215	160	450	6,50	4 x M20	A
ZFL-218	730	215	160	400	7,00	4 x M20	A
ZFL-236	1340	215	160	450	7,50	4 x M20	A

**Reference details**



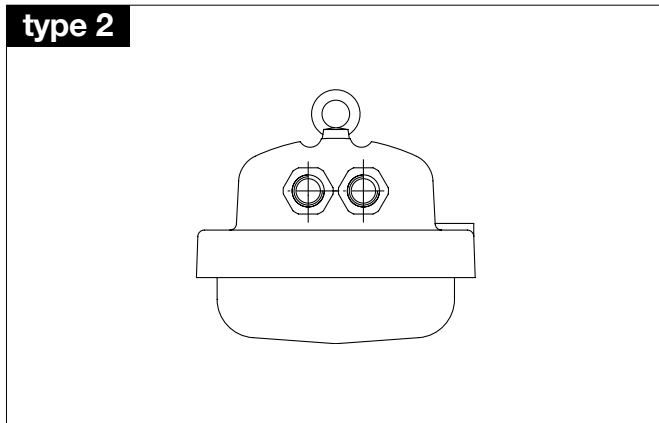
**Ceiling mounting**

**type 1**



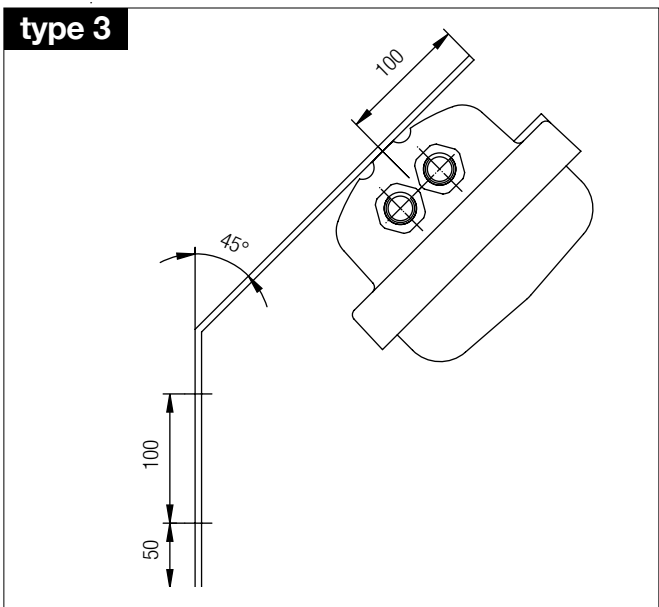
**Pendant mounting**

**type 2**



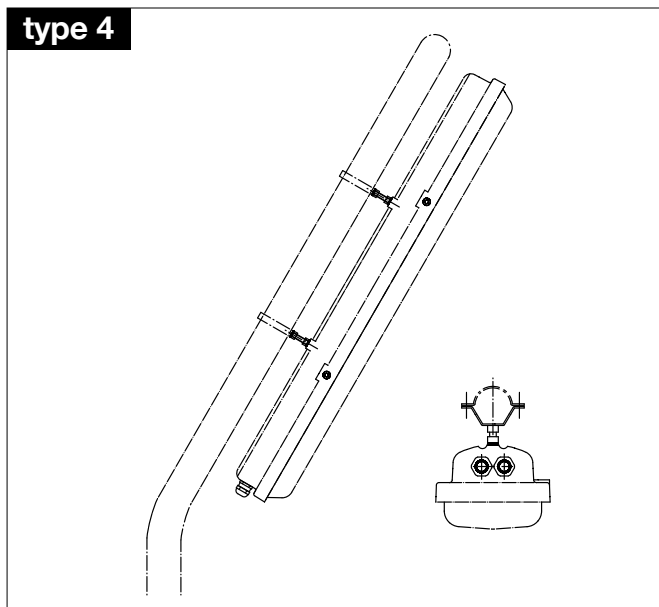
**Wall/structure mounting**

**type 3**



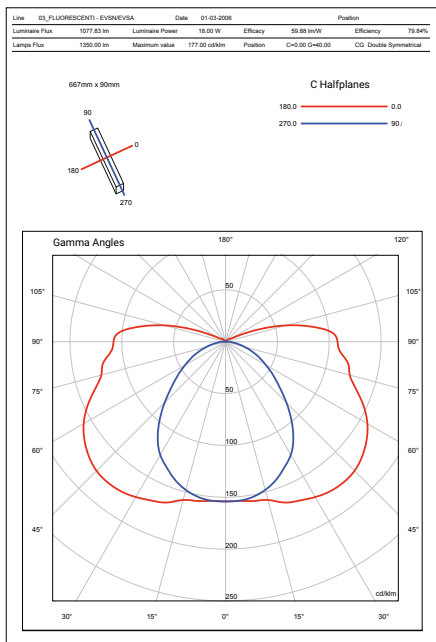
**Pole mounting. Assembling detail with pole (typical)**

**type 4**

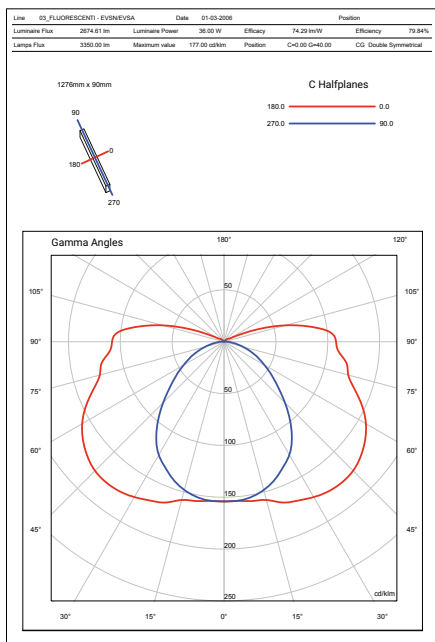


**ZFL Polar diagrams – photometric data**

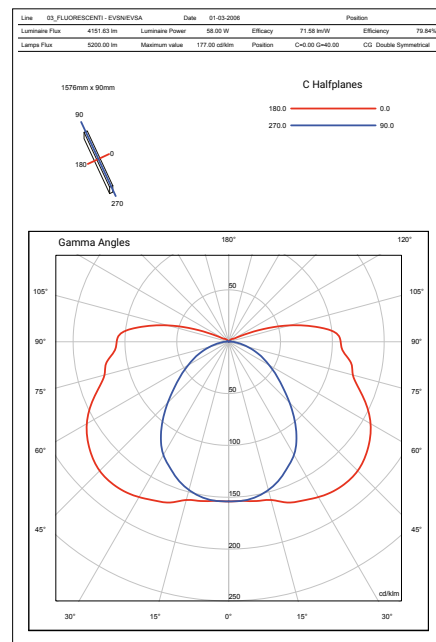
**ZFL-218**



**ZFL-136**



**ZFL-236**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0121	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	GALVANIZED STEEL
20301.0165	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	STAINLESS STEEL
20302.0128	WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0163	POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20301.0162	POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20301.0161	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 08 ATEX 008X
PROTECTION DEGREE	IP65
AMBIENT TEMPERATURE	-20°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	EAC: TC RU C-IT.BH02.B.00602 (-40°C ÷ +60°C)  RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**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**

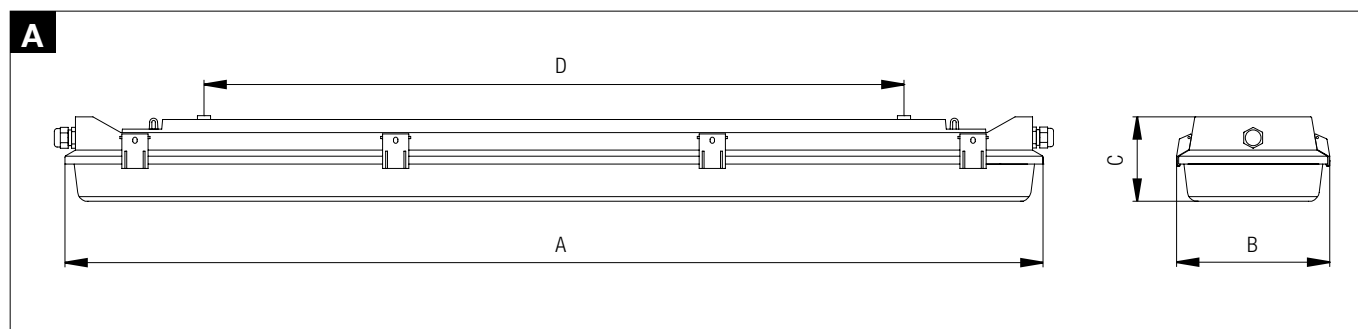
CODE	LAMP	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER	CABLE ENTRY WITH CABLE GLAND	EMERGENCY UNIT	AUTONOMY	DETAIL
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc)</b>								
EVSN118EL	1 x 18W	T6 (AT = 40°C)	T 85°C	G13	2 x M20	-	-	A
		T5 (AT = 50°C)	T100°C					
		T4 (AT = 60°C)	T135°C					
EVSN136EL	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					
EVSN158EL	1 x 58W	T5 (AT = 60°C)	T100°C	G13	2 x M20	-	-	A
EVSN218EL	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					
EVSN236EL	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					
EVSN258EL	2 x 58W	T5 (AT = 60°C)	T100°C	G13	2 x M20	-	-	A

<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220±240V - 50/60Hz</b>								
EVSNE136EL	1 x 36W	T6 (AT = 40°C)	T 85°C	G13	2 x M20	4,8V - 4Ah	60 min.	A
		T5 (AT = 50°C)	T100°C					
		T4 (AT = 60°C)	T135°C					
EVSNE158EL	1 x 58W	T5 (AT = 60°C)	T100°C	G13	2 x M20	4,8V - 4Ah	60 min.	A
EVSNE218EL	2 x 18W	T6 (AT = 40°C)	T 85°C	G13	2 x M20	4,8V - 4Ah	60 min.	A
		T5 (AT = 50°C)	T100°C					
		T4 (AT = 60°C)	T135°C					
EVSNE236EL	2 x 36W	T6 (AT = 40°C)	T 85°C	G13	2 x M20	4,8V - 4Ah	180 min.	A
		T5 (AT = 50°C)	T100°C					
		T4 (AT = 60°C)	T135°C					
EVSNE258EL	2 x 58W	T5 (AT = 60°C)	T100°C	G13	2 x M20	4,8V - 4Ah	180 min.	A

**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
EVSN118EL	667	90	98	382	1,75	2 x M20	A
EVSN136EL	1276	90	98	675	2,45	2 x M20	A
EVSN158EL	1576	90	98	1035	2,65	2 x M20	A
EVSN218EL	667	155	102	406	2,1	2 x M20	A
EVSN236EL	1276	155	102	675	3,9	2 x M20	A
EVSN258EL	1576	155	102	1006	4	2 x M20	A

**Reference details**





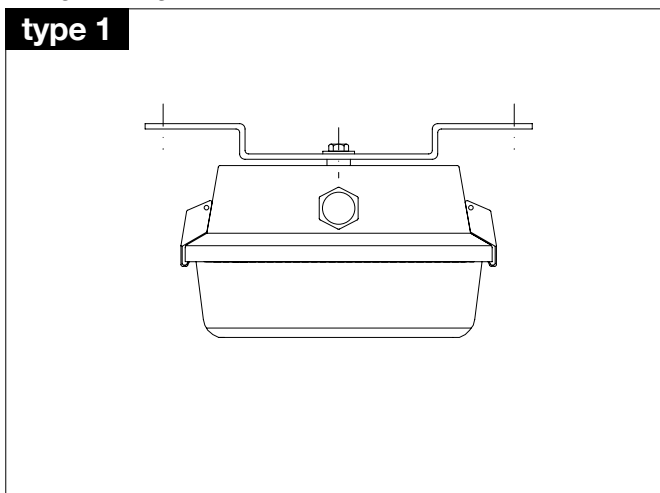
**Reference details**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WIGHT [Kg]	CABLE ENTRY	DETAIL
EVSNE136EL	1276	90	98	735	3,7	2 x M20	A
EVSNE158EL	1576	90	98	1035	4,35	2 x M20	A
EVSNE218EL	667	155	102	406	3,35	2 x M20	A
EVSNE236EL	1276	155	102	735	5,15	2 x M20	A
EVSNE258EL	1576	155	102	1006	6,45	2 x M20	A

**EVSN** Installation and mounting details

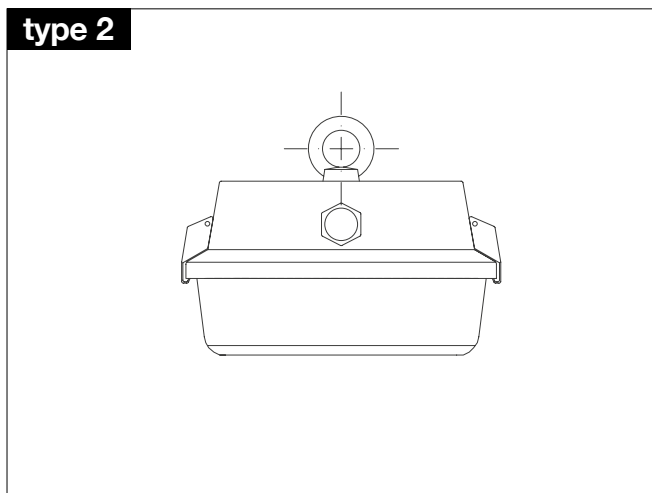
**Ceiling mounting**

**type 1**



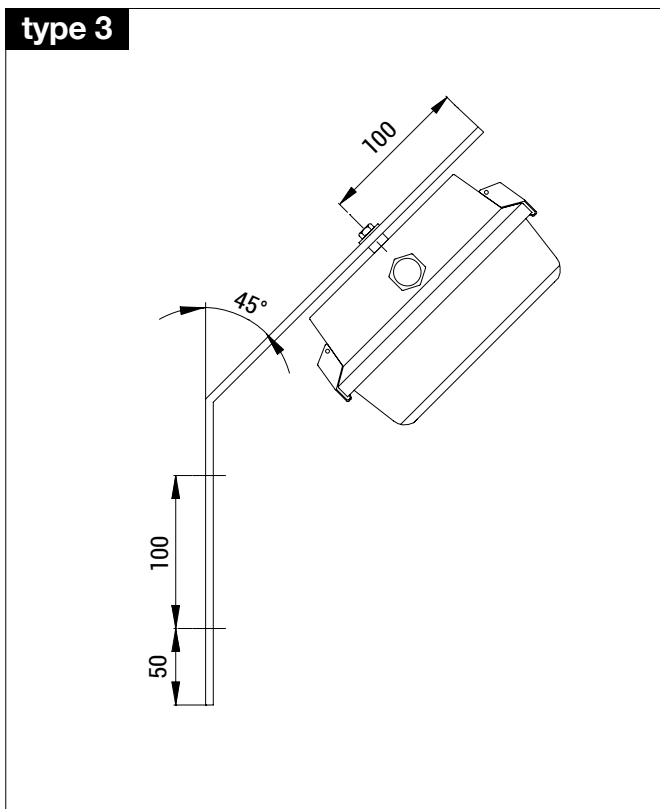
**Pendant mounting**

**type 2**



**Wall/structure mounting**

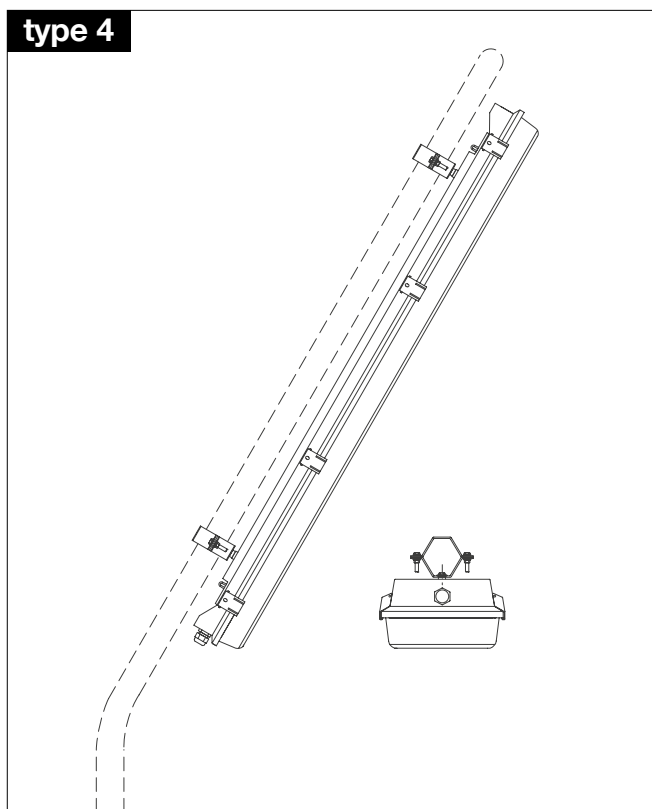
**type 3**



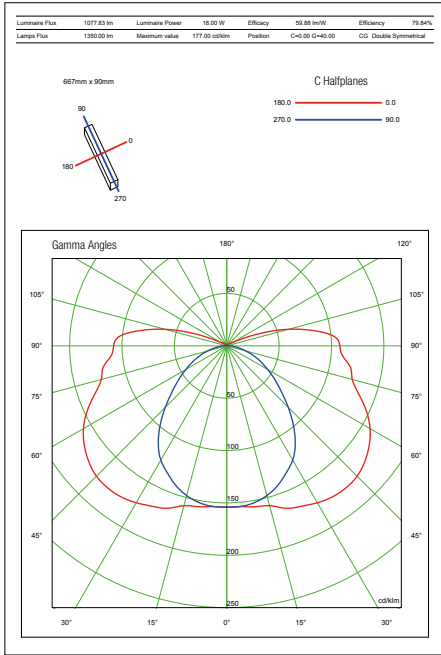
**Pole mounting**

**Assemblig detail with pole (typical)**

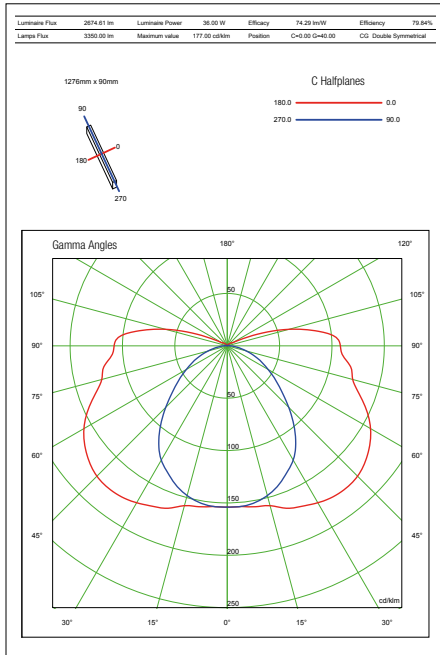
**type 4**



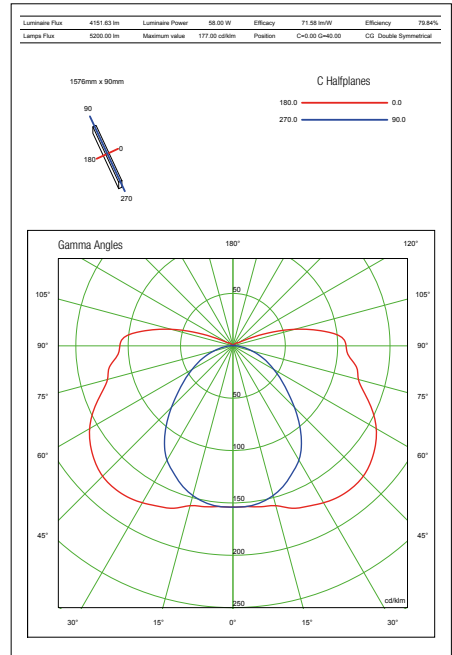
**EVSN118EL**



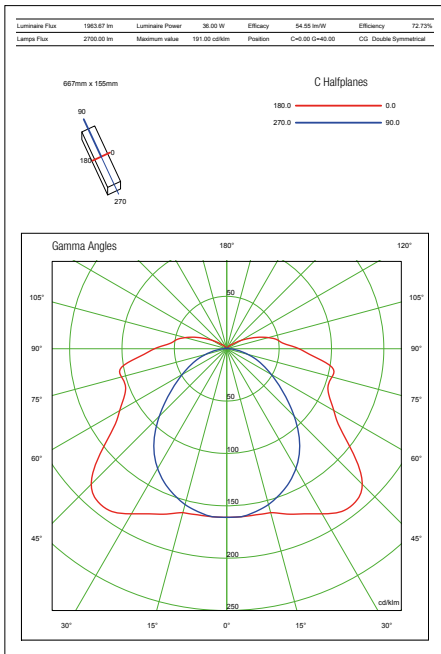
**EVSN136EL**



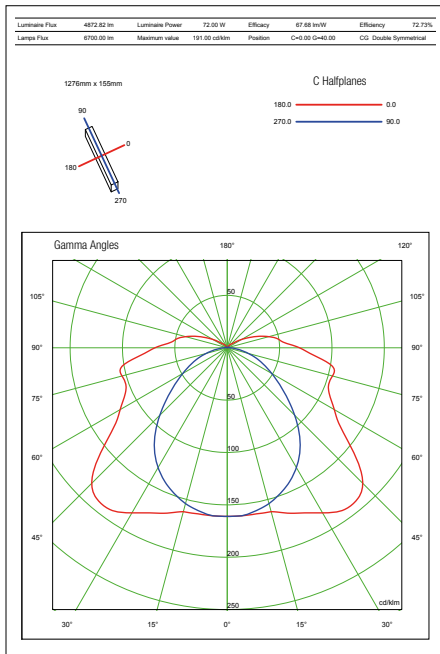
**EVSN158EL**



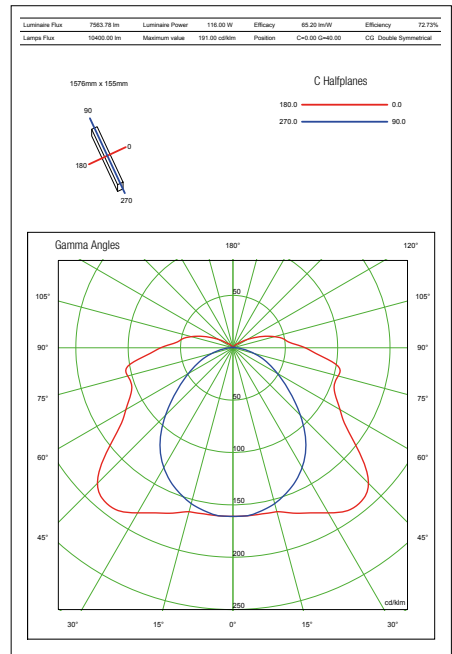
**EVSN218EL**



**EVSN236EL**



**EVSN258EL**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20303.0130	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	GALVANIZED STEEL
20303.0126	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	STAINLESS STEEL
20303.0131	WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20302.0145	POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20302.0146	POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20302.0125	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 1012X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-40°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx LCIE 15.0020X INMETRO: CEPEL 15.2353X EAC: TC RU C-IT.BH02.B.00602 (-40°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280

**Mechanical characteristics**

Body	marine grade copper free aluminum (SFDN version) stainless steel AISI 316L - sp. 1,5mm pickled, polished and brightened (SFDNX 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 SFDN version - on request for SFDNX 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 SFDN version only)


 > **Asymmetric**

 > **Symmetric**

 > **Concentrating**
**Electrical characteristics**

Power supply	conventional ballast 230V - 50Hz (P.F. CORRECTED - $\cos \rho \geq 0,95$ )
Lampholders	porcellain 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 SFDN)

## Technical data

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

**Note:** available with symmetric optic only

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

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

(\* ) INTERNAL OPTICAL BEAM: (S) SYMMETRIC BEAM - (A) ASYMMETRIC BEAM - (C) CONCENTRATING BEAM

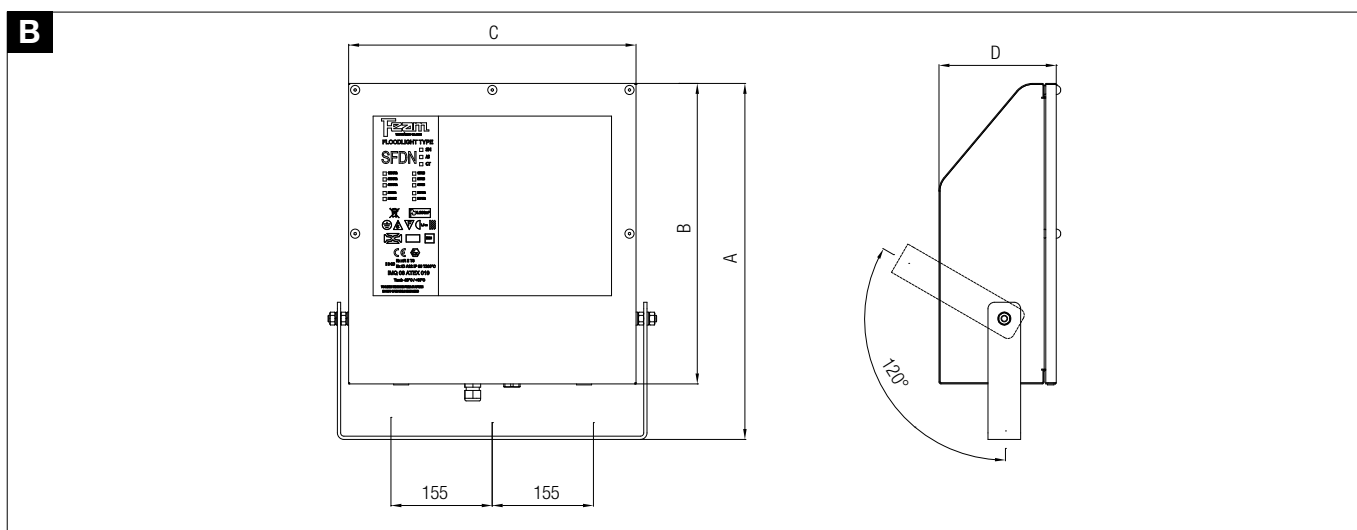
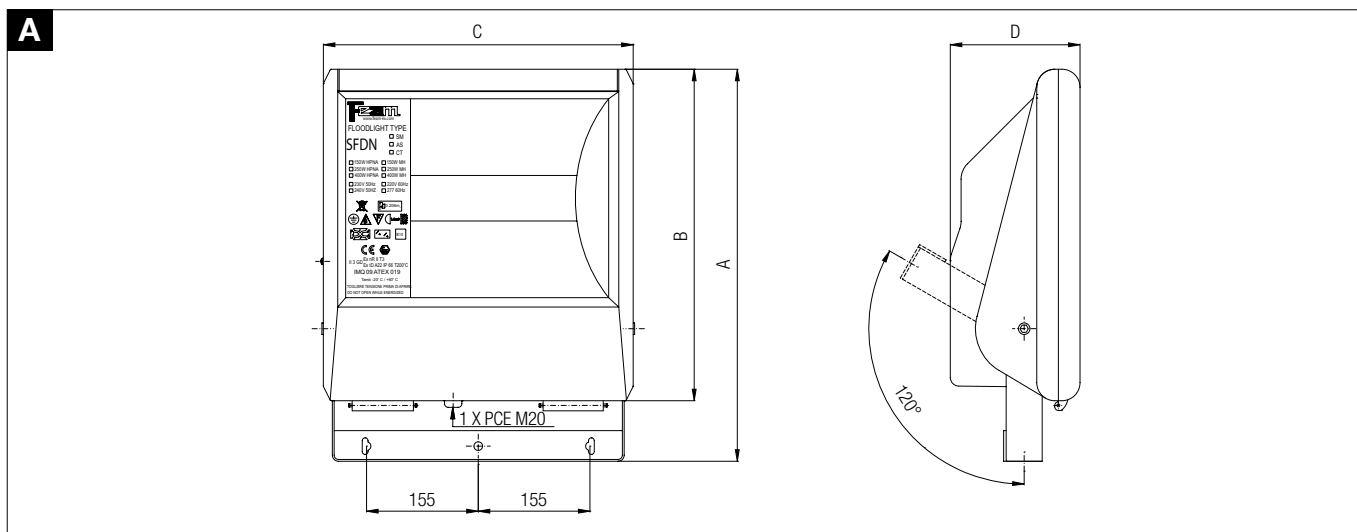
**SAMPLE:** SFDN#400MH-S= 400W METAL HALIDE FLOODLIGHT WITH SYMMETRIC OPTICAL BEAM

## Technical features

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
SFDN-250HG	544	461	430	180	8,80	1 x ISO-M20	A
SFDN-400HG	544	461	430	180	9,10	1 x ISO-M20	A
SFDN-150MH	544	461	430	180	9,50	1 x ISO-M20	A
SFDNX-150MH	545	460	440	180	9,50	1 x ISO-M20	B
SFDN-250MH	544	461	430	180	9,70	1 x ISO-M20	A
SFDNX-250MH	545	460	440	180	9,70	1 x ISO-M20	B
SFDN-400MH	544	461	430	180	11,00	1 x ISO-M20	A
SFDNX-400MH	545	460	440	180	11,00	1 x ISO-M20	B
SFDN-150HPNA	544	461	430	180	10,50	1 x ISO-M20	A
SFDNX-150HPNA	545	460	440	180	10,50	1 x ISO-M20	B
SFDN-250HPNA	544	461	430	180	11,10	1 x ISO-M20	A
SFDNX-250HPNA	545	460	440	180	11,10	1 x ISO-M20	B
SFDN-400HPNA	544	461	430	180	12,30	1 x ISO-M20	A
SFDNX-400HPNA	545	460	440	180	12,30	1 x ISO-M20	B

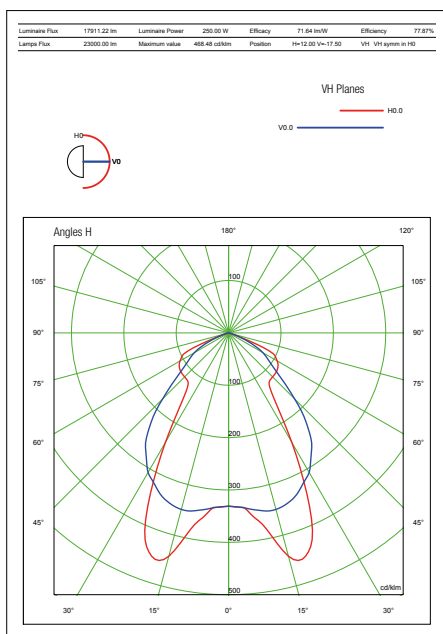


Reference details

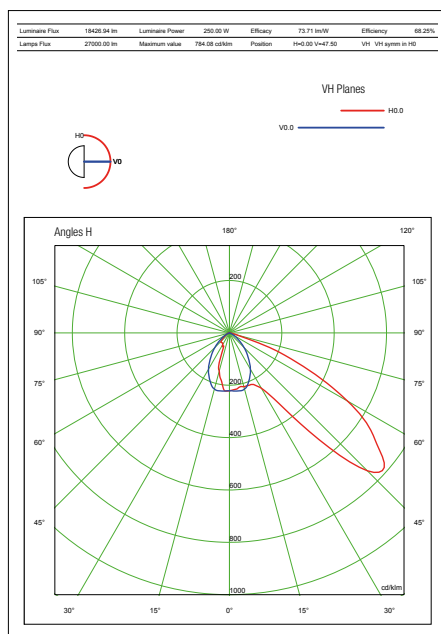


SFDN-SFDNX Polar diagrams – photometric data

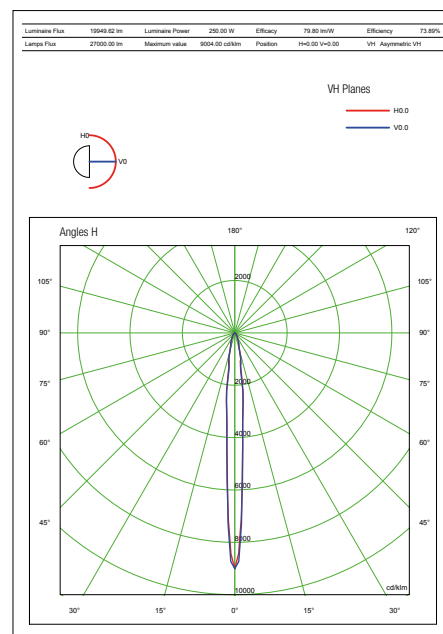
SFDN-250HPNA-S



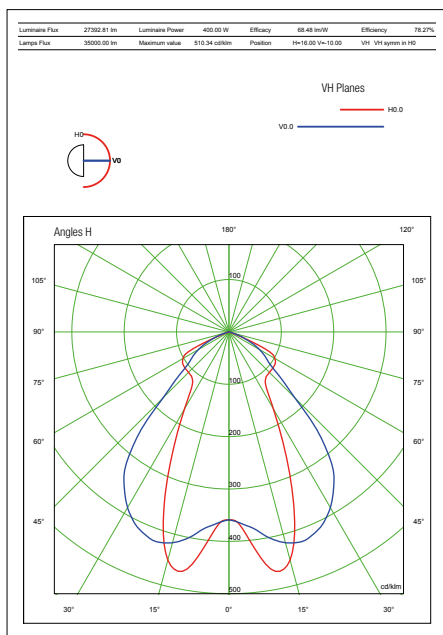
SFDN-250HPNA-A



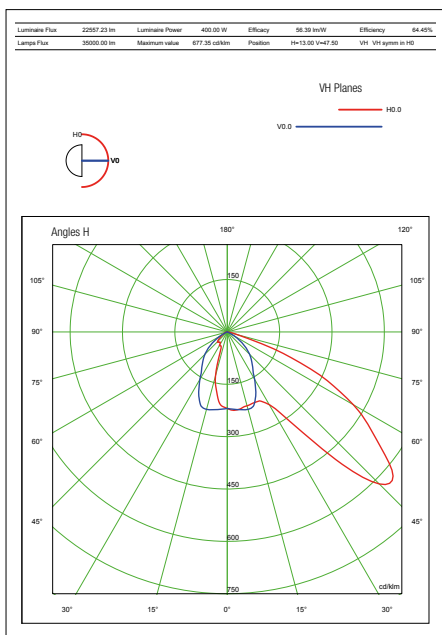
SFDN-250HPNA-C



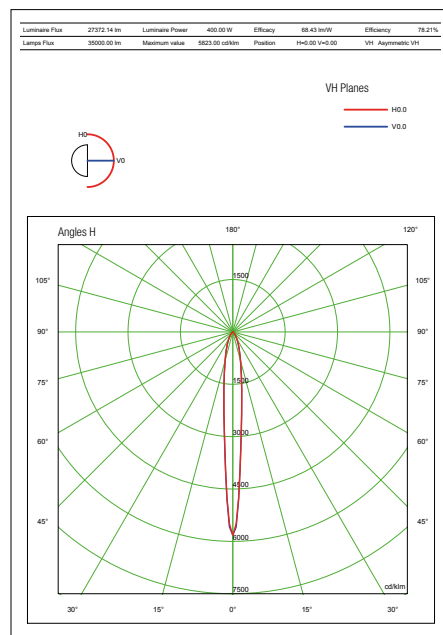
**SFDN-400MH-S**



**SFDN-400MH-A**



**SFDN-400MH-C**

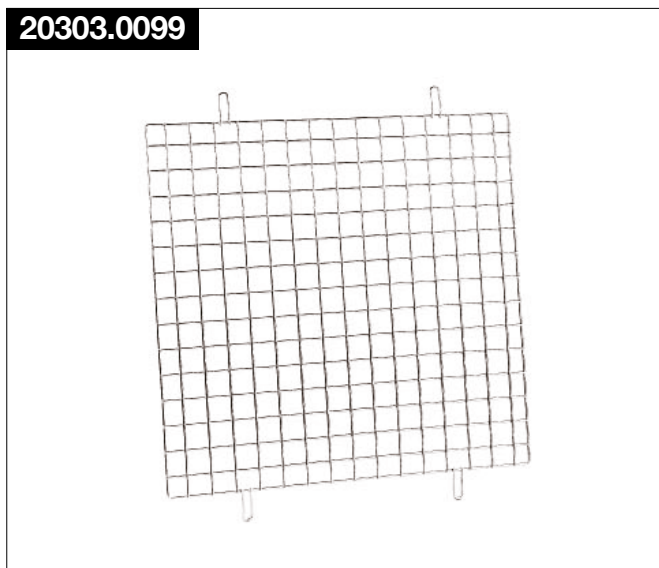


**On request accessories**

CODE	DESCRIPTION	MATERIAL
20303.0099	PROTECTION GRID	ALUMINIUM
20303.0100	POLE ADAPTER FOR DIA 40÷60MM	PAINTED STEEL

**Protection grid**

**20303.0099**



**Pole adapter**

**20303.0100**



**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 3010X
PROTECTION DEGREE	IP66 (in accordance to IEC 60529)
AMBIENT TEMPERATURE	-40°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 19.0034X EAC: TC RU C-IT.BH02.B.00602 (-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



Technical data

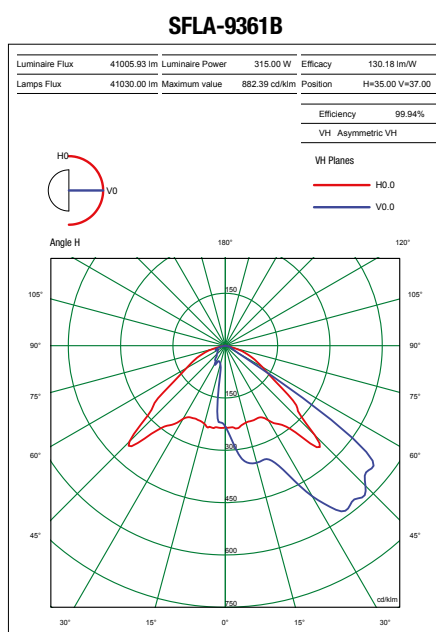
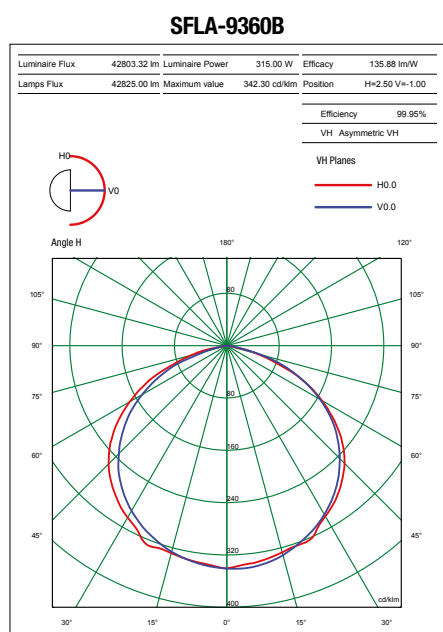
CODE	POWER LAMP	WIRING	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
SFLA-4160B	140 W	64 LED	T4 (Ta +60°C)	T135°C	20800	19035	1 X ISO-M20	A
SFLA-4161B								
SFLA-5200B	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

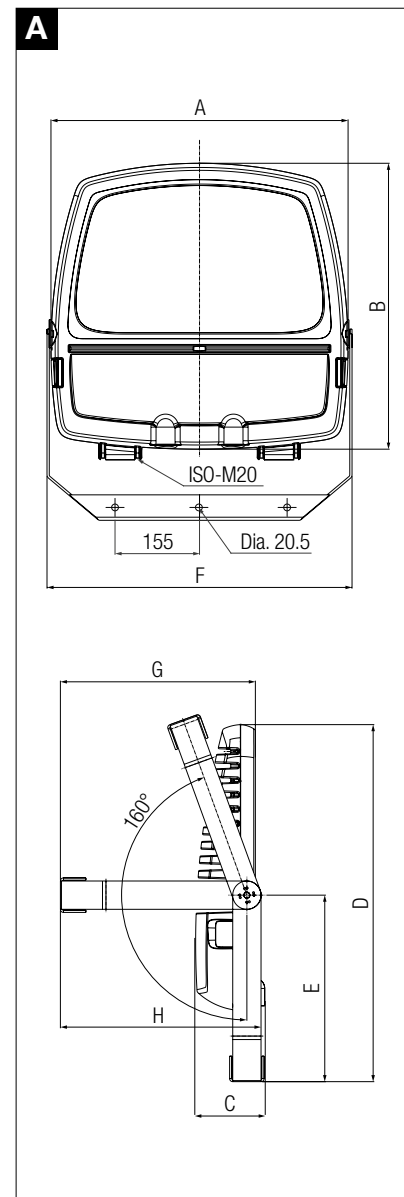
Technical features

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 Polar diagrams - photometric data



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 3010X
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 19.0034X EAC: TC RU C-IT.BH02.B.00602 (-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

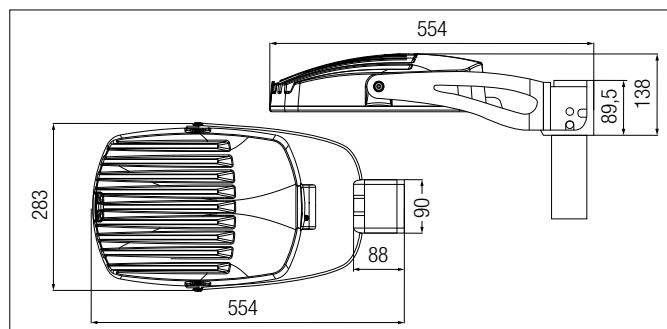
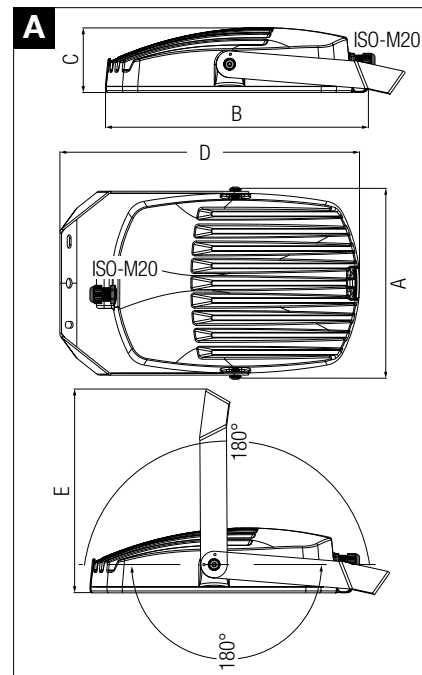
CODE	POWER LAMP	WIRING	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
SFLP-1040B	35 W	16 LED	T4 (Ta +60°C)	T115°C	5200	4760	1 X ISO-M20	A
SFLP-1041B						4560		
SFLP-1042B						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

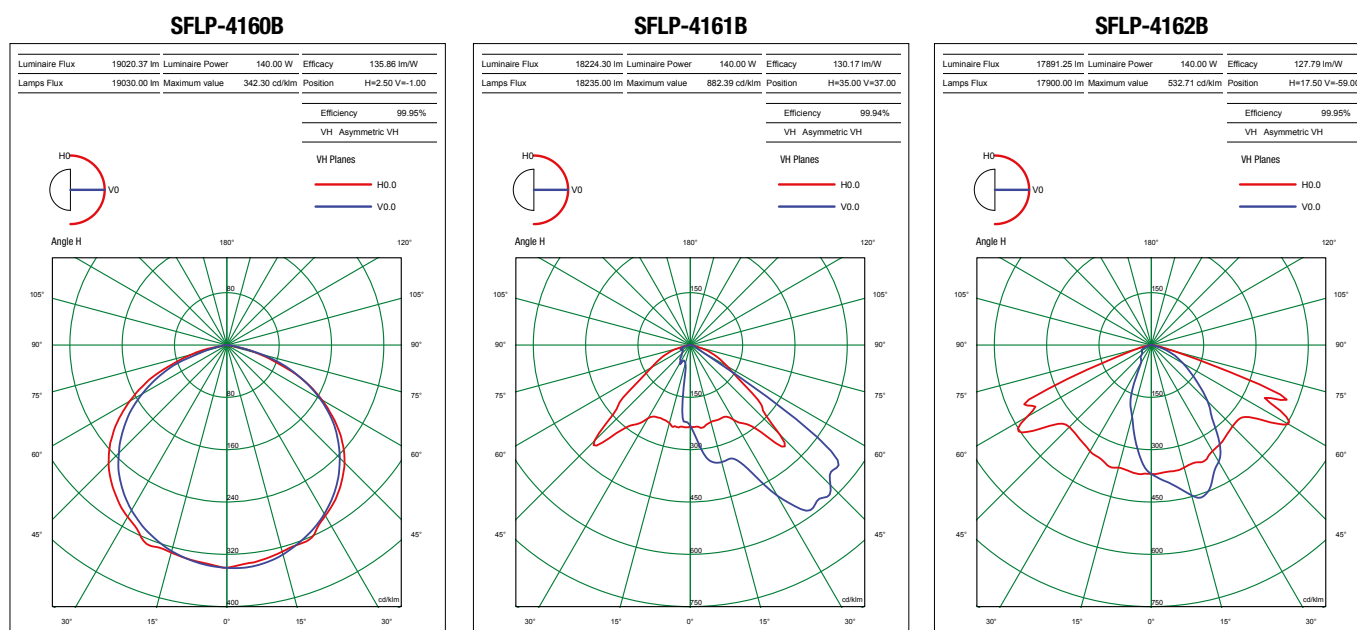
Technical features

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 Polar diagrams - photometric data



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 3010X
PROTECTION DEGREE	IP66 (in accordance to IEC 60529)
AMBIENT TEMPERATURE	-40°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 19.0034X EAC: TC RU C-IT.ГБ08.B.01343 (-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

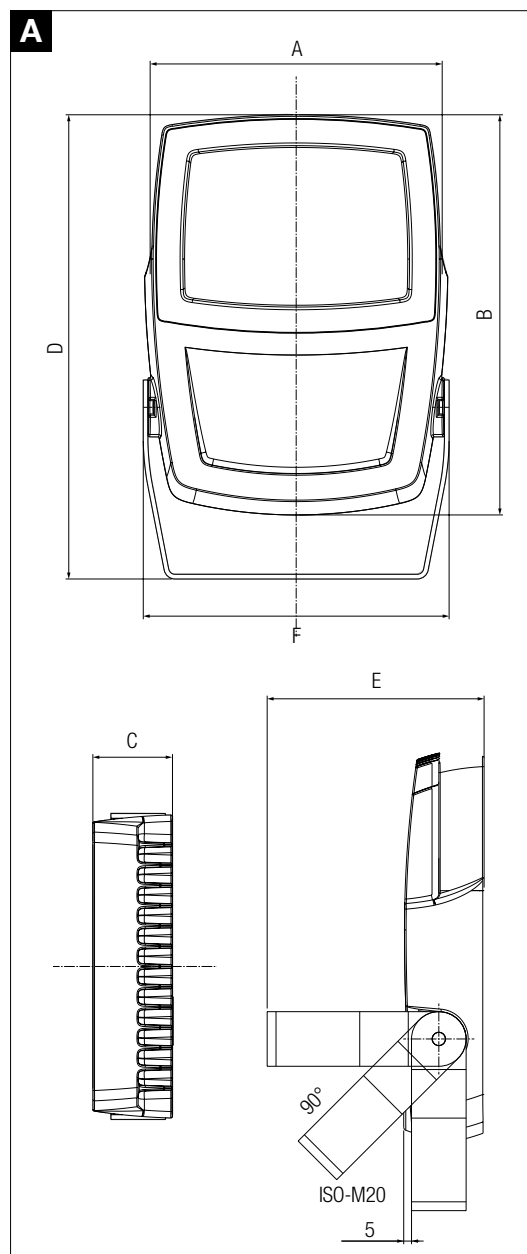
CODE	POWER LAMP	WIRING	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
SFLJ-1300B	17,5 W	1 LED	T3 (Ta +60°C)	T120°C	3040	2705	1 X ISO-M20	A
SFLJ-1380B	24,5 W				4000	3560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

OPTIC BEAM: OB=SM - WITHOUT LENS

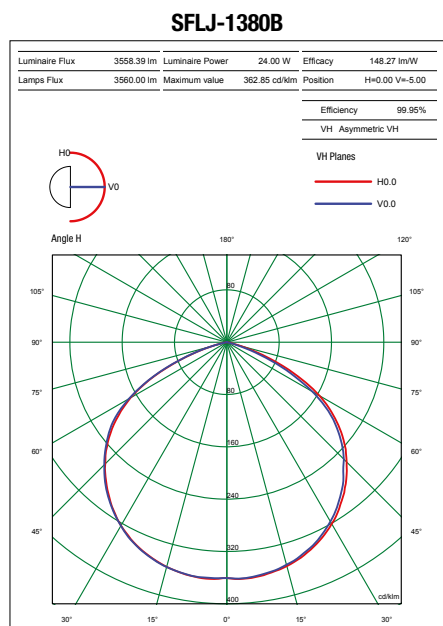
**Technical features**

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 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:** 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
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc)</b>								
EVSA118EL	1 x 18W	-	-	G13	2 x M20	-	-	A
EVSA136EL	1 x 36W	-	-	G13	2 x M20	-	-	A
EVSA158EL	1 x 58W	-	-	G13	2 x M20	-	-	A
EVSA218EL	2 x 18W	-	-	G13	2 x M20	-	-	A
EVSA236EL	2 x 36W	-	-	G13	2 x M20	-	-	A
EVSA258EL	2 x 58W	-	-	G13	2 x M20	-	-	A

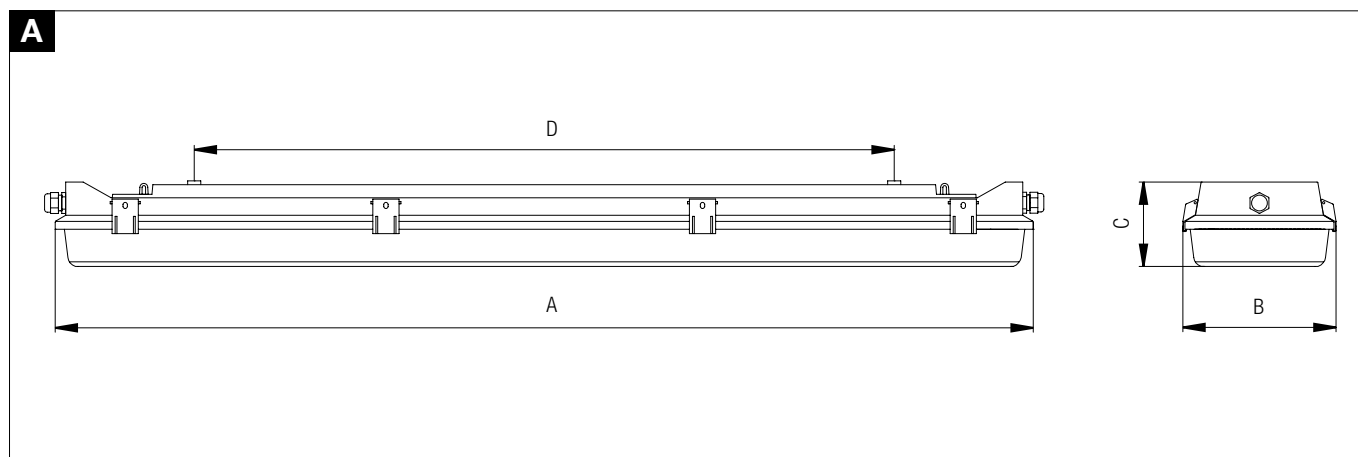
<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY 220V / 240V - 50/60Hz</b>								
EVSA136EL-E	1 x 36W	-	-	G13	2 x M20	4,8V - 4Ah	60 min.	A
EVSA158EL-E	1 x 58W	-	-	G13	2 x M20	4,8V - 4Ah	60 min.	A
EVSA218EL-E	2 x 18W	-	-	G13	2 x M20	4,8V - 4Ah	60 min.	A
EVSA236EL-E	2 x 36W	-	-	G13	2 x M20	4,8V - 4Ah	180 min.	A
EVSA258EL-E	2 x 58W	-	-	G13	2 x M20	4,8V - 4Ah	180 min.	A

**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
EVSA118EL	667	90	98	382	1,75	2 x M20	A
EVSA136EL	1276	90	98	735	2,45	2 x M20	A
EVSA158EL	1576	90	98	1035	3,1	2 x M20	A
EVSA218EL	667	155	102	406	2,1	2 x M20	A
EVSA236EL	1276	155	102	735	3,9	2 x M20	A
EVSA258EL	1576	155	102	1006	5,2	2 x M20	A

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
EVSA136EL-E	1276	90	98	735	3	2 x M20	A
EVSA158EL-E	1576	90	98	1035	3,6	2 x M20	A
EVSA218EL-E	667	155	102	406	2,6	2 x M20	A
EVSA236EL-E	1276	155	102	735	4,4	2 x M20	A
EVSA258EL-E	1576	155	102	1006	5,7	2 x M20	A

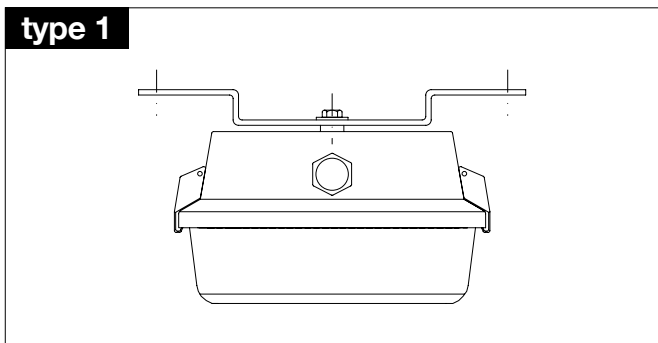
**Reference details**





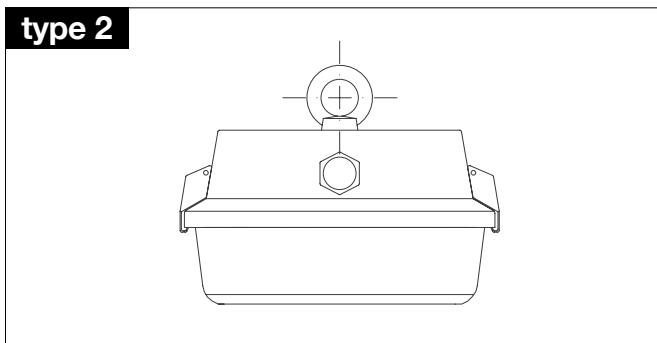
Ceiling mounting

type 1



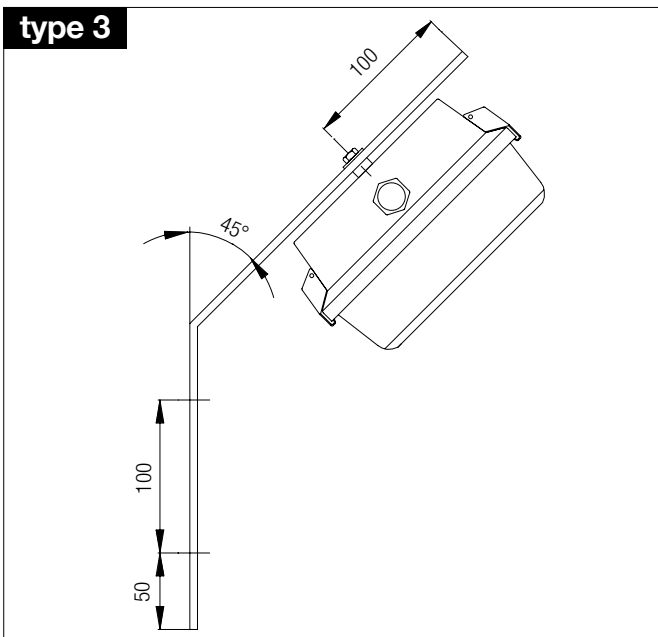
Pendant mounting

type 2



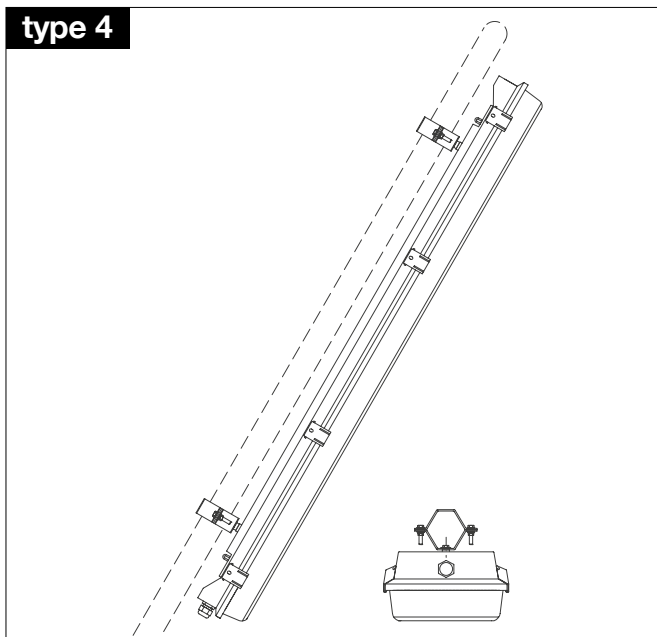
Wall/structure mounting

type 3



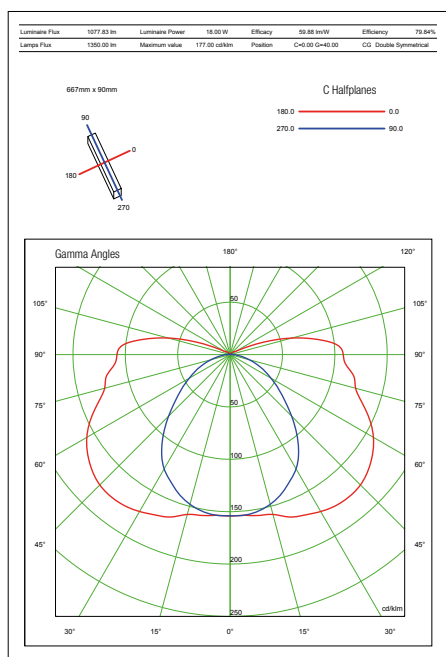
Pole mounting  
Assemblg detail with pole (typical)

type 4

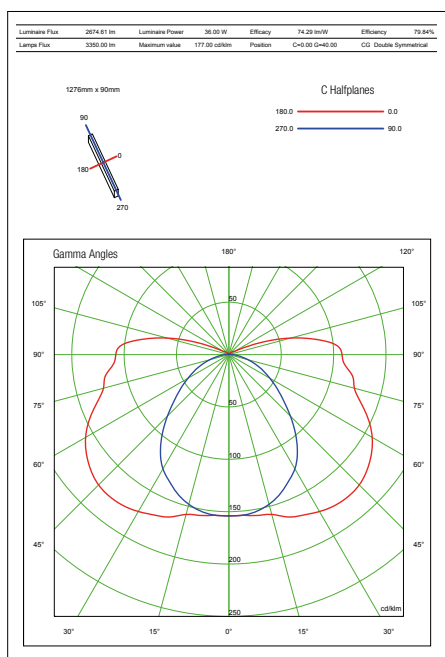


EVSA Polar diagrams – photometric data

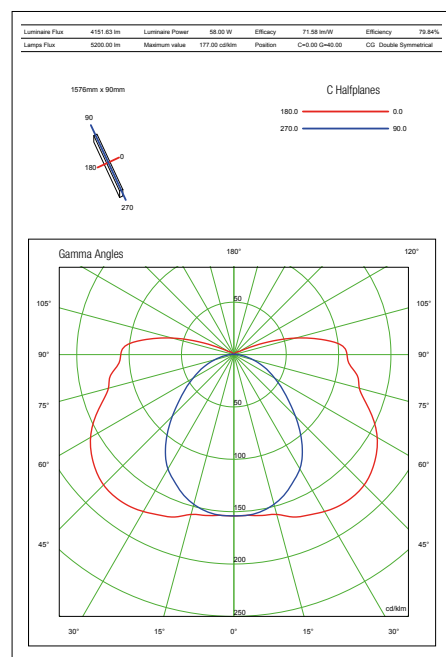
EVSA118EL



EVSA136EL

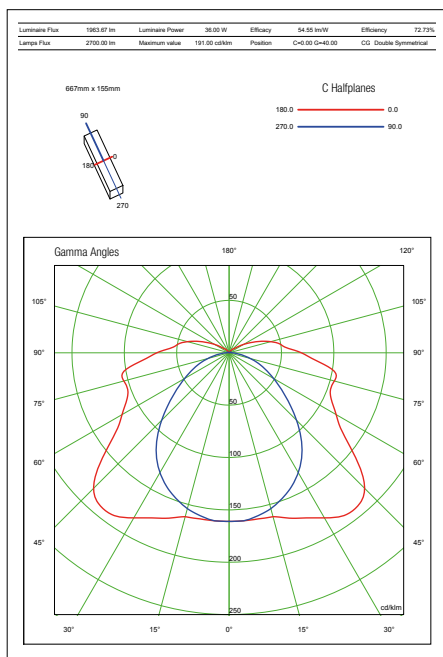


EVSA158EL

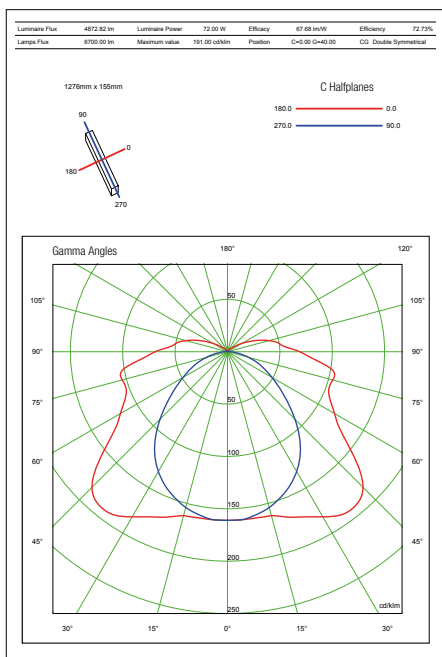




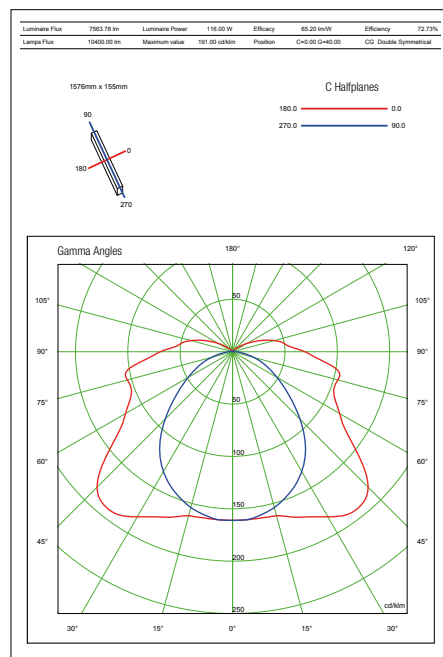
**EVSA218EL**



**EVSA236EL**



**EVSA258EL**



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20303.0130	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	GALVANIZED STEEL
20303.0126	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	STAINLESS STEEL
20303.0131	WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20302.0145	POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20302.0146	POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20302.0125	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
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (110±240Vac - 50/60 Hz) - (110±240Vdc)</b>								
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

<b>EMERGENCY FLUORESCENT LIGHTING FIXTURES FOR SINGLE AND TWIN LAMPS - POWER SUPPLY (inverter) 220±240V - 50/60Hz</b>								
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

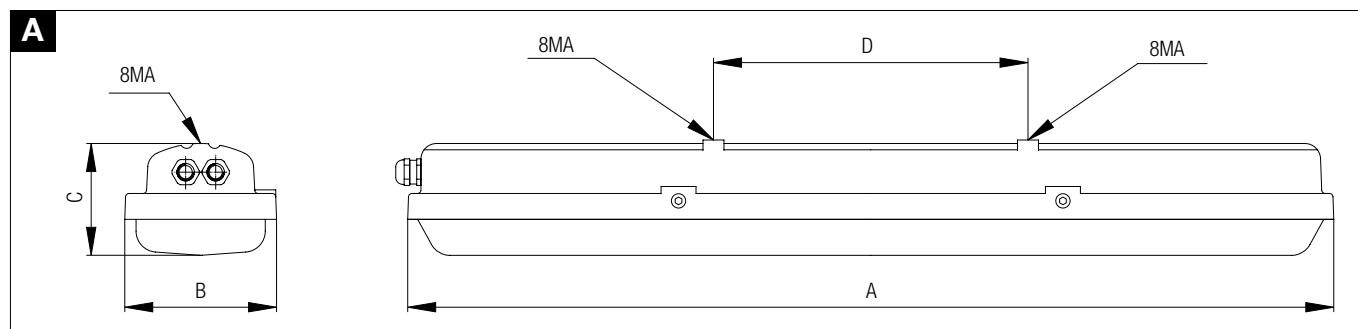
<b>LIGHTING FIXTURES FOR LED STRIPES LAMP ("TR" VERSION) - CCT: 5000K / CRI: 80 - POWER SUPPLY 220±240Vac</b>							
CODE	LAMP	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT (lm)	EMERGENCY UNIT	DIMENSIONALLY EQUIVALENT TO	
WFL-66LED	66 LED / 22W	-	-	3180	-	18W FLUO. L=730 mm	
WFL-132LED	132 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

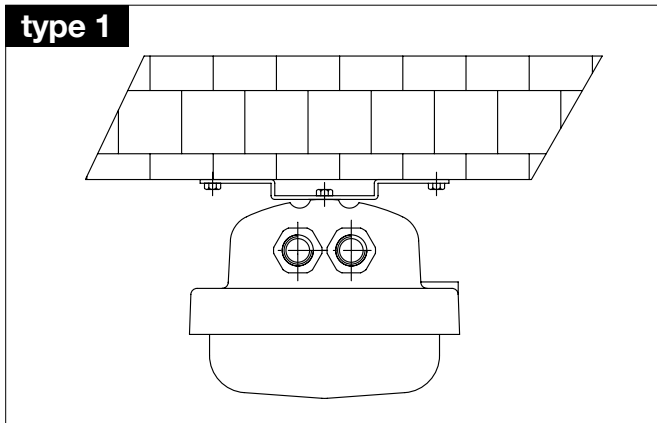
**Reference details**





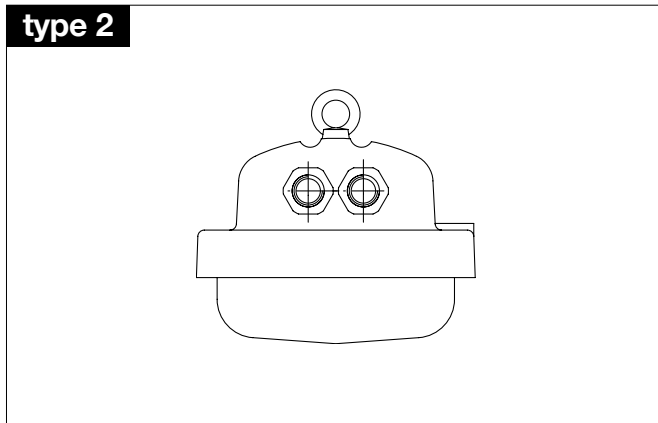
Ceiling mounting

type 1



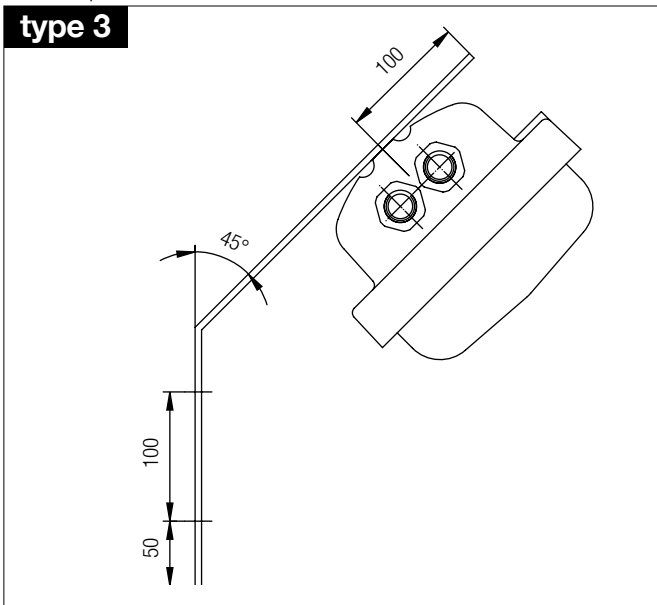
Pendant mounting

type 2



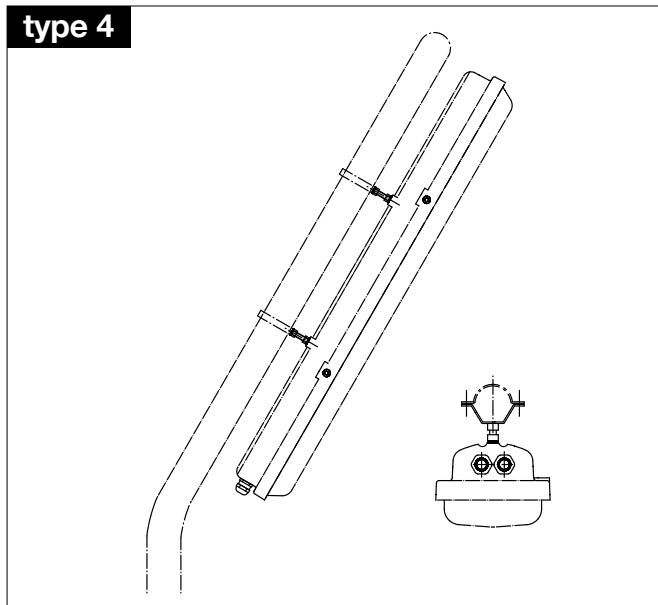
Wall/structure mounting

type 3



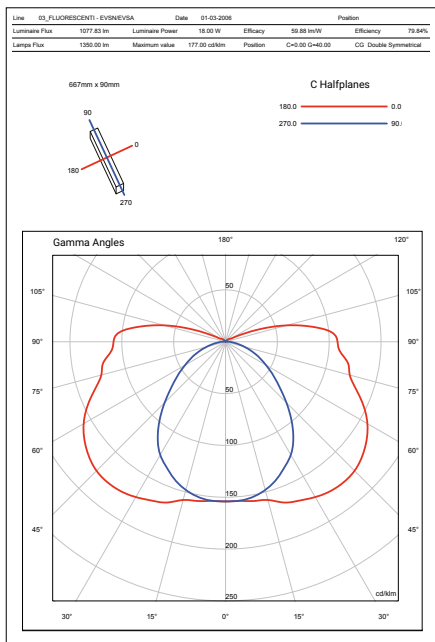
Pole mounting. Assembling detail with pole (typical)

type 4

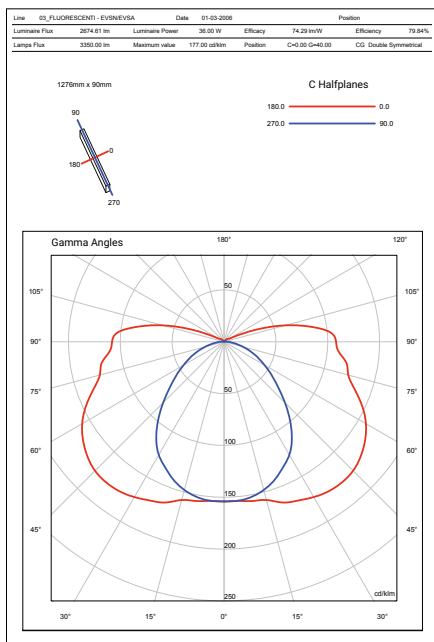


WFL Polar diagrams – photometric data

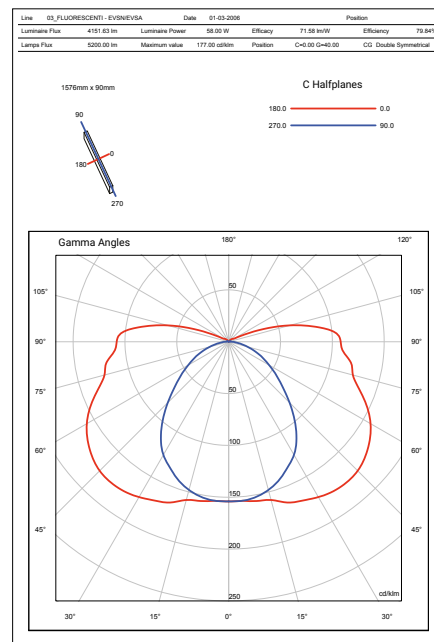
WFL-218



WFL-136



WFL-236



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0121	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	GALVANIZED STEEL
20301.0165	PENDANT MOUNTING KIT C/W HARDWARE AND EYE-BOLTS	TYPE 2	STAINLESS STEEL
20302.0128	WALL/STRUCTURE MOUNTING KIT C/W HARDWARE	TYPE 3	GALVANIZED STEEL
20301.0163	POLE MOUNTING KIT (SIZE 1 1/2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20301.0162	POLE MOUNTING KIT (SIZE 2" DIA.) C/W HARDWARE	TYPE 4	STAINLESS STEEL
20301.0161	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 - $\cos \rho \geq 0,95$ )
Lamp holders	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**

SFDA#250HG	250 W	-	-	E-40	1 x ISO-M20	A
SFDA#400HG	400 W					

**Note:** Available with symmetric optical only

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

SFDA#150MH-*	150 W	-	-	E-40	1 x ISO-M20	A
SFDA#250MH-*	250 W					
SFDA#400MH-*	400 W					

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

SFDA#150HPNA-*	150 W	-	-	E-40	1 x ISO-M20	A
SFDA#250HPNA-*	250 W					
SFDA#400HPNA-*	400 W					

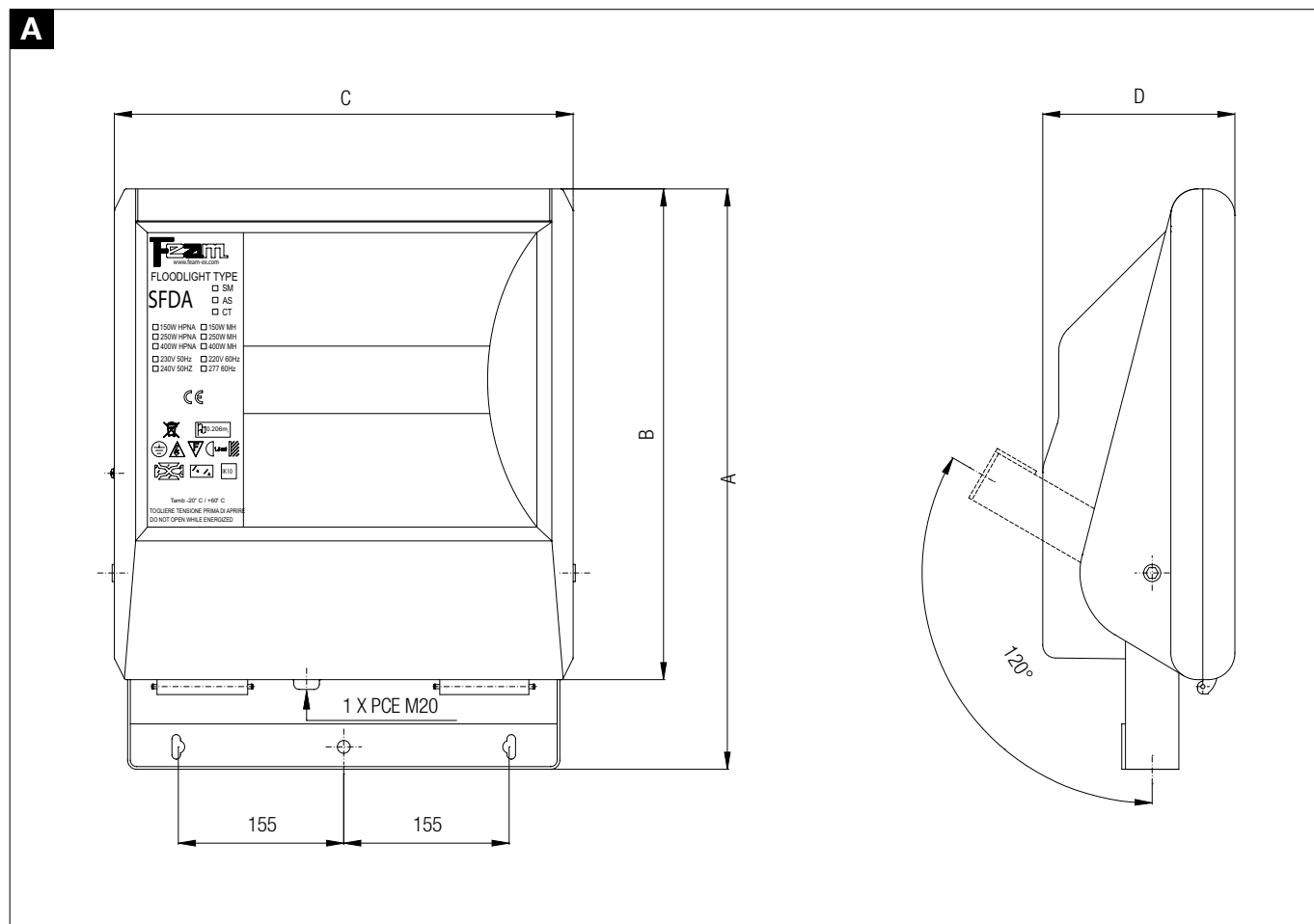
(\*) INTERNAL OPTICAL BEAM: (S) SYMMETRIC BEAM - (A) ASYMMETRIC BEAM - (C) CONCENTRATING BEAM

**SAMPLE:** SFDA#400MH-S = FLOODLIGHT 400W METAL HALIDE WITH SYMMETRIC OPTICAL BEAM

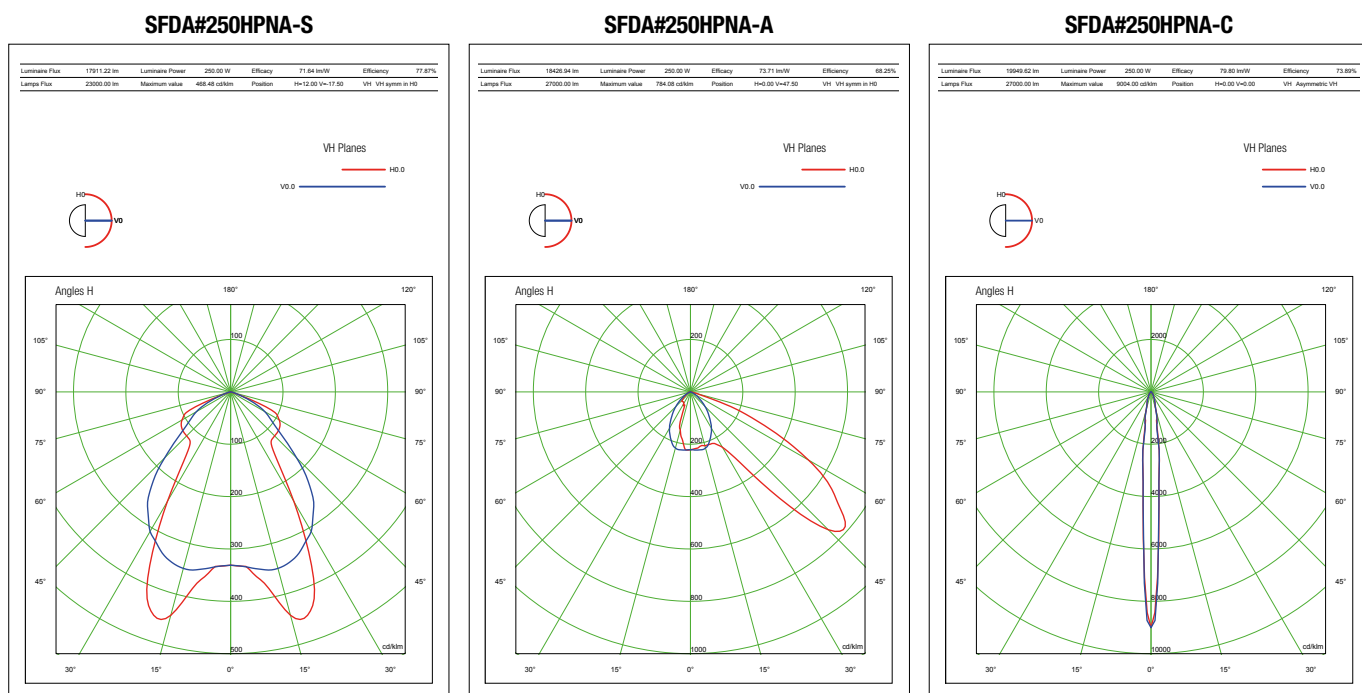
**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
SFDA#250HG	544	461	430	180	8,80	1 x ISO-M20	A
SFDA#400HG	544	461	430	180	9,10	1 x ISO-M20	A
SFDA#150MH	544	461	430	180	9,50	1 x ISO-M20	A
SFDA#250MH	544	461	430	180	9,70	1 x ISO-M20	A
SFDA#400MH	544	461	430	180	11,00	1 x ISO-M20	A
SFDA#150HPNA	544	461	430	180	10,50	1 x ISO-M20	A
SFDA#250HPNA	544	461	430	180	11,10	1 x ISO-M20	A
SFDA#400HPNA	544	461	430	180	12,30	1 x ISO-M20	A

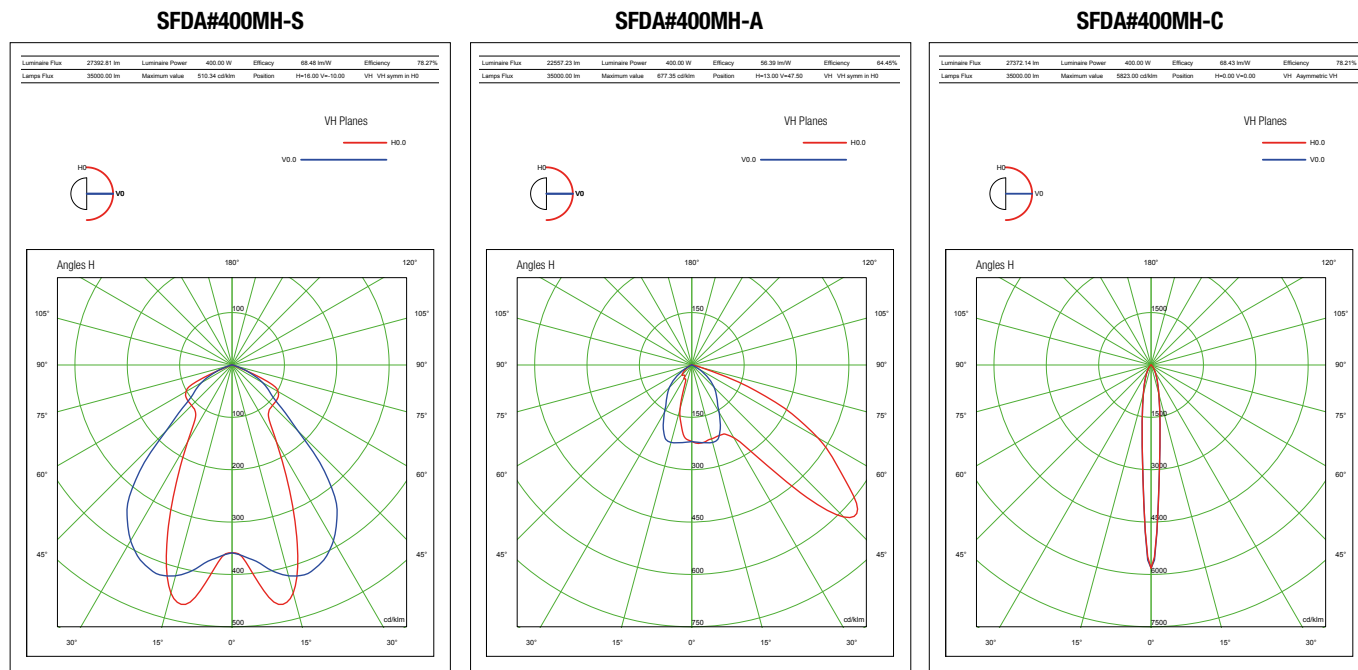
Reference details



SFDA Polar diagrams - photometric data





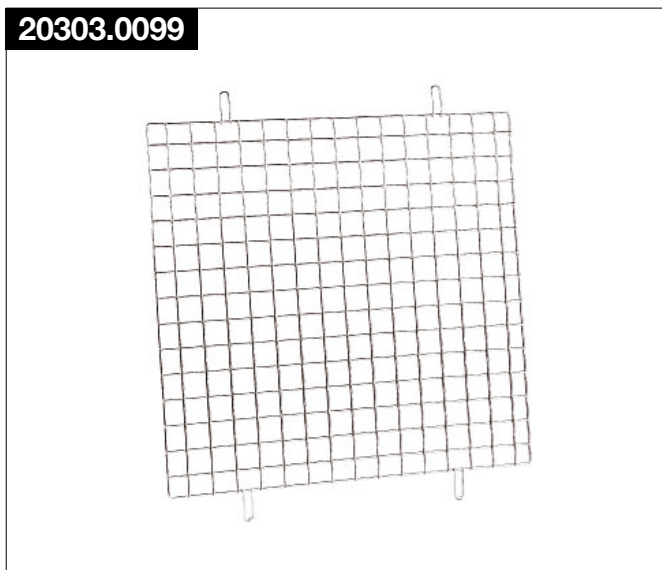


**On request accessories**

CODE	DESCRIPTION	MATERIAL
20303.0099	PROTECTION GRID	ALUMINIUM
20303.0100	POLE ADAPTER FOR DIA 40÷60MM	PAINTED STEEL

**Protection grid**

**20303.0099**



**Pole adapter**

**20303.0100**



**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

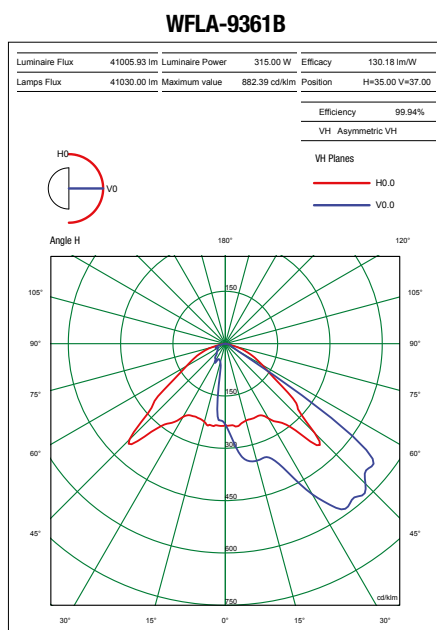
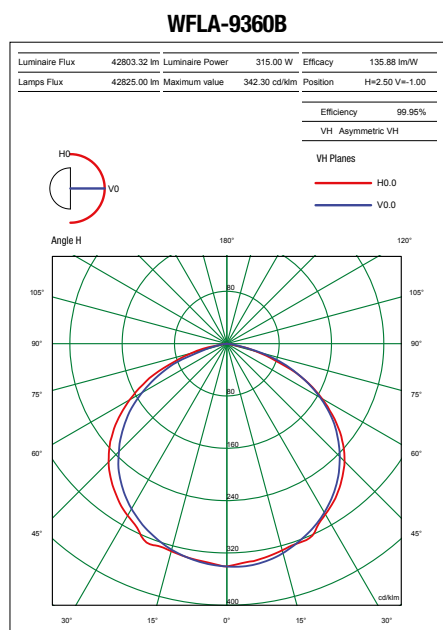
CODE	POWER LAMP	WIRING	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
WFLA-4160B	140 W	64 LED			20800	19035	1 X ISO-M20	A
WFLA-4161B					26000	23790		
WFLA-5200B	175 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

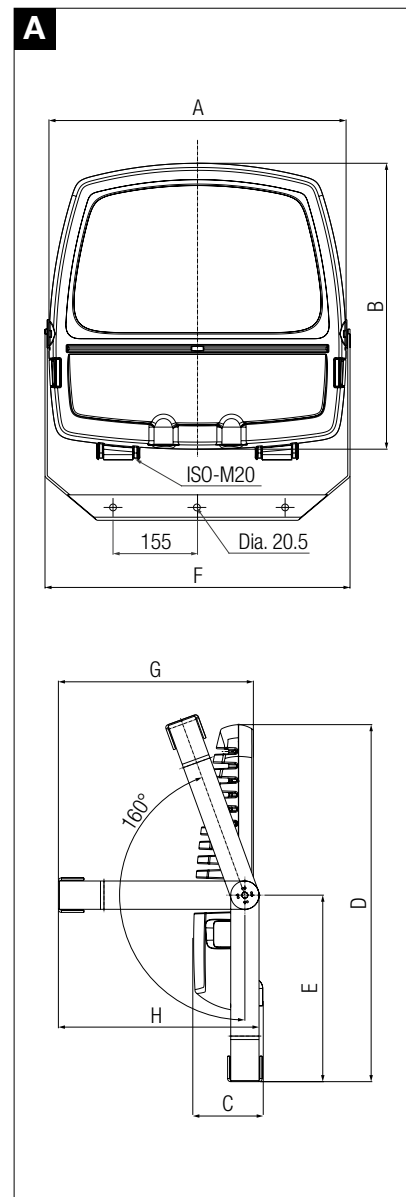
**Technical features**

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 Polar diagrams - photometric data**



**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:**

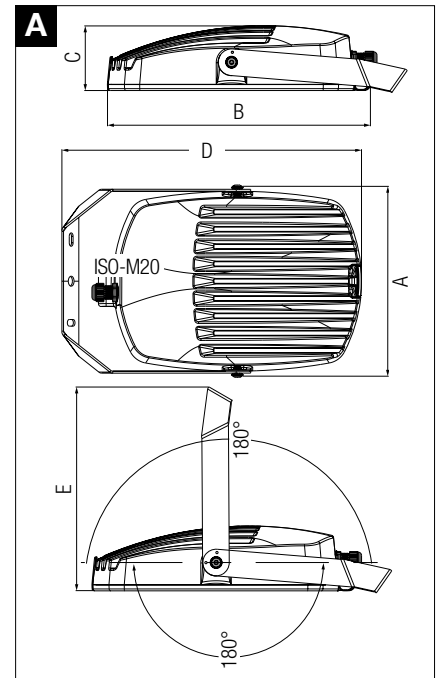
- External painting colour on request
- DALI dimmable driver and output reduction with Vmidnight system
- CCT 2200/3000/5700 K
- Customized LED current drivers
- Additional optics
- SPD 10KV
- Pole mounting

Technical data

CODE	POWER LAMP	WIRING	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
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				

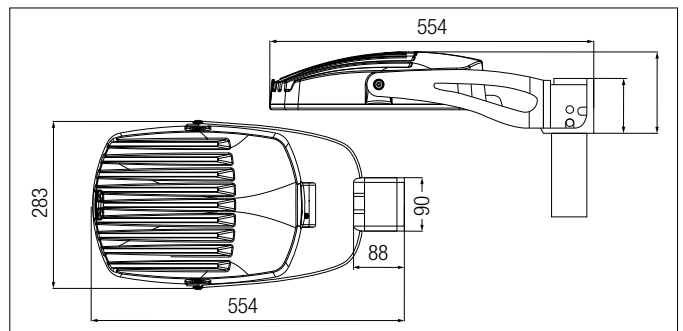
OPTIC BEAM: 0B=SM - WITHOUT LENS / 1B=AS - ASYMMETICAL LENS / 2B=ST - STREET-ROAD LENS

Reference details

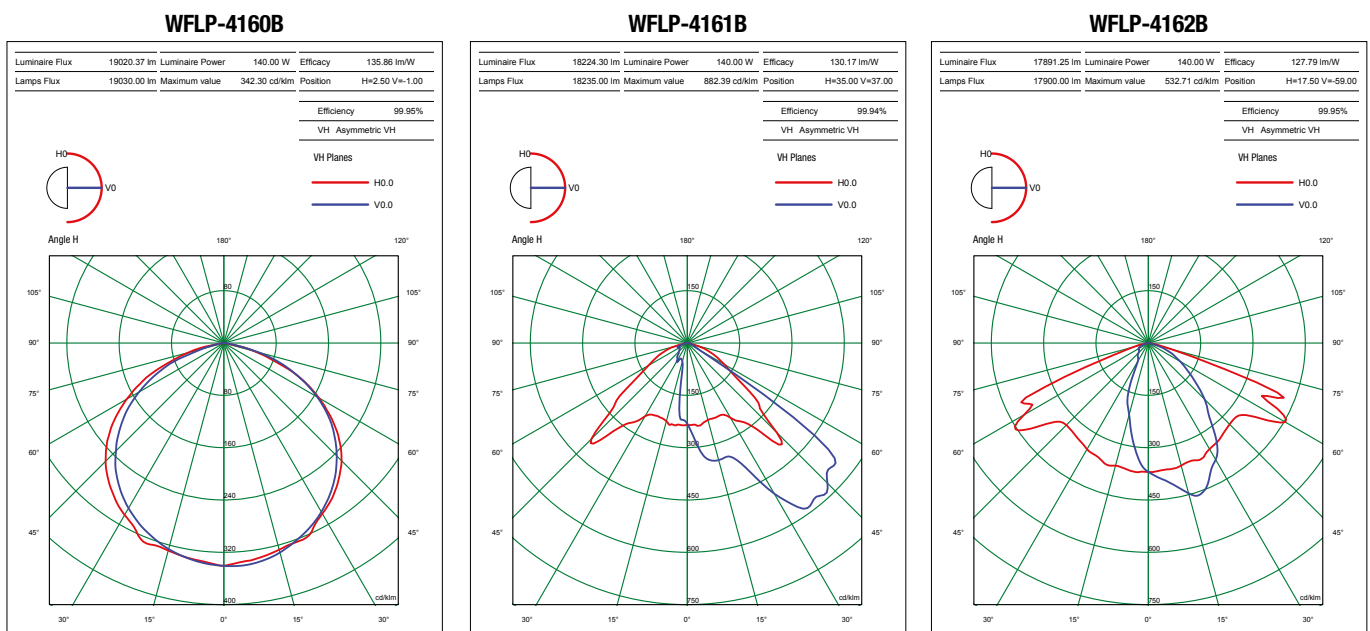


Technical features

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 Polar diagrams - photometric data



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

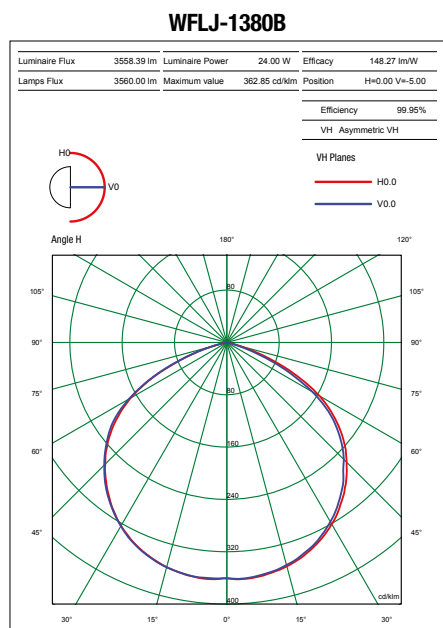
Technical data

CODE	POWER LAMP	WIRING	TEMPERATURE CLASS ( GAS )	TEMPERATURE CLASS ( DUSTS )	OUTPUT TYPICAL (lm)	OUTPUT NET (lm)	CABLE ENTRY SIZE	DETAIL
<b>FLOODLIGHTS FOR LED LAMP - POWER SUPPLY 220±240V 50/60Hz</b>								
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		

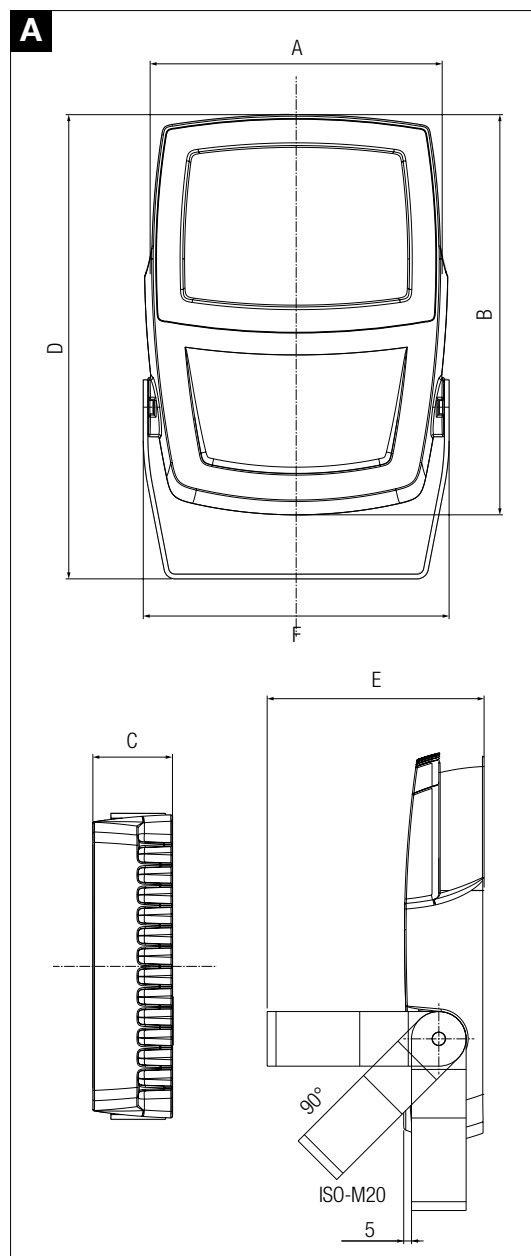
Technical features

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 Polar diagrams - photometric data



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 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 10 ATEX 032X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-40°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	RUSSIAN MARINE CERTIFICATE (RMRS): 19.02519.280 INMETRO: CEPEL 14.2313X

**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



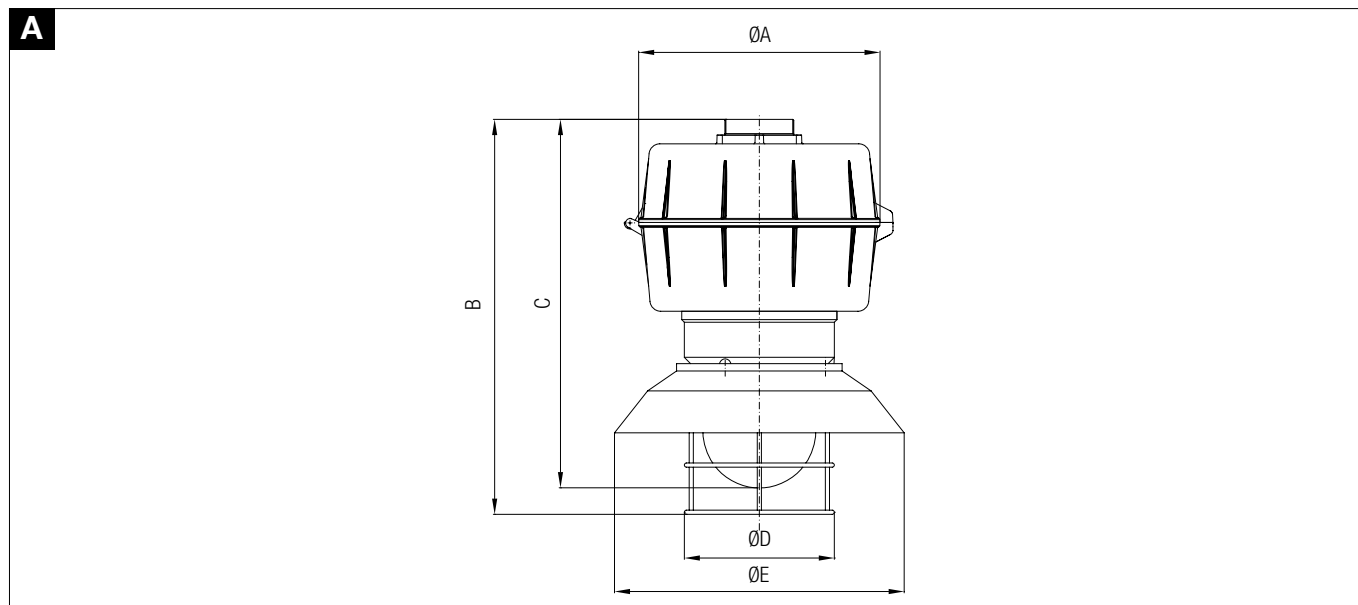
**Technical data**

CODE	TYPE LAMP	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER SIZE	DETAIL
<b>LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz</b>					
EWN2-80HG	80 W	T4	T 135°C	E-27	A
EWN2-125HG	125 W	T3	T 200°C	E-27	A
EWN3-250HG	250W	T4	T 135°C	E-40	A
EWN5-400HG	400 W	T3	T 200°C	E-40	A
<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz</b>					
EWN2-70MH	70 W	T4	T 135°C	E-27	A
EWN2-100MH	100 W	T4	T 135°C	E-27	A
EWN2-150MH	150 W	T3	T 200°C	E-27	A
EWN3-175MH	175 W	T3	T 200°C	E-40	A
EWN3-250MH	250 W	T3	T 200°C	E-40	A
EWN5-400MH	400 W	T3	T 200°C	E-40	A
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz</b>					
EWN2-70HPS	70 W	T4	T 135°C	E-27	A
EWN3-100HPS	100 W	T4	T 135°C	E-40	A
EWN3-150HPS	150 W	T3	T 200°C	E-40	A
EWN3-250HPS	250 W	T3	T 200°C	E-40	A
EWN5-400HPS	400 W	T3	T 200°C	E-40	A

**Technical features**

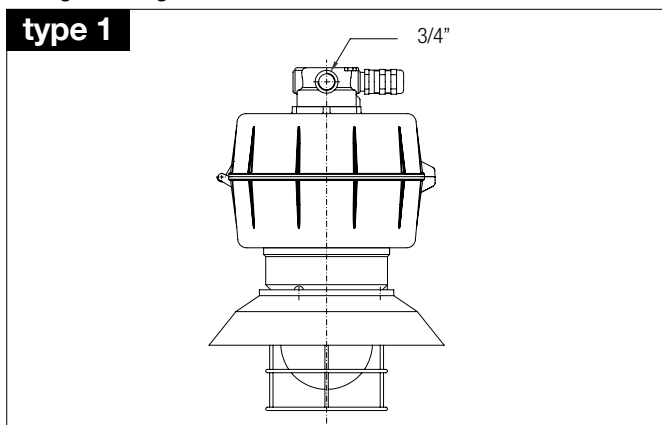
CODE	A [mm]	B [mm]	C [mm]	Ø D [mm]	Ø E [mm]	WEIGHT [Kg]	DETAIL
EWN2	280	430	415	145	280	8,5	A
EWN3	280	510	480	190	402	9,5	A
EWN5	280	570	545	255	515	10	A

**Reference details**



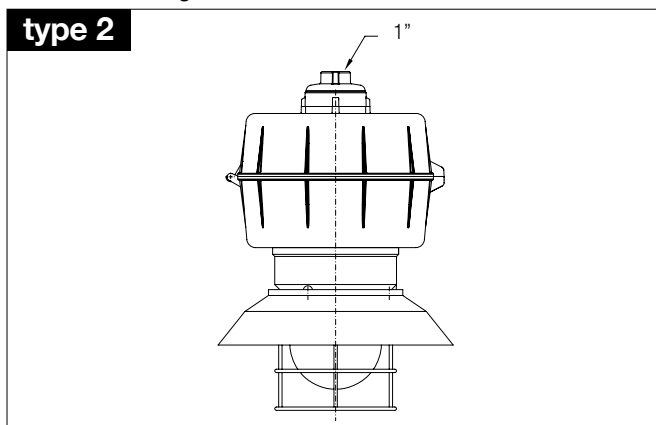
**Ceiling mounting**

**type 1**



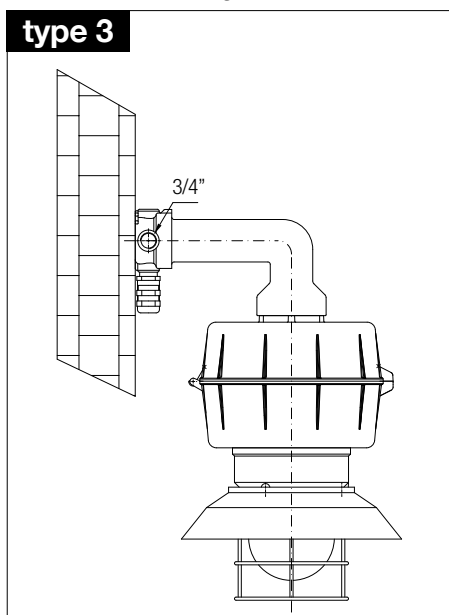
**Pendant mounting**

**type 2**



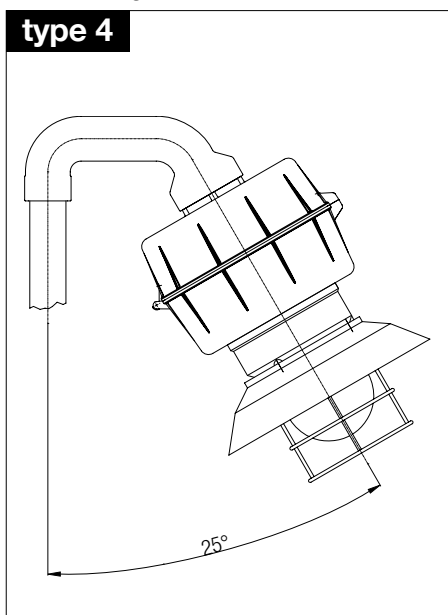
**Wall/structure mounting**

**type 3**



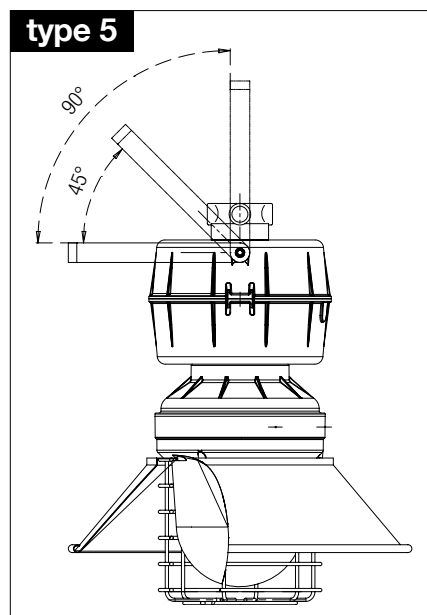
**Pole mounting 25°**

**type 4**



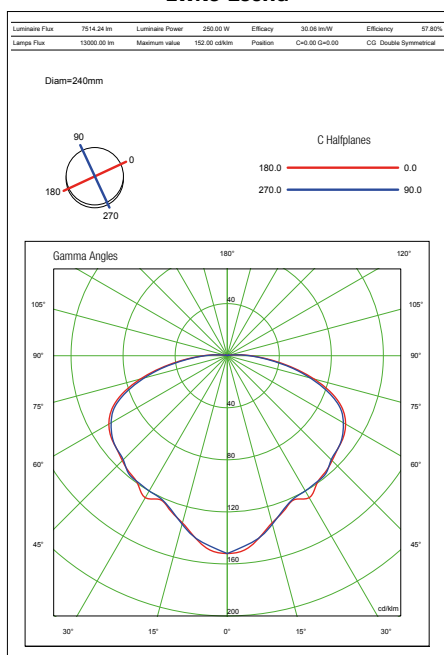
**Universal mounting inst. with adjustable bracket**

**type 5**

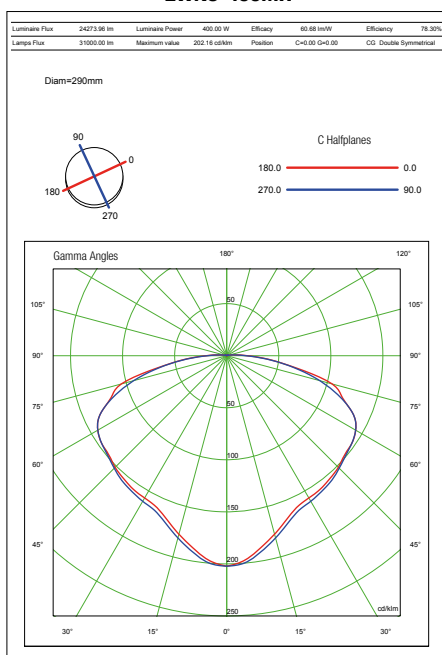


**EWN Polar diagrams - photometric data**

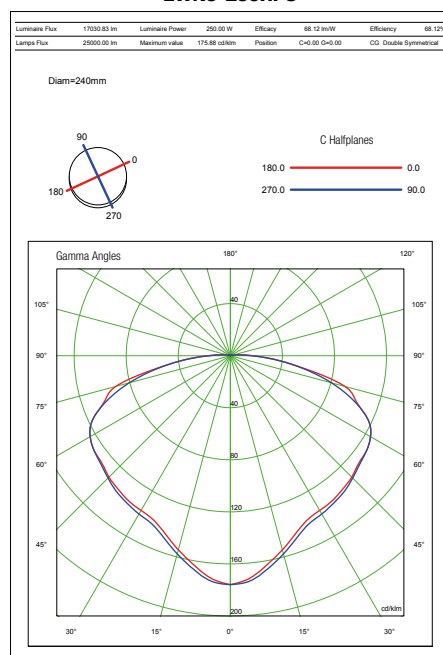
**EWN3-250HG**



**EWN5-400MH**



**EWN3-250HPS**



## On request accessories

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0071	EVAC 200 / 201 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0072	EVAC 300 / 301 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0073	EVAC 500 / 501 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0026	EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0027	EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0028	EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0030	EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0031	EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0032	EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0075	EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0076	EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0077	EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0038	EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20302.0039	EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20302.0040	EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20303.0102	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	ALUMINIUM
20303.0103	PENDANT MOUNTING KIT	TYPE 2	ALUMINIUM
20303.0104	WALL / STRUCTURE MOUNTING KIT	TYPE 3	ALUMINIUM
20303.0108	2" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMINIUM
20303.0107	1-1/2" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMINIUM
20303.0106	1" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMINIUM
20303.0105	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



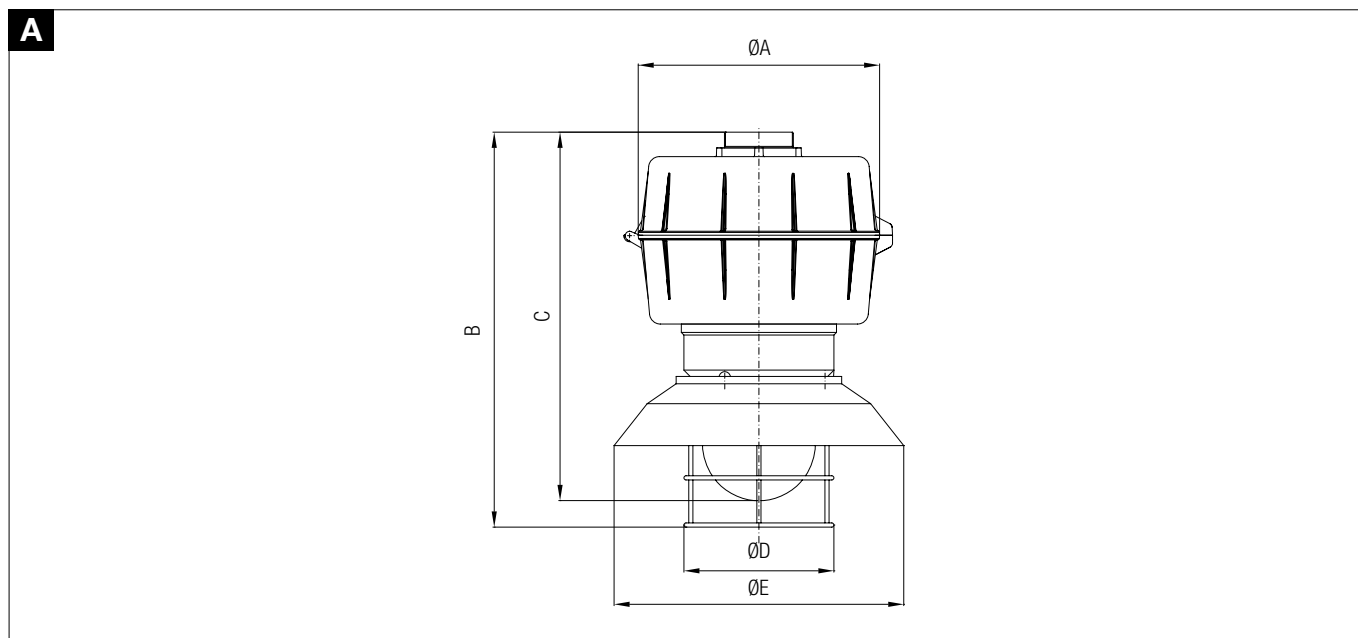
**Technical data**

CODE	LAMP TYPE	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER SIZE	DETAIL
<b>LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz</b>					
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
<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz</b>					
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
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz</b>					
EW2-70HPS	70 W	-	-	E-27	A
EW3-100HPS	100 W	-	-	E-40	A
EW3-150HPS	150 W	-	-	E-40	A
EW3-250HPS	250 W	-	-	E-40	A
EW5-400HPS	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

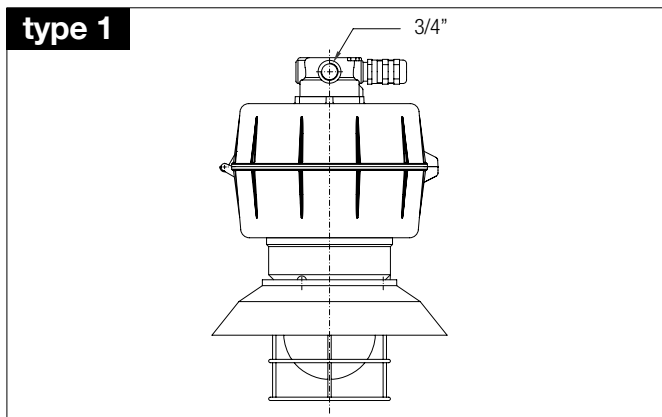
**Reference details**





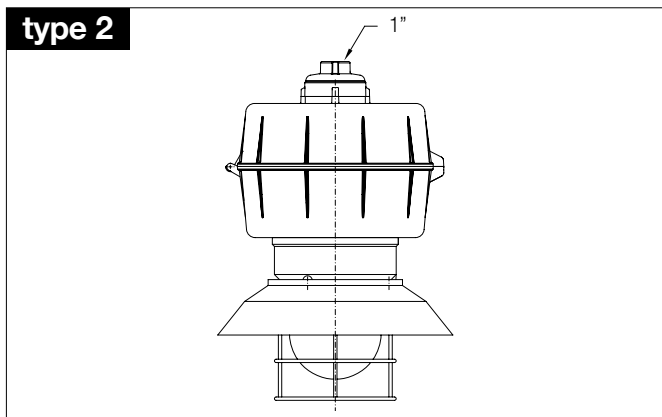
Ceiling mounting

type 1



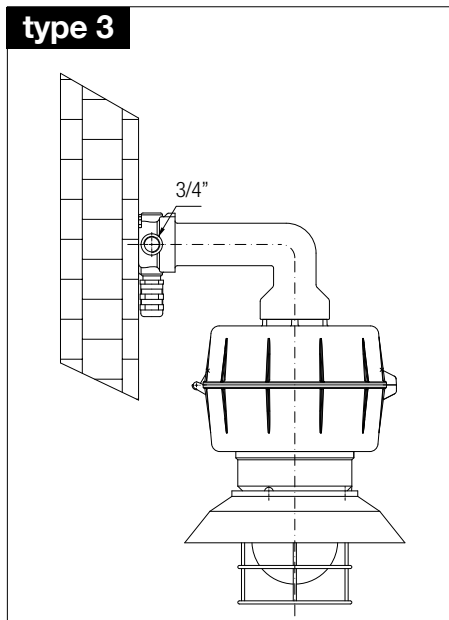
Pendant mounting

type 2



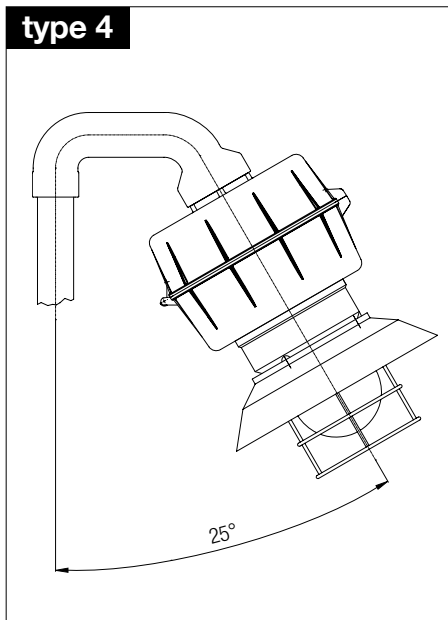
Wall/structure mounting

type 3



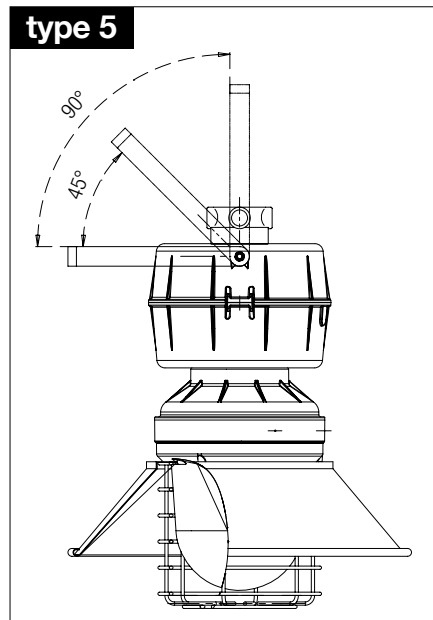
Pole mounting 25°

type 4



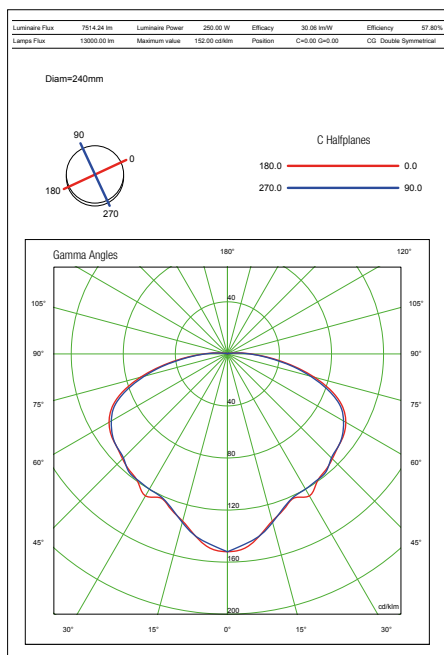
Universal mounting inst. with adjustable bracket

type 5

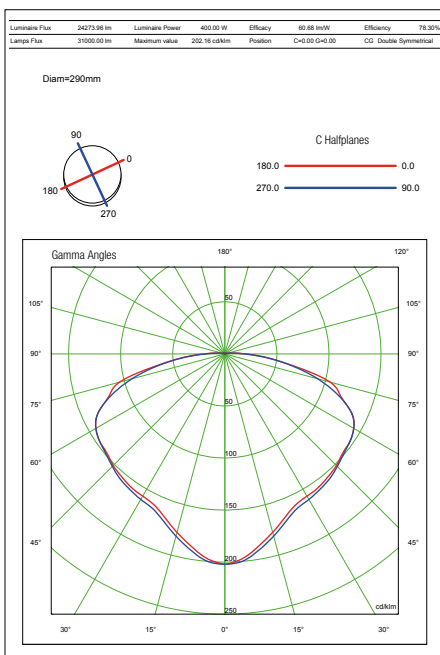


EW Polar diagrams - photometric data

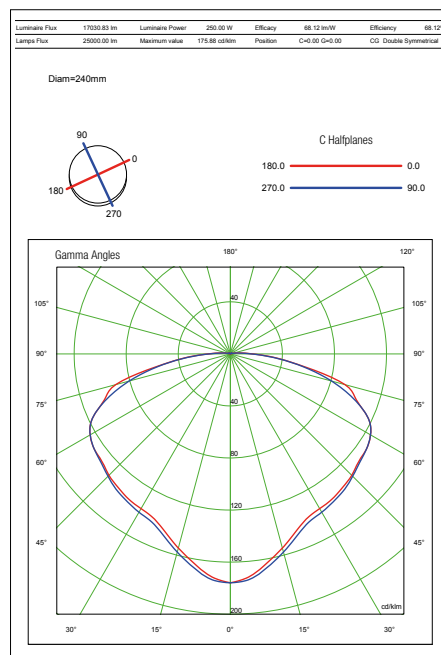
EW3-250HG



EW5-400MH



EW3-250HPS



**On request accessories**

CODE	DESCRIPTION	INSTALLATION	MATERIAL
20302.0071	EVAC 200 / 201 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0072	EVAC 300 / 301 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0073	EVAC 500 / 501 SIZE STANDARD REFLECTOR		WHITE STOVE ENAMELLED ALUM.
20302.0026	EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0027	EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0028	EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR		STAINLESS STEEL AISI 316L
20302.0130	EVAC 200 / 201 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0031	EVAC 300 / 301 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0032	EVAC 500 / 501 SIZE STAINLESS STEEL REFLECTOR INCLINED 45°		WHITE STOVE ENAMELLED ALUM.
20302.0075	EVAC 200 / 201 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0076	EVAC 300 / 301 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0077	EVAC 500 / 501 SIZE STANDARD PROTECTION GUARD		GALVANIZED STEEL
20302.0038	EVAC 200 / 201 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20302.0039	EVAC 300 / 301 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20302.0040	EVAC 500 / 501 SIZE STAINLESS STEEL PROTECTION GUARD		STAINLESS STEEL AISI 316L
20303.0102	CEILING MOUNTING KIT C/W HARDWARE	TYPE 1	ALUMININIUM
20303.0103	PENDANT MOUNTING KIT	TYPE 2	ALUMININIUM
20303.0104	WALL / STRUCTURE MOUNTING KIT	TYPE 3	ALUMININIUM
20303.0108	2" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMININIUM
20303.0107	1-1/2" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMININIUM
20303.0106	1" DIA.SIZE POLE MONTING KIT C/W HARDWARE	TYPE 4	ALUMININIUM
20303.0105	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

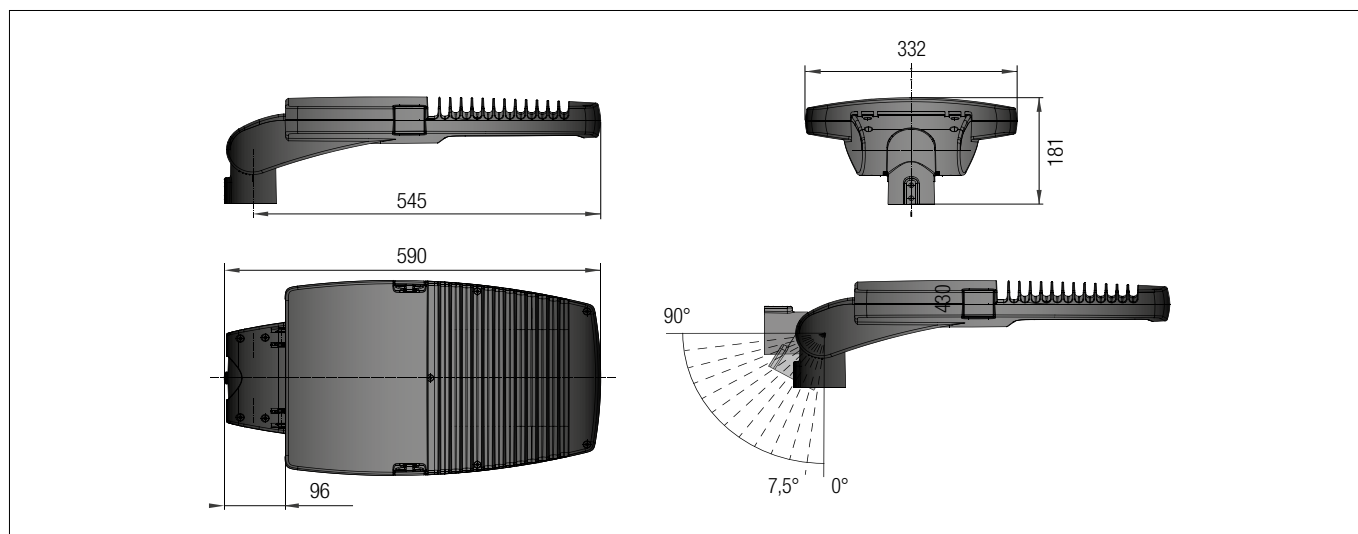




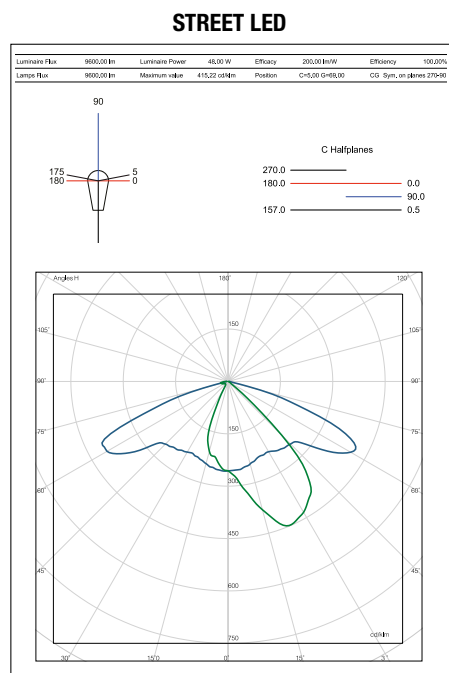
**Technical data**

CODE	LED UNITS & POWER	NOMINAL OUTPUT	NET OUTPUT	weight [kg]	DETAIL
<b>LED LIGHTING FIXTURES - POWER SUPPLY 230V-50Hz</b>					
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

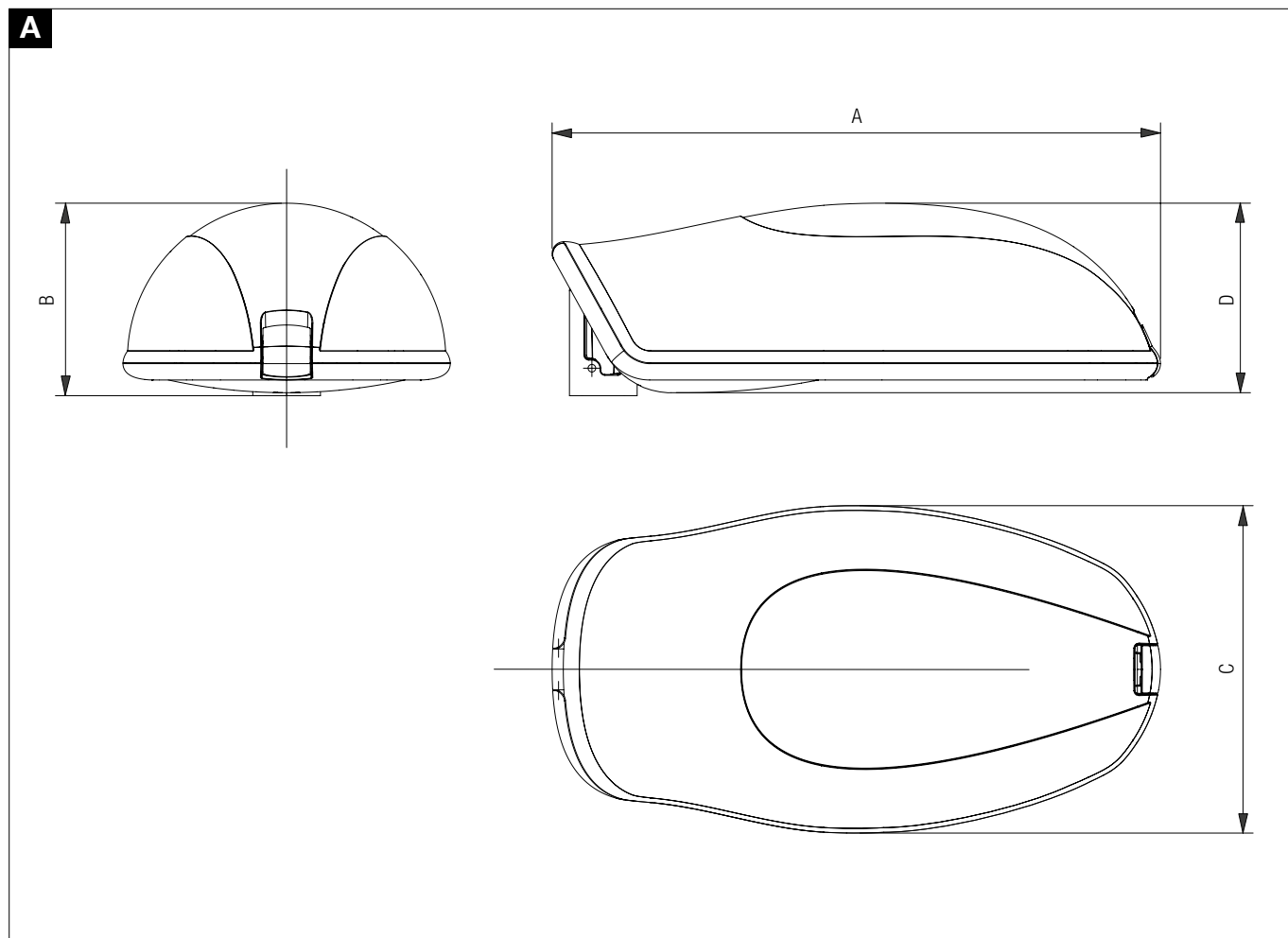
## Technical data

CODE	LAMP TYPE	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER SIZE	DETAIL
<b>LIGHTING FIXTURE FOR HIGH PRESSURE MERCURY VAPOUR LAMP - POWER SUPPLY 230V 50Hz</b>					
M400-125HG	125 W	-	-	E-27	A
M400-250HG	250 W	-	-	E-40	A
M400-400HG	400 W	-	-	E-40	A
<b>LIGHTING FIXTURE FOR METAL HALIDE LAMP - POWER SUPPLY 230V 50Hz</b>					
M400-70MH	70 W	-	-	E-27	A
M400-100MH	100 W	-	-	E-27	A
M400-150MH	150 W	-	-	E-27	A
M400-250MH	250 W	-	-	E-40	A
M400-400MH	400 W	-	-	E-40	A
<b>LIGHTING FIXTURE FOR HIGH PRESSURE SODIUM LAMP - POWER SUPPLY 230V 50Hz</b>					
M400-70HPNA	70 W	-	-	E-27	A
M400-100HPNA	100 W	-	-	E-40	A
M400-150HPNA	150 W	-	-	E-40	A
M400-250HPNA	250 W	-	-	E-40	A
M400-400HPNA	400 W	-	-	E-40	A

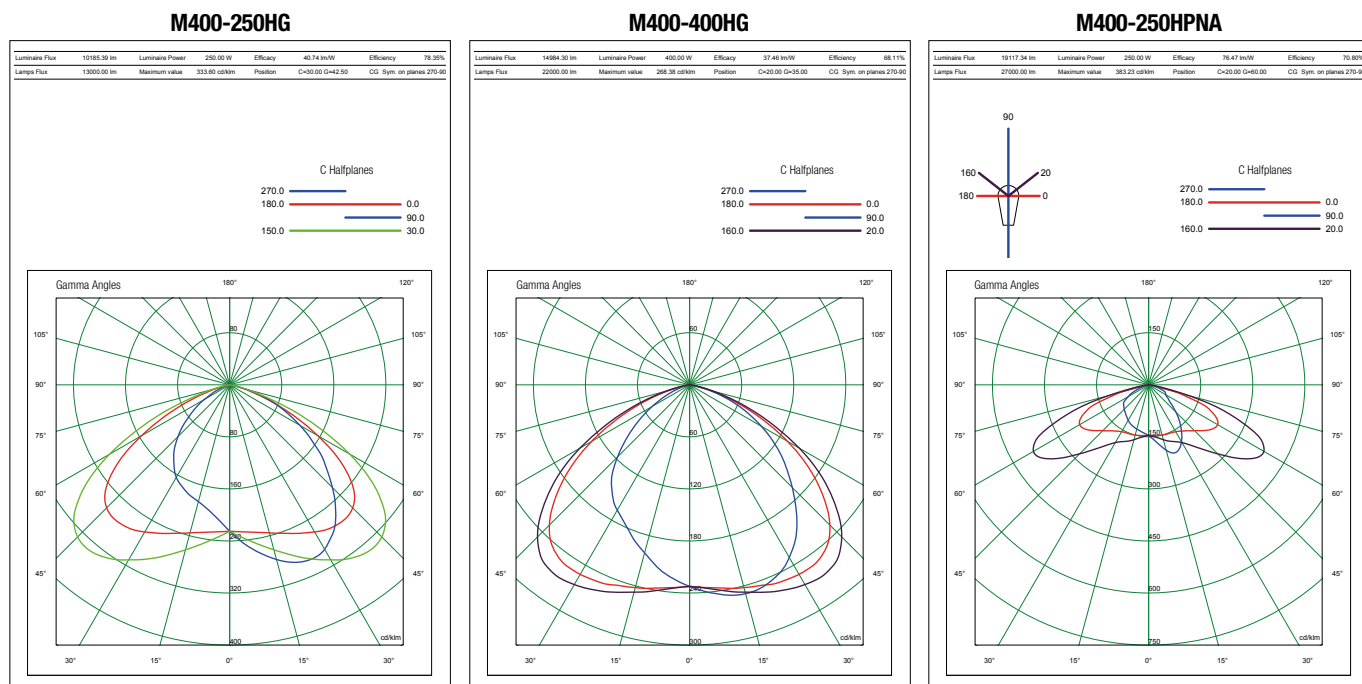
## M400 Technical features

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	DETAIL
M400-125HG	719	228	387	224	10,2	A
M400-250HG	719	228	387	224	11,5	A
M400-400HG	719	228	387	224	12,9	A
M400-70MH	719	228	387	224	10,4	A
M400-100MH	719	228	387	224	10,4	A
M400-150MH	719	228	387	224	11,7	A
M400-250MH	719	228	387	224	11,7	A
M400-400MH	719	228	387	224	13	A
M400-70HPNA	719	228	387	224	10,5	A
M400-100HPNA	719	228	387	224	10,5	A
M400-150HPNA	719	228	387	224	11,7	A
M400-250HPNA	719	228	387	224	13	A
M400-400HPNA	719	228	387	224	14,3	A

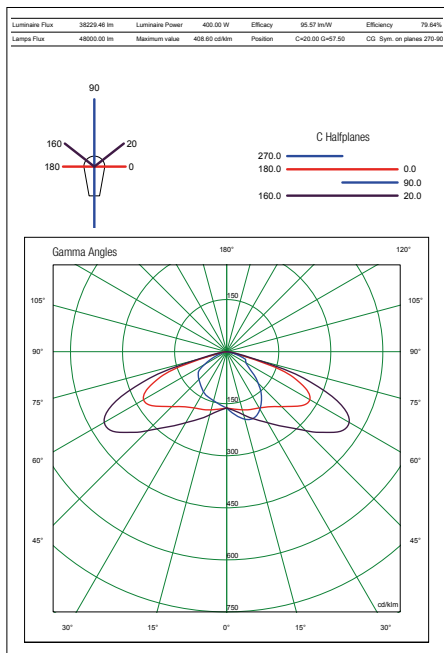
Reference details



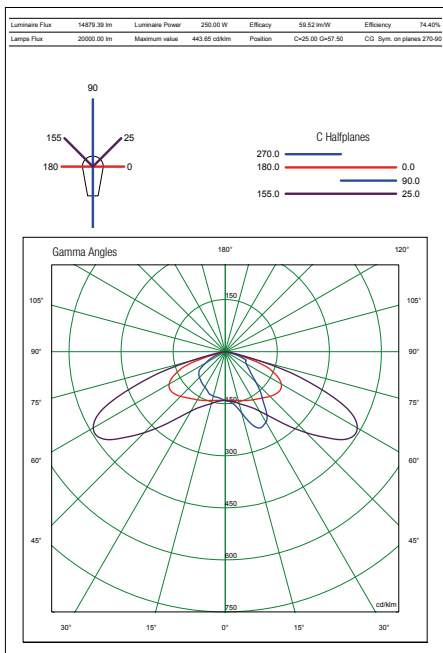
M400 Polar diagrams - photometric data



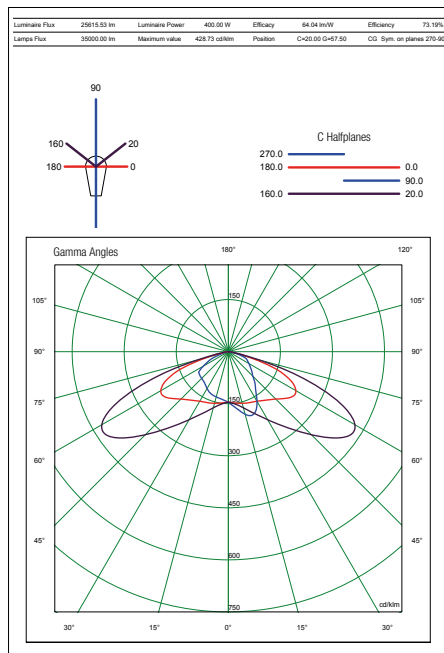
**M400-400HPNA**



**M400-250MH**



**M400-400MH**



**On request accessories**

CODE	DESCRIPTION	MATERIAL
20303.0120	ANGLE/WALL INSTALLATION BRACKET	PAINTED STEEL
20303.0121	POLE ADAPTER - DIA. 40÷60MM	ALUMINIUM
20303.0125	POLE ADAPTER - DIA. 76 MM	PAINTED STEEL

**Angle/wall installation bracket**

**20303.0120**



**Pole adapter - dia. 40 mm**

**20303.0121**



**Pole adapter - dia. 76 mm**

**20303.0125**



**REMARK:**

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**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 panted 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

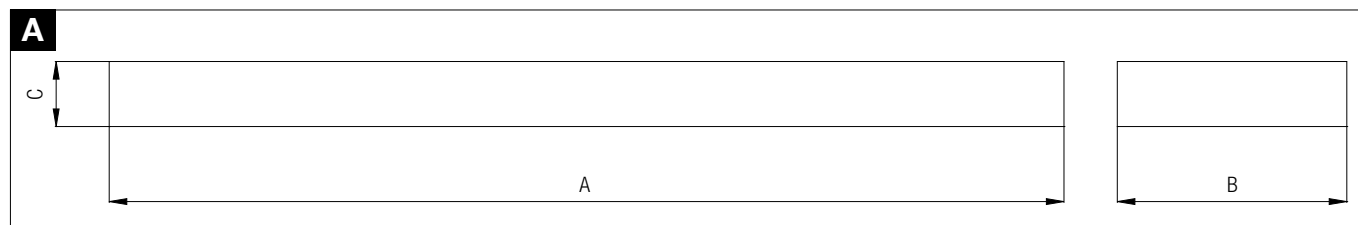
CODE	LAMP TYPE	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER	CABLE ENTRY	DETAIL
<b>FLUORESCENT LIGHTING FIXTURES WITH DARKLIGHT OPTICAL - POWER SUPPLY 230V-50Hz</b>						
OFFICE-PAR-136	1 x 36W	-	-	G13	CABLE GLAND Ø20mm	A
OFFICE-PAR-158	1 x 58W	-	-	G13	CABLE GLAND Ø20mm	A
OFFICE-PAR-218	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
<b>FLUORESCENT LIGHTING FIXTURES WITH METHACRILATE DIFFUSER - POWER SUPPLY 230V-50Hz</b>						
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

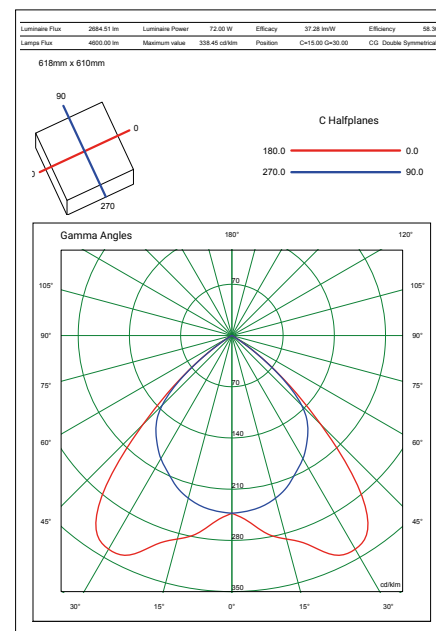
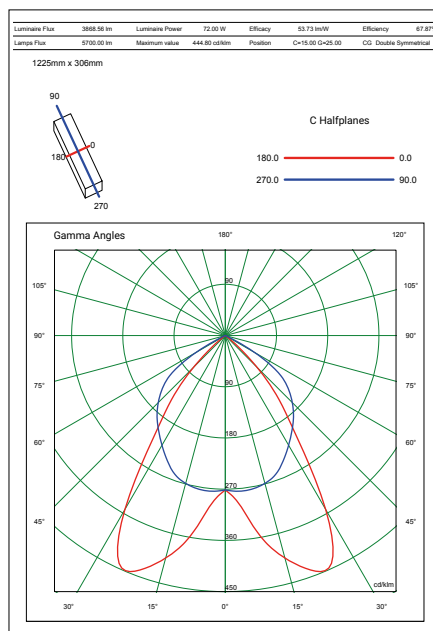
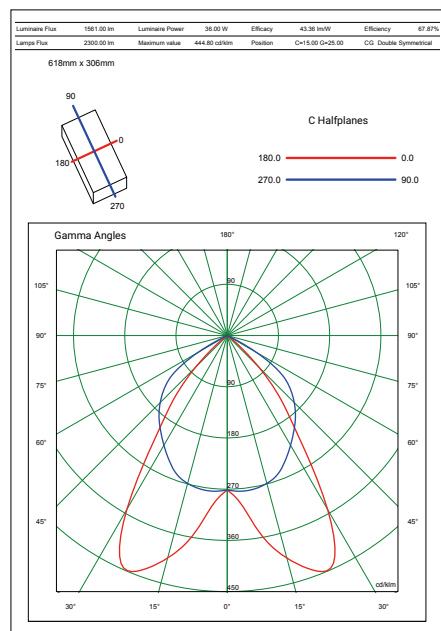
Reference details



OFFICE-PAR-218

OFFICE-PAR-236

OFFICE-PAR-418



REMARK:

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**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



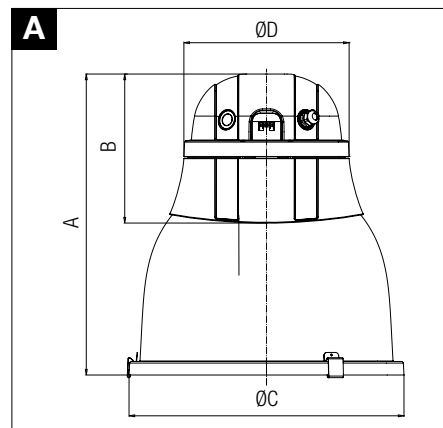
Technical data

CODE	LAMP TYPE	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER	CABLE GLAND	DETAIL
<b>INDUSTRIAL REFLECTORS FOR MERCURY VAPOUR LAMPS - POWER SUPPLY 230V-50Hz</b>						
KRONOS-125MBF	125 W	-	-	E-27	M20	A
KRONOS-250MBF	250 W	-	-	E-40	M20	A
KRONOS-400MBF	400 W	-	-	E-40	M20	A
<b>INDUSTRIAL REFLECTORS FOR METAL HALIDE LAMPS - POWER SUPPLY 230V-50Hz</b>						
KRONOS-150JM	150 W	-	-	E-27	M20	A
KRONOS-250JM	250 W	-	-	E-40	M20	A
KRONOS-400JM	400 W	-	-	E-40	M20	A
<b>INDUSTRIAL REFLECTORS FOR HIGH PRESSURE SODIUM LAMPS - POWER SUPPLY 230V-50Hz</b>						
KRONOS-150SAP	150 W	-	-	E-40	M20	A
KRONOS-250SAP	250 W	-	-	E-40	M20	A
KRONOS-400SAP	400 W	-	-	E-40	M20	A

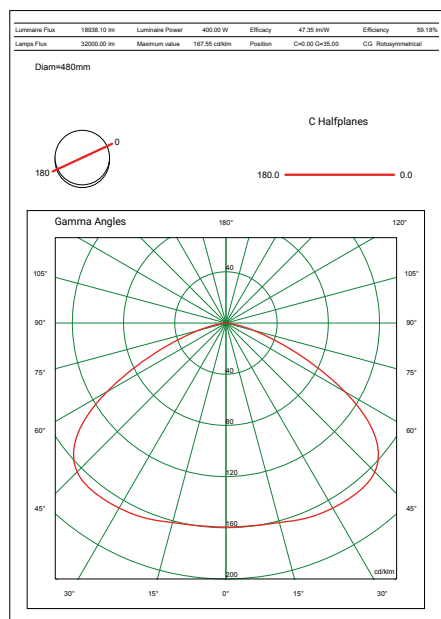
Technical features

CODE	A [mm]	B [mm]	Ø C [mm]	Ø D [mm]	WEIGHT[Kg]	CABLE GLAND	DETAIL
KRONOS-125MBF	535	265	550	295	4,62	M20	A
KRONOS-250MBF	535	265	550	295	5,03	M20	A
KRONOS-400MBF	535	265	550	295	6,35	M20	A
KRONOS-150JM	535	265	550	295	5,22	M20	A
KRONOS-250JM	535	265	550	295	5,17	M20	A
KRONOS-400JM	535	265	550	295	6,50	M20	A
KRONOS-150SAP	535	265	550	295	5,22	M20	A
KRONOS-250SAP	535	265	550	295	6,57	M20	A
KRONOS-400SAP	535	265	550	295	7,76	M20	A

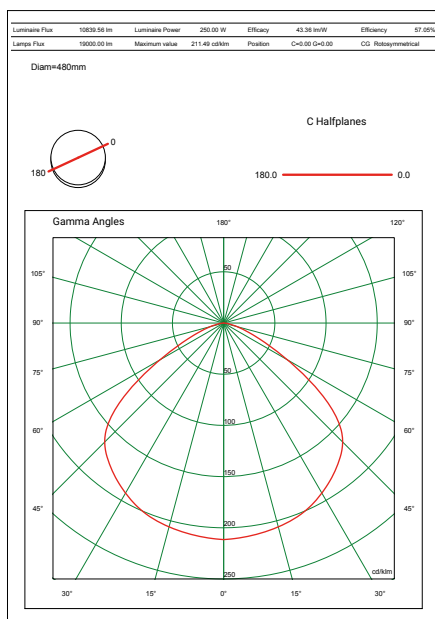
Reference details



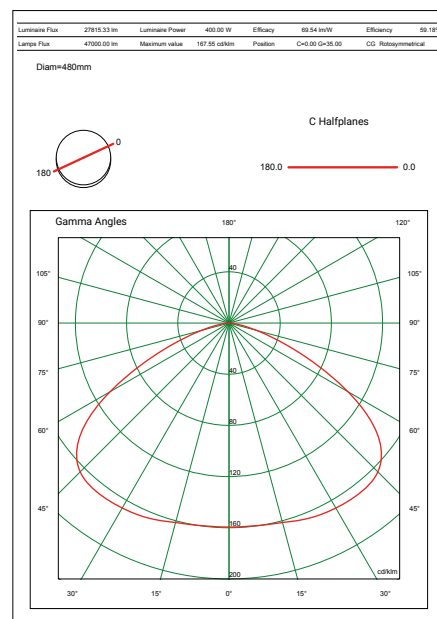
KRONOS-400MBF



KRONOS-250SAP



KRONOS-400JM



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

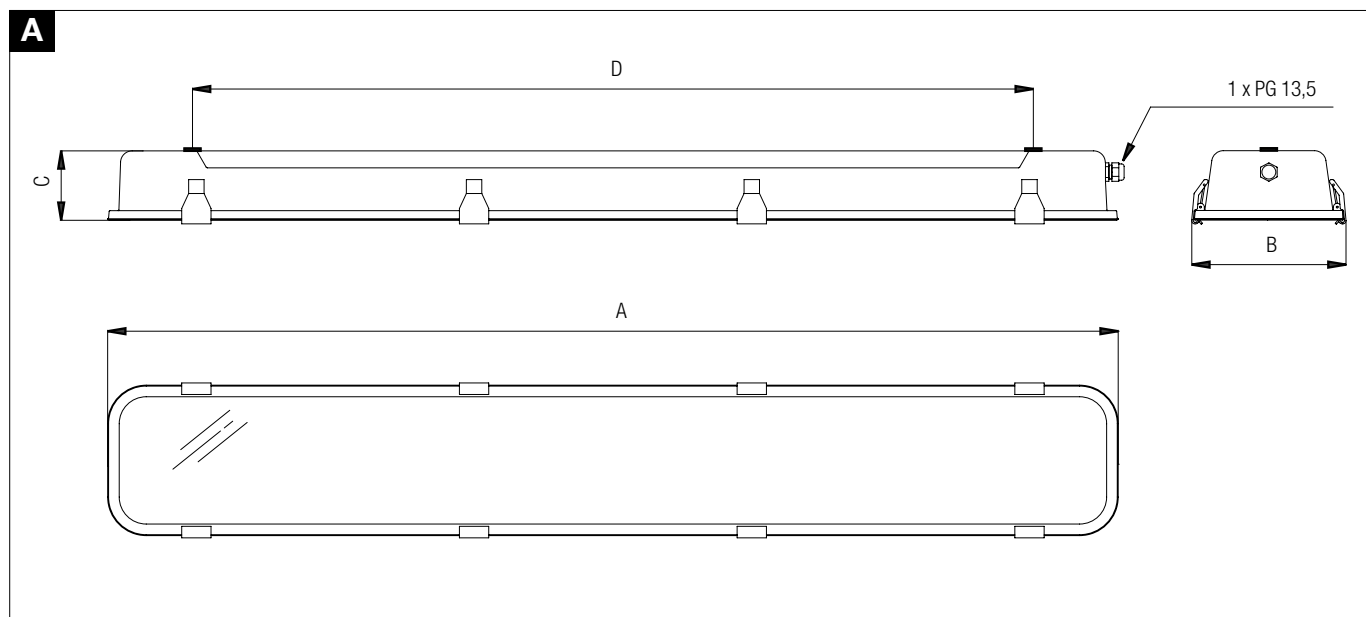
**Technical data**

CODE	LAMP TYPE	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	LAMPHOLDER	CABLE ENTRY	EMERG.UNIT (ON REQUEST)	AUTONOMY (EMERG.UNIT)	DETAIL
<b>FLUORESCENT LIGHTING FIXTURES FOR SINGLE, TWIN, AND THREE LAMPS - POWER SUPPLY 230V-50/60Hz</b>								
GENIUS-118	1 x 18W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-136	1 x 36W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-158	1 x 58W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-218	1 x 18W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-236	2 x 36W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-258	2 x 58W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-318	3 x 18W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A
GENIUS-336	3 x 36W	-	-	G13	1 x PG 13.5	4,8V - 4A/h	180 min.	A

**Technical features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	WEIGHT [Kg]	CABLE ENTRY	DETAIL
GENIUS-118	700	220	90	480	12,50	1 x PG 13,5	A
GENIUS-136	1310	220	90	1090	15,50	1 x PG 13,5	A
GENIUS-158	1610	220	90	1390	18,50	1 x PG 13,5	A
GENIUS-218	700	220	90	480	13,00	1 x PG 13,5	A
GENIUS-236	1310	220	90	1090	16,00	1 x PG 13,5	A
GENIUS-258	1610	220	90	1390	19,00	1 x PG 13,5	A
GENIUS-318	700	220	90	1090	13,50	1 x PG 13,5	A
GENIUS-336	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

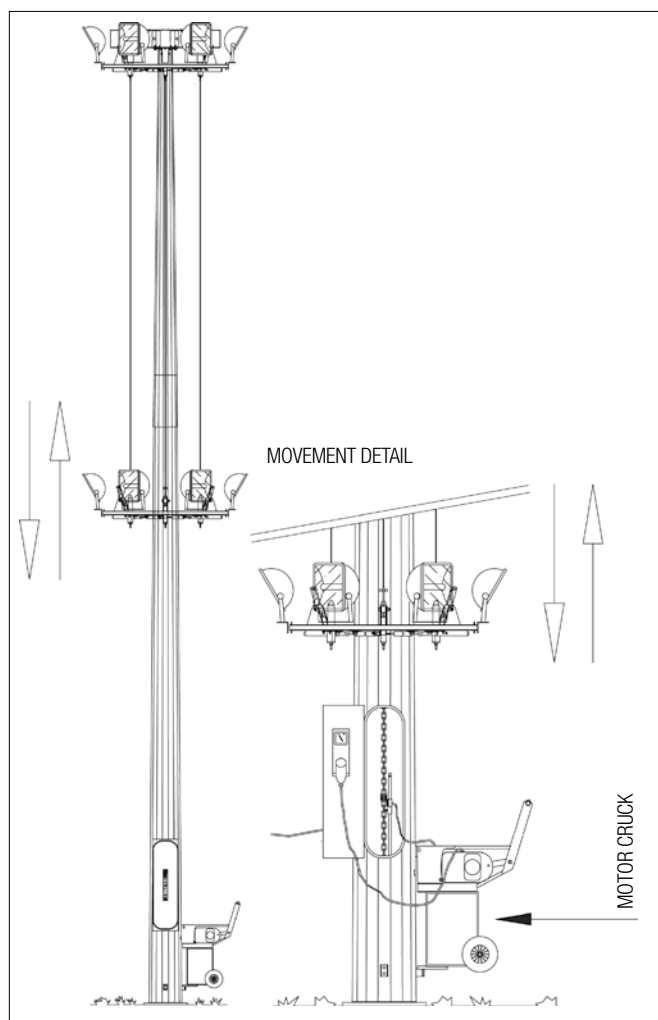


**LIGHTING MASTS WITH MOBILE CROWN FOR EXPLOSION PROOF FLOODLIGHTS EEX D IIB T3 IP65**

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 FEAM 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

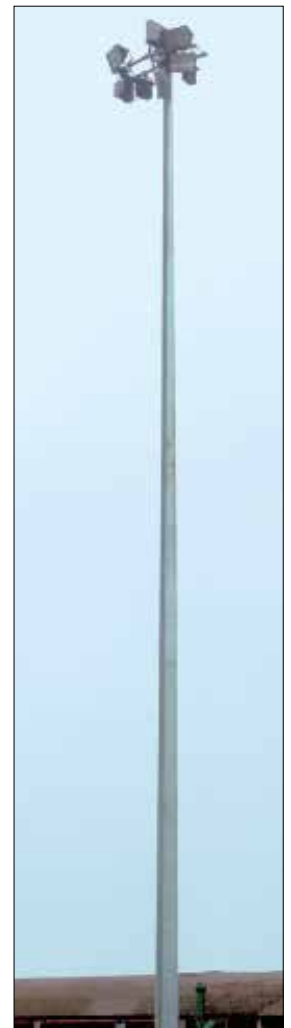


**LIGHTING COLUMNS FOR EXPLOSION PROOF CONNECTION BOX, LIGHTING FIXTURES AND FLOODLIGHTS**

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

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

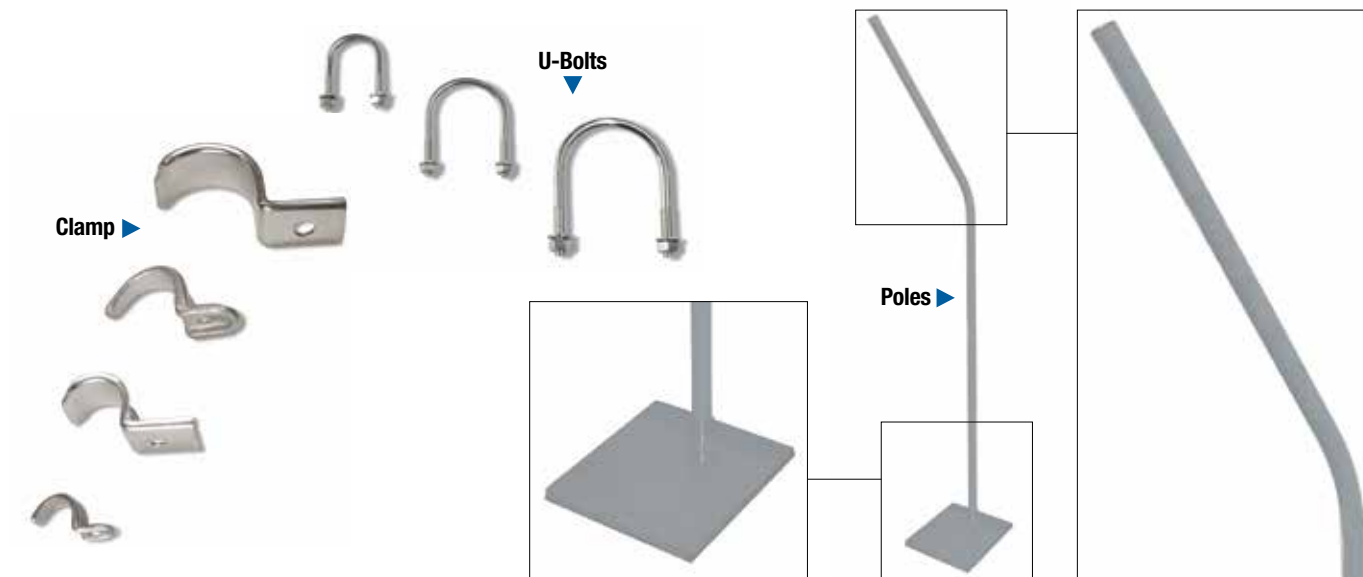
Normally provided with standard works for the electric wiring according to the standard, they may be personalised with particular works upon request. Furthermore a complete range of accessories such as brackets, cross arms, make them suitable to the most different needs. All columns are protected against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



**REMARK:**

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

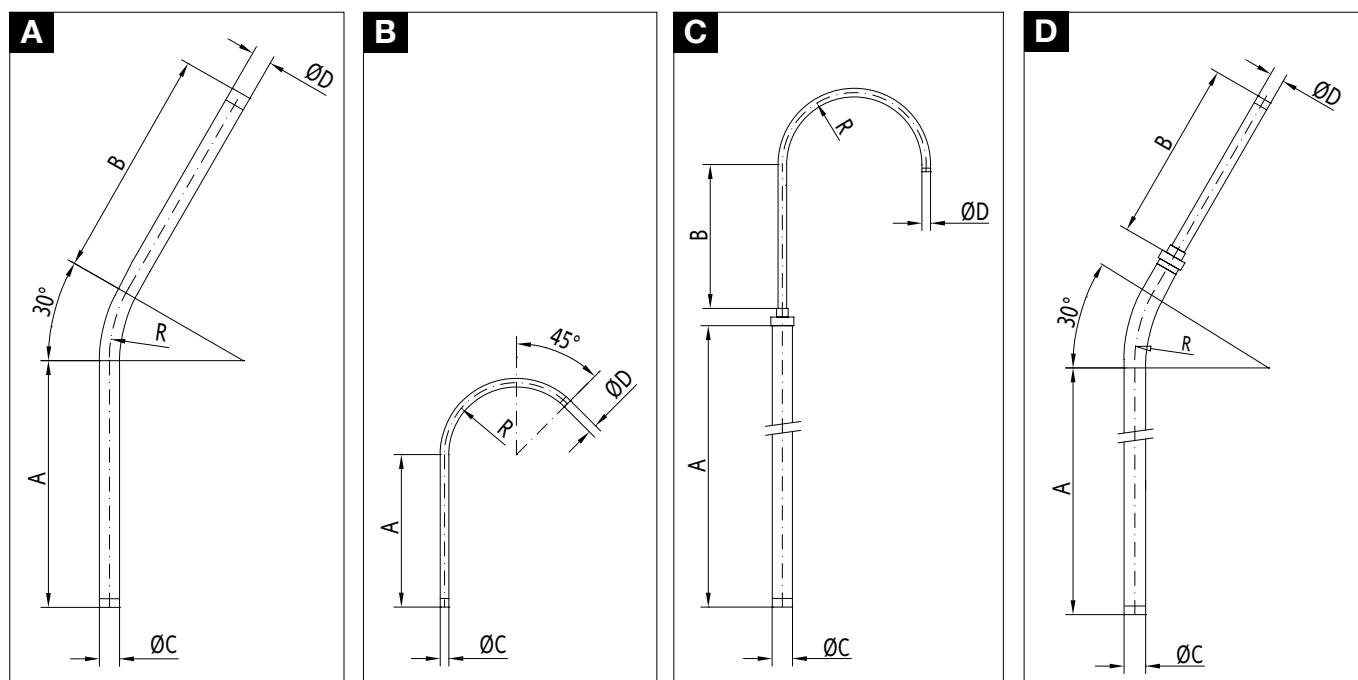


**POLES Technical features**

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**

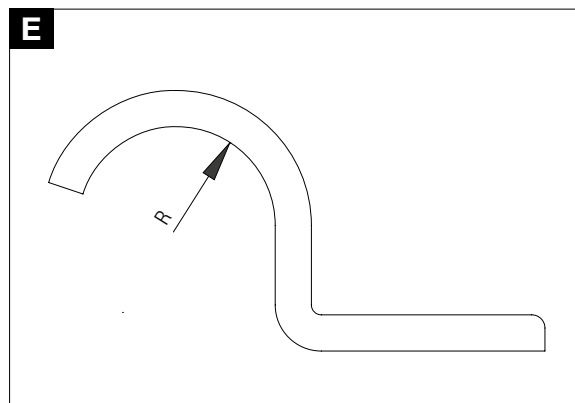


**CLAMP Technical features**

CODE	Ø CONDUIT	R	MATERIAL	DETAIL
GF1	1/2"	10	GALVANIZED STEEL	E
GF2	3/4"	12	GALVANIZED STEEL	E
GF3	1"	15	GALVANIZED STEEL	E
GF4	1-1/4"	20	GALVANIZED STEEL	E
GF5	1-1/2"	22,5	GALVANIZED STEEL	E
GF6	2"	27,5	GALVANIZED STEEL	E
GF7	2-1/2"	35	ALUMINUM	E
GF8	3"	45	ALUMINUM	E
GF10	4"	60	ALUMINUM	E

Materials: stainless steel on request

**Reference details**



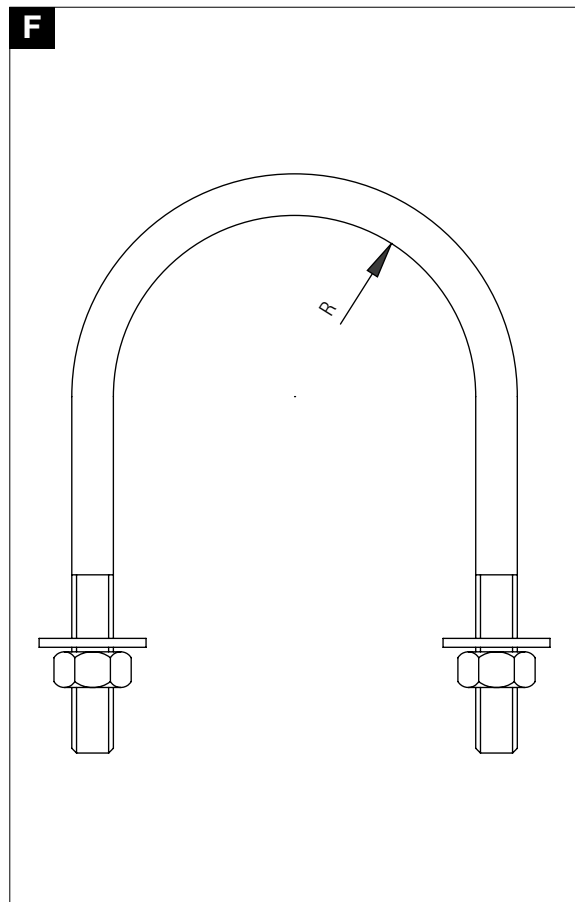
**U-BOLTS Technical features**

CODE	Ø CONDUIT	R	MATERIAL	DETAIL
GH1	1/2"	10	GALVANIZED STEEL	F
GH2	3/4"	12	GALVANIZED STEEL	F
GH3	1"	15	GALVANIZED STEEL	F
GH4	1-1/4"	20	GALVANIZED STEEL	F
GH5	1-1/2"	22,5	GALVANIZED STEEL	F
GH6	2"	27,5	GALVANIZED STEEL	F
GH7	2-1/2"	35	GALVANIZED STEEL	F
GH8	3"	45	GALVANIZED STEEL	F
GH10	4"	60	GALVANIZED STEEL	F

CODE	Ø CONDUIT	R	MATERIAL	DETAIL
GH1IN	1/2"	10	STAINLESS STEEL	F
GH2IN	3/4"	12	STAINLESS STEEL	F
GH3IN	1"	15	STAINLESS STEEL	F
GH4IN	1-1/4"	20	STAINLESS STEEL	F
GH5IN	1-1/2"	22,5	STAINLESS STEEL	F
GH6IN	2"	27,5	STAINLESS STEEL	F
GH7IN	2-1/2"	35	STAINLESS STEEL	F
GH8IN	3"	45	STAINLESS STEEL	F
GH10IN	4"	60	STAINLESS STEEL	F

With nuts and washer

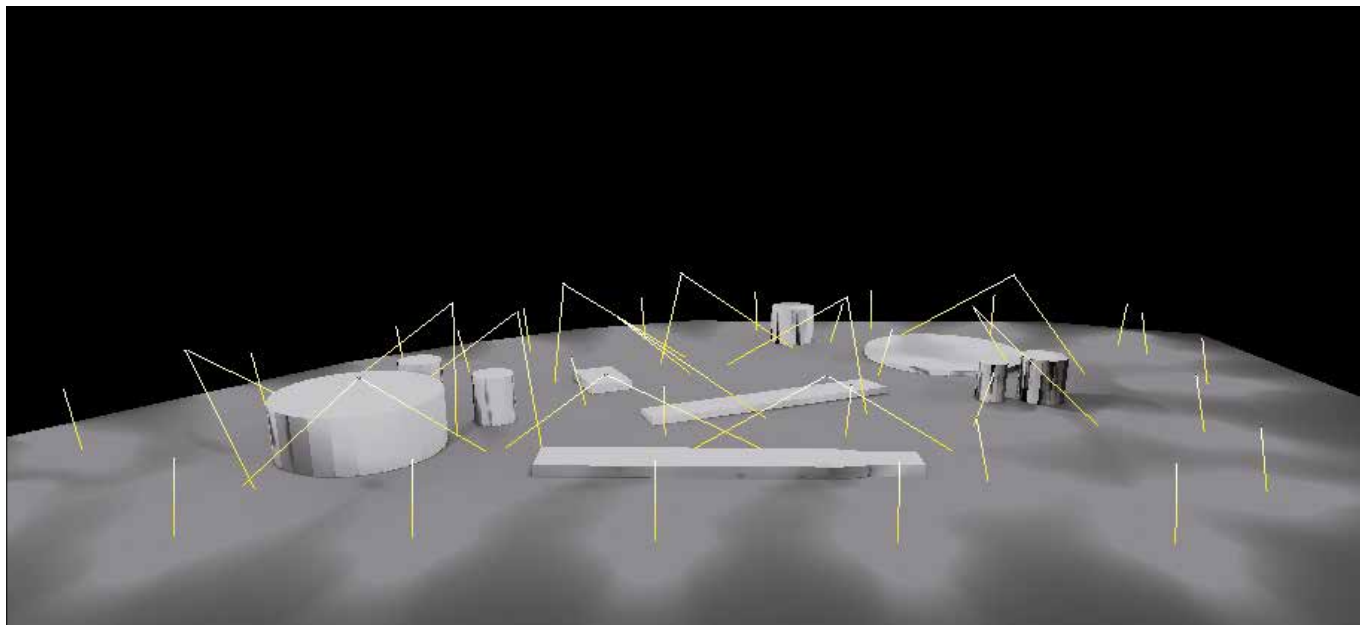
**Reference details**



**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) - 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.**

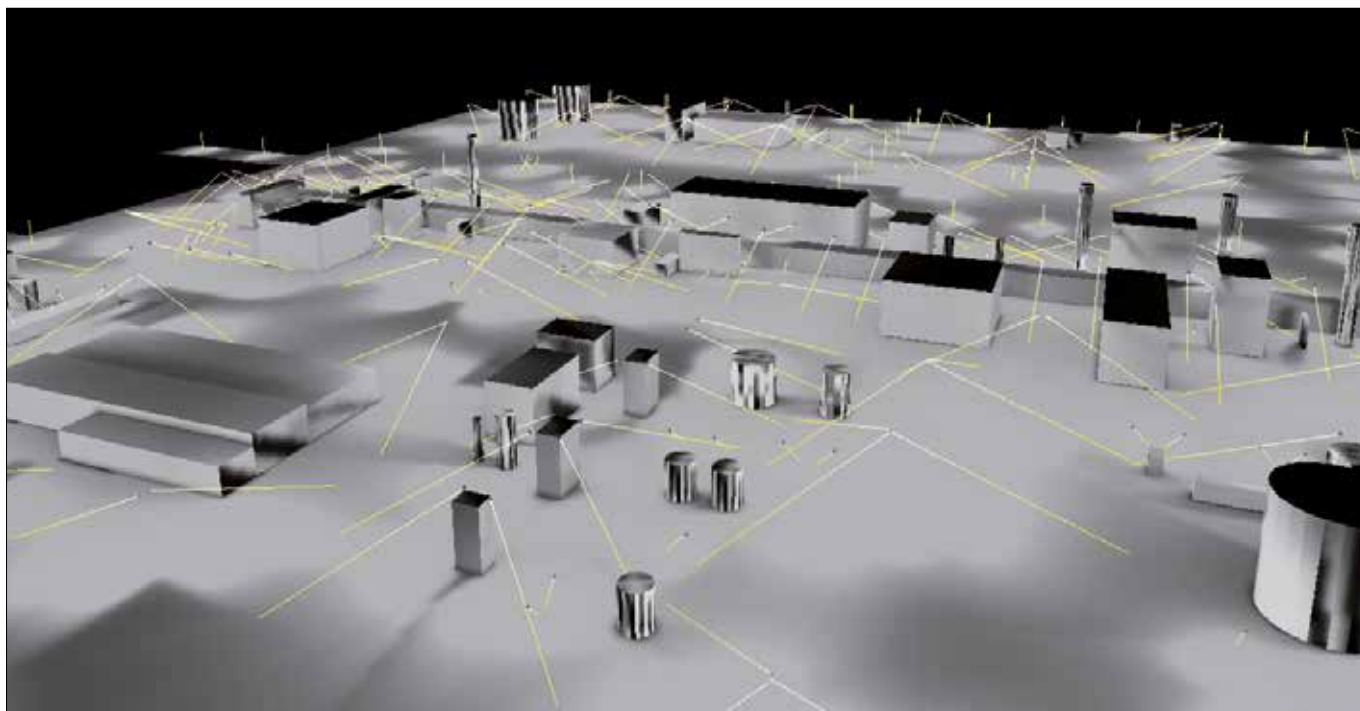
Our technical staff offers its services in planning lighting installation, with photometric graphs and lighting data outputs in full according to Customer requirements.

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 BARTEC FEAM luminaires in your project. It is enough you to inform us about the required illumination level: BARTEC FEAM will present you the lighting project quickly.

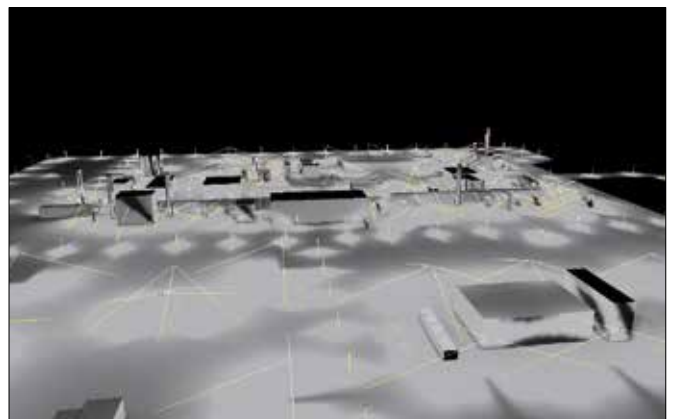
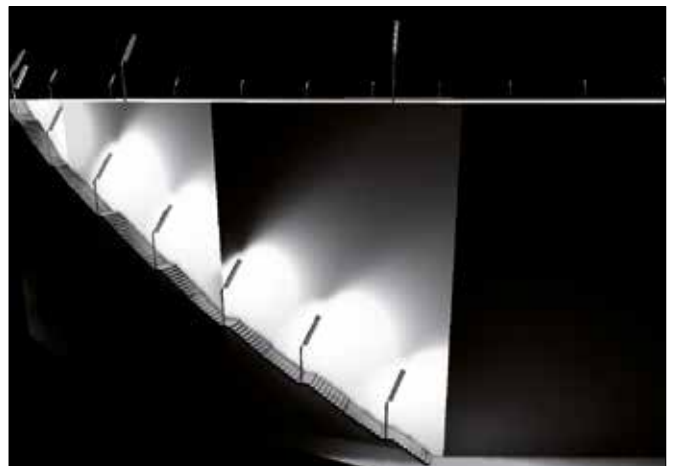
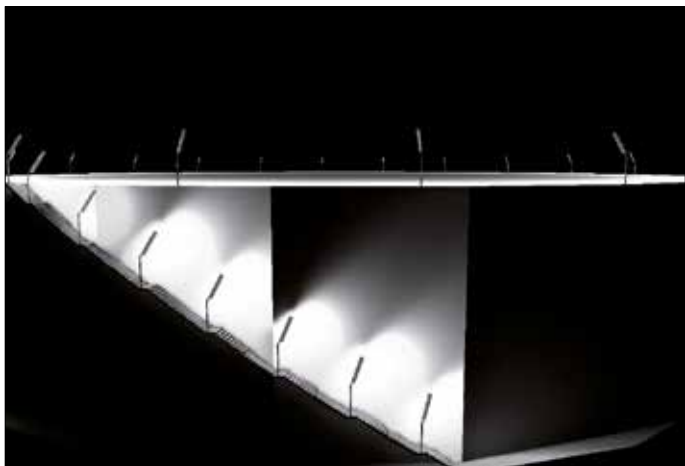
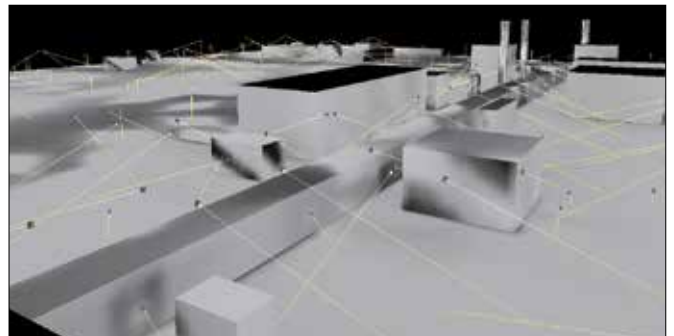
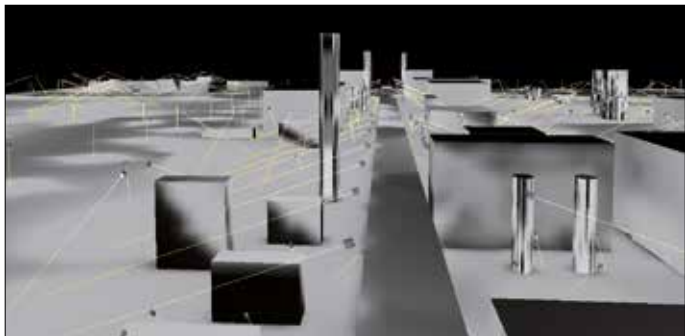
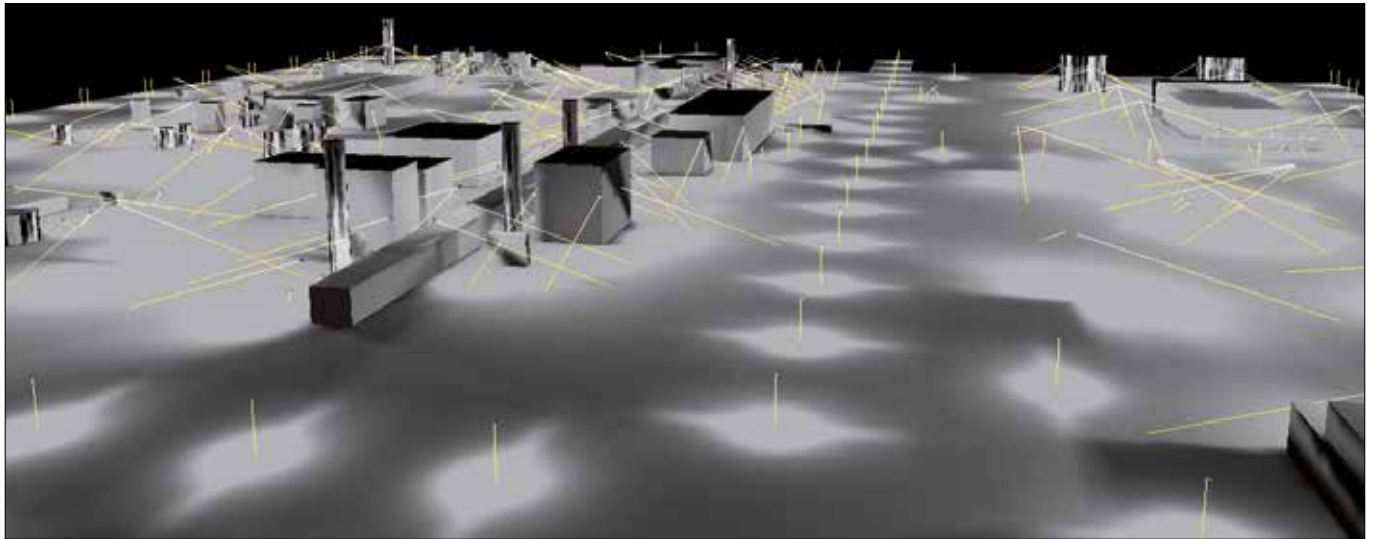
Using a proper software , our technical staff is able to insert BARTEC FEAM lighting fixtures into a project and produce a virtual image of the area, which shows the real illuminating effect.

### 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.

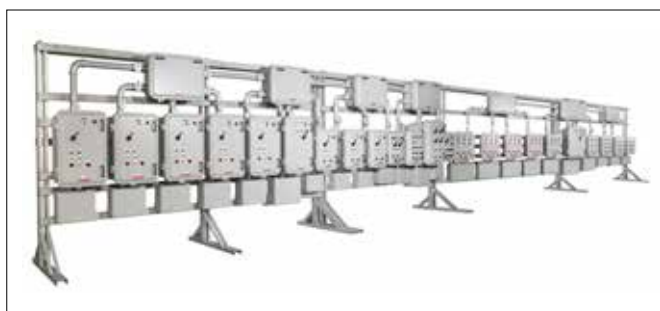




## EX ENCLOSURES

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**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 [ja 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 [ja 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 <sup>th</sup> Ed. (15 Sett. 2006) - Explosion-Proof / Dust-Ignition-Proof - Electrical Equipment for Use in Hazardous (Classified) Locations



**REFERENCE STANDARDS**

**Directive 2014/34/EU**

EXECUTION	(⊕ II 2 G) Ex db IIB+H2 T6...T3 (⊕ II 2 G) Ex db [ia/ib] IIB+H2 T6...T3 (⊕ II 2 D) Ex tb IIIC T85°C...T150°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 0022X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9019U IECEx: IECEx INE 13_0070X INMETRO: CEPEL 12.2139 EAC: TC RU C-IT.Г508.B.02506 RINA: ELE139017CS003 RUSSIAN MARINE CERTIFICATE (RMRS): 13.03518.315 NEC 505: UL 20141204-E302348 - Type rating NEMA 1, 12, 4 and 4X

**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. BARTEC-FEAM 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 BARTEC-FEAM’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 BARTEC-FEAM 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 BARTEC-FEAM’s workshop to survey working evolution and to witness final inspection.

**Standard Tests and Checks:**

- |                                  |                              |   |
|----------------------------------|------------------------------|---|
| • Visual and dimensional control | • Mechanical running control | • Grinding check                            |
| • Working control                | • Hydrostatic test           | • Insulation resistance measuring           |
| • Equipment control              | • Insulation test            | • Insulation test / Electrical running test |

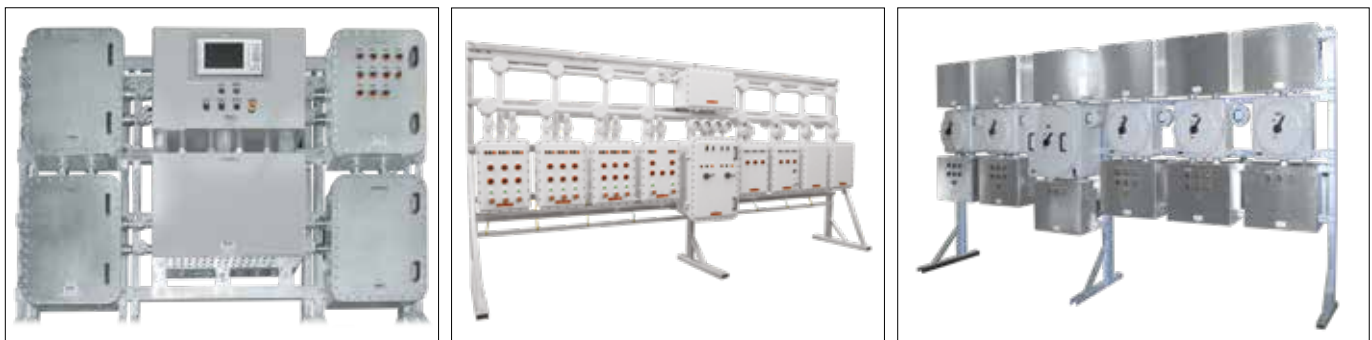
**Ordering:**

The following technical information are needed to work out a switchrack. A direct consult with BARTEC-FEAM 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, BARTEC-FEAM 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 0022X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9019U IECEx: IECEx INE 13_0070X INMETRO: CEPEL 12.2139 EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE139017CS003 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141204-E302348 - Type rating NEMA 1, 12, 4 and 4X

**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



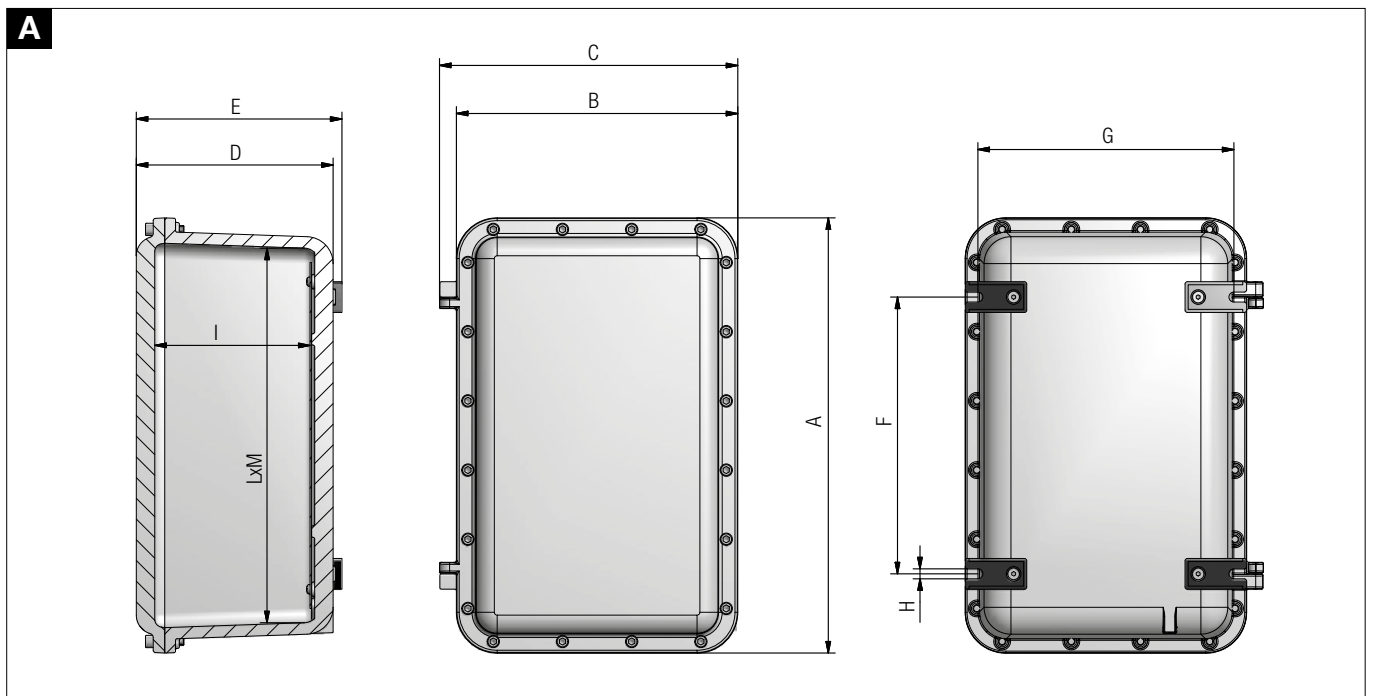
**On Request Accessories:**

- 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
EJB-08	380	170	188	126	136	270	156	11	91	315	105	305 - 85	8,2	A
EJB-11	175	175	197	122	132	78	171	11	90	113	113	100 - 100	4,00	A
EJB-21A	284	245	267	169	179	160	241	11	121	216	176	180 - 140	11,20	A
EJB-22	300	200	221	222	232	195	186	11	174	229	129	180 - 100	11,30	A
EJB-23A	310	260	281	197	207	195	251	11	152	245	195	200 - 160	13,30	A
EJB-30	415	315	337	164	174	294	299	11	113	345	245	300 - 200	19,50	A
EJB-31A	415	315	337	246	256	294	299	11	195	345	245	300 - 200	24,20	A
EJB-51A	566	366	388	256	268	360	337	13	200	487	287	450 - 250	36,10	A
EJB-61A	670	470	491	361	373	500	443	13	307	580	380	530 - 330	68,10	A
EJB-63A	670	470	491	236	248	500	443	13	182	580	380	530 - 330	50,50	A
EJB-71	742	542	572	429	439	520	580	16	331	632	432	590 - 390	110,40	A
EJB-73	742	542	572	311	321	520	580	16	213	632	432	590 - 390	95,60	A
EJB-91	960	660	697	462	472	700	650	16	350	825	525	750 - 440	188,50	A
EJB-93	960	660	697	305	315	700	650	16	193	825	525	750 - 440	166,50	A

Reference details

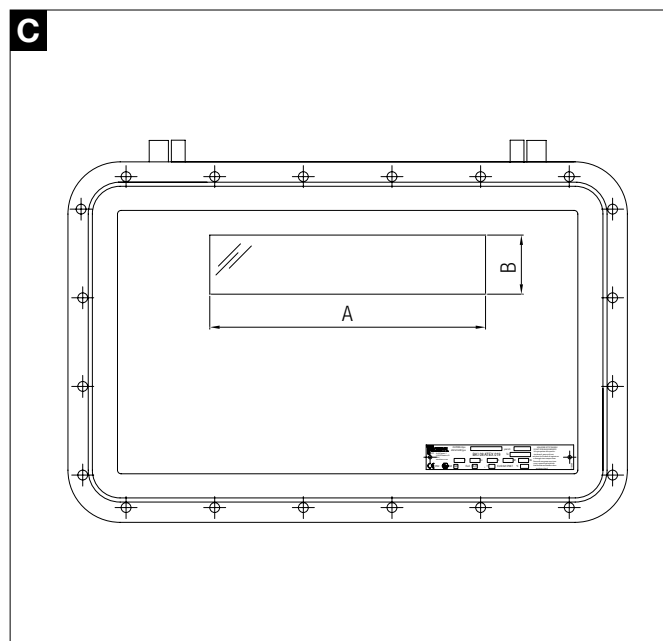


Glass windows on cover

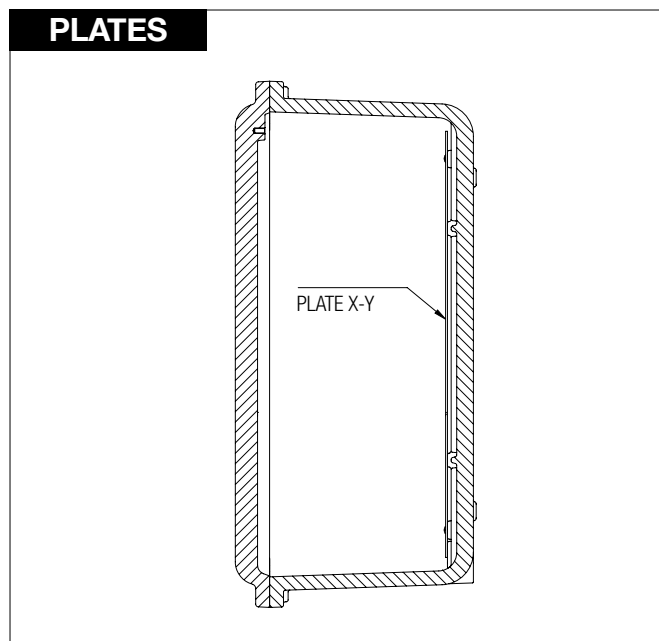
WINDOW CODE	WINDOW TYPE	ENCLOSURE CODE										DIMENSIONS		DETAIL
		EJB-08	EJB-11	EJB-21	EJB-22	EJB-23	EJB-30/31	EJB-51	EJB-61/63	EJB-71/73	EJB-91/93	A [mm]	B [mm]	
20201.0054	F1	X	X	X	X	X	X	X	X	X	X	60	60	C
20201.0055	F2	-	-	X	X	X	X	X	X	X	X	75	75	C
20201.0056	F3	-	-	X	X	X	X	X	X	X	X	110	75	C
20201.0057	F4	-	-	X	X	X	X	X	X	X	-	150	75	C
20201.0058	F5	-	-	-	-	-	X	X	X	-	-	150	150	C
20201.0059	F6	-	-	-	-	-	X	X	X	-	-	300	75	C
20201.0060	F7	-	-	-	-	-	X	X	X	-	-	300	150	C
20201.0061	F8	-	-	-	-	-	-	-	X	-	-	300	300	C
20201.0062	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]
EJB-08	24 x 1	18 x 1	10 x 1	-	-	-	-	-	305 - 85
EJB-11	12 x 1	8 x 1	6 x 1	-	-	-	-	-	100 - 100
EJB-21A	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
EJB-22	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
EJB-23A	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
EJB-30	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
EJB-31A	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
EJB-51A	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
EJB-61A/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
EJB-71/73	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
EJB-91/93	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

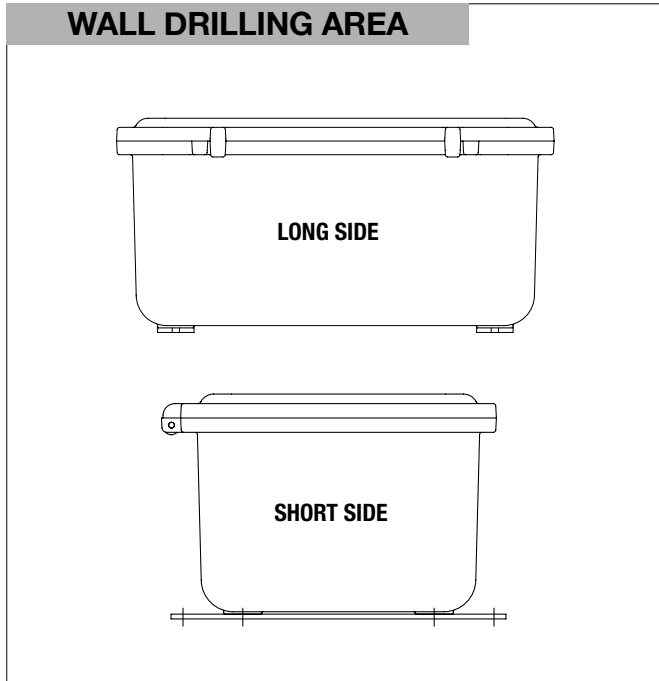
Body and cover enclosures indicative maximum quantity of holes of the same size

ENCLOSURE CODE	DRILLING AREA LONG SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
EJB-08	9	6	5	4	4	-	-	-
EJB-11	3	2	2	1	1	-	-	-
EJB-21A	10	7	5	3	2	2	1	-
EJB-22	15	11	8	6	6	3	2	1
EJB-23A	11	8	6	4	3	3	2	1
EJB-30	13	7	5	5	4	3	-	-
EJB-31A	28	18	14	11	8	6	3	2
EJB-51A	44	27	24	20	12	10	6	3
EJB-61A	72	50	36	32	21	21	14	8
EJB-63A	36	29	18	16	14	7	5	4
EJB-71	90	55	46	39	32	21	15	10
EJB-73	40	26	22	18	14	12	7	4
EJB-91	112	84	65	55	40	28	23	14
EJB-93	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
EJB-08	2	2	1	1	-	-	-	-
EJB-11	3	2	2	1	1	-	-	-
EJB-21A	8	5	4	3	2	1	1	-
EJB-22	9	5	5	4	2	1	1	1
EJB-23A	9	6	6	5	2	2	1	1
EJB-30	9	5	4	3	3	2	-	-
EJB-31A	20	12	9	8	6	5	2	1
EJB-51A	24	15	12	11	6	6	3	2
EJB-61A	48	30	24	20	12	12	8	6
EJB-63A	24	17	12	10	8	4	3	3
EJB-71	59	35	28	25	21	12	10	6
EJB-73	26	18	14	12	8	11	4	2
EJB-91	70	42	35	35	24	18	13	8
EJB-93	30	24	21	14	12	7	5	3



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



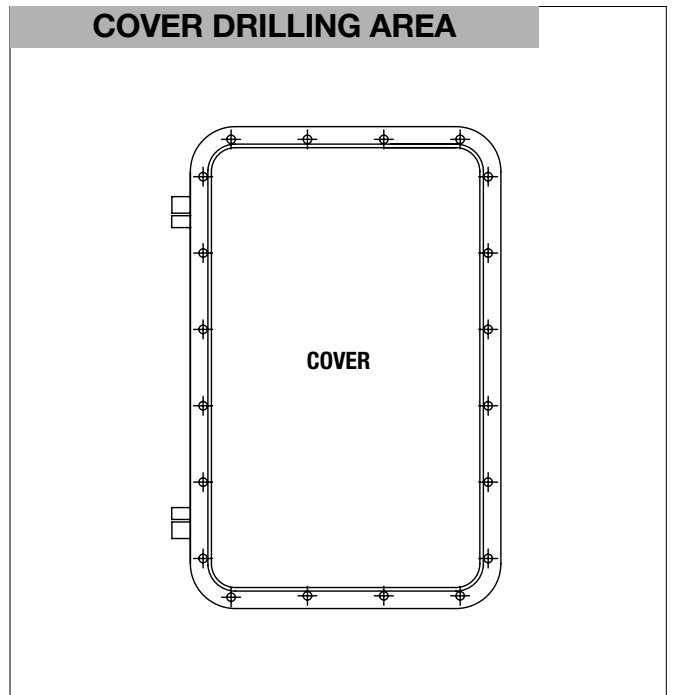
**Threads comparison table**

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
EJB-08	10
EJB-11	4
EJB-21	12
EJB-22	12
EJB-23	16
EJB-30	30
EJB-31	30
EJB-51	54
EJB-61	56
EJB-63	56
EJB-71	48
EJB-73	48
EJB-91	54
EJB-93	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 [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 0022X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9019U IECEx: IECEx INE 13_0070X INMETRO: CEPEL 12.2139 EAC: TC RU C-IT.Г502.B.00689/18 RINA: ELE139017CS003 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141204-E302348 Type rating NEMA 1, 12, 4 and 4X

**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



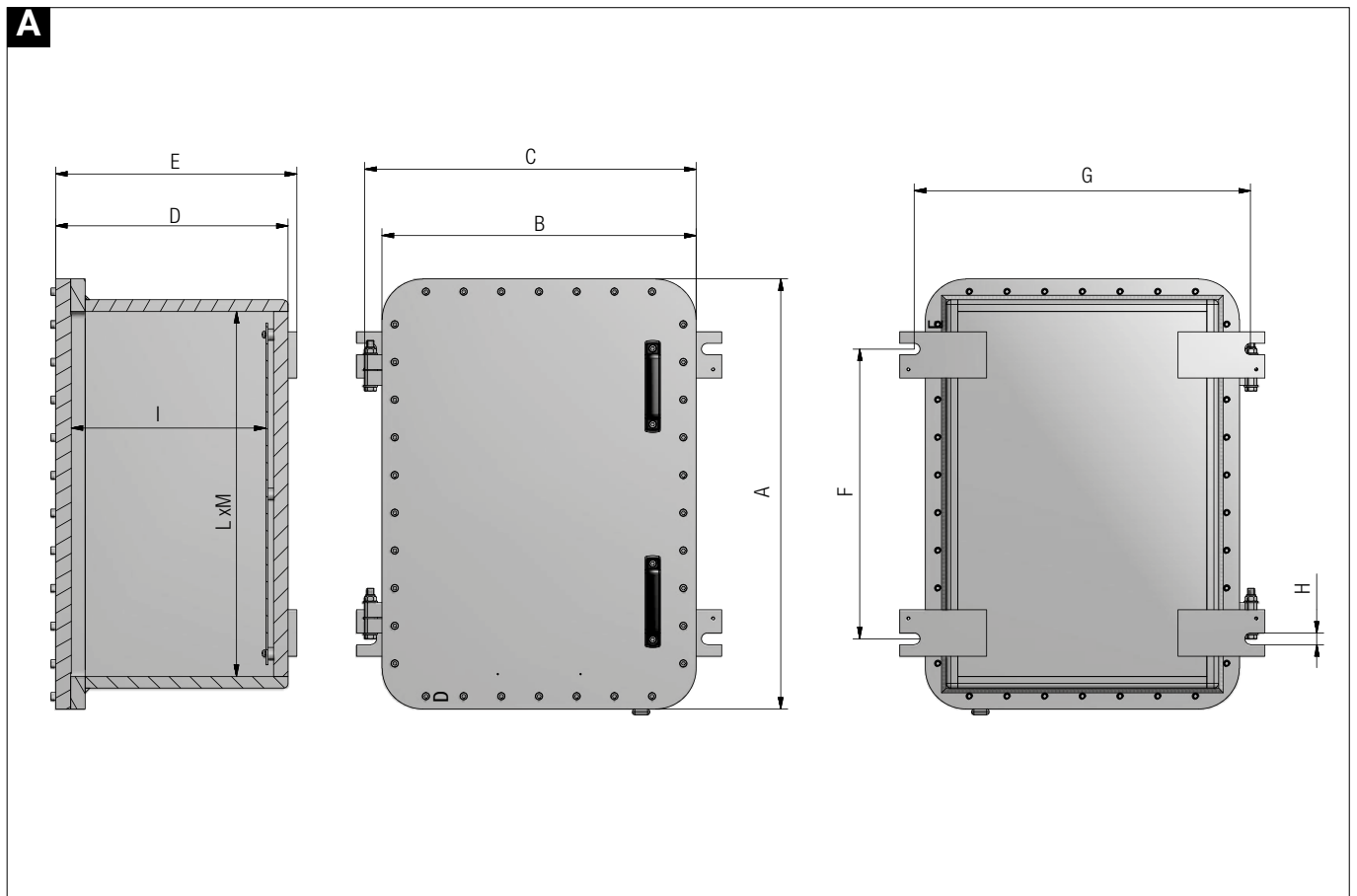
**On Request Accessories:**

- 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
EJB-11 INX	175	175	197	122	132	78	171	11	90	113	113	100 - 100	11,00	A
EJB-21 INX	284	245	267	169	179	160	241	11	121	216	176	180 - 140	32,00	A
EJB-22 INX	300	200	221	222	232	195	186	11	174	229	129	180 - 100	38,00	A
EJB-23 INX	310	260	281	197	207	195	251	11	152	245	195	200 - 160	40,00	A
EJB-30 INX	415	315	337	164	174	294	299	11	113	345	245	300 - 200	53,00	A
EJB-31 INX	415	315	337	246	256	294	299	11	195	345	245	300 - 200	62,00	A
EJB-51 INX	566	366	388	256	268	360	337	13	200	487	287	450 - 250	110,00	A
EJB-61 INX	670	470	491	361	373	500	443	13	307	580	380	530 - 330	152,00	A
EJB-63 INX	670	470	491	236	248	500	443	13	182	580	380	530 - 330	140,00	A
EJB-71 INX	742	542	572	429	439	520	580	16	331	632	432	590 - 390	222,00	A
EJB-73 INX	742	542	572	311	321	520	580	16	213	632	432	590 - 390	190,00	A
EJB-91 INX	960	660	697	462	472	700	650	16	350	825	525	750 - 440	419,00	A
EJB-93 INX	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

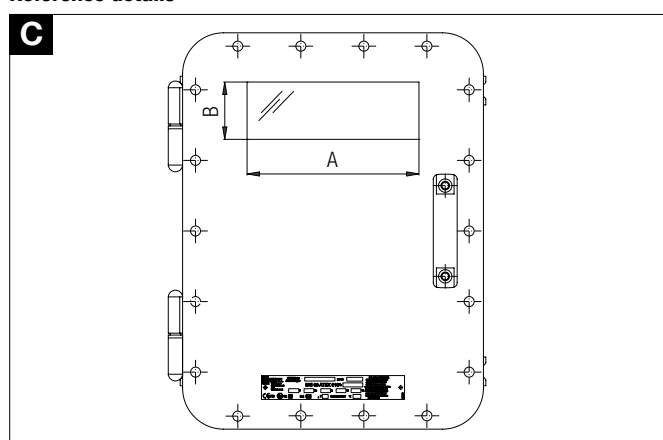
CODE	SEZ. 2,5 [sq/mm]	SEZ. 6,0 [sq/mm]	SEZ. 10,0 [sq/mm]	SEZ. 16,0 [sq/mm]	SEZ. 35,0 [sq/mm]	SEZ. 50,0 [sq/mm]	SEZ. 70,0 [sq/mm]	SEZ. 240,0 [sq/mm]	INT. PLATE X - Y [mm]
EJB-11 INX	12 x 1	8 x 1	6 x 1	4 x 1	2 x 1	-	-	-	100 - 100
EJB-21 INX	30 x 1	20 x 1	14 x 1	12 x 1	9 x 1	7 x 1	5 x 1	1 x 1	180 - 140
EJB-22 INX	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
EJB-23 INX	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
EJB-30 INX	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
EJB-31 INX	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
EJB-51 INX	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
EJB-61/63 INX	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
EJB-71/73 INX	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
EJB-91/93 INX	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



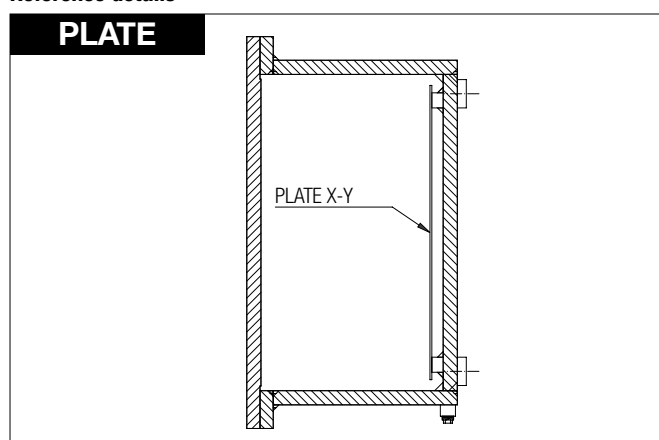
**Glass Windows on Cover**

WINDOW CODE	WINDOW TYPE	ENCLOSURE CODE									DIMENSIONS		DETAIL
		EJB-11 INX	EJB-21 INX	EJB-22 INX	EJB-23 INX	EJB-30/31 INX	EJB-51 INX	EJB-61/63 INX	EJB-71/73 INX	EJB-91/93 INX	A [mm]	B [mm]	
20201.0054	F1	X	X	X	X	X	X	X	X	X	60	60	C
20201.0055	F2	-	X	X	X	X	X	X	X	X	75	75	C
20201.0056	F3	-	X	X	X	X	X	X	X	X	110	75	C
20201.0057	F4	-	X	X	X	X	X	X	X	-	150	75	C
20201.0058	F5	-	-	-	-	X	X	X	-	-	150	150	C
20201.0059	F6	-	-	-	-	X	X	X	-	-	300	75	C
20201.0060	F7	-	-	-	-	X	X	X	-	-	300	150	C
20201.0061	F8	-	-	-	-	-	-	X	-	-	300	300	C
20201.0062	F9	-	-	-	-	-	-	X	-	-	450	300	C

**Reference details**



**Reference details**

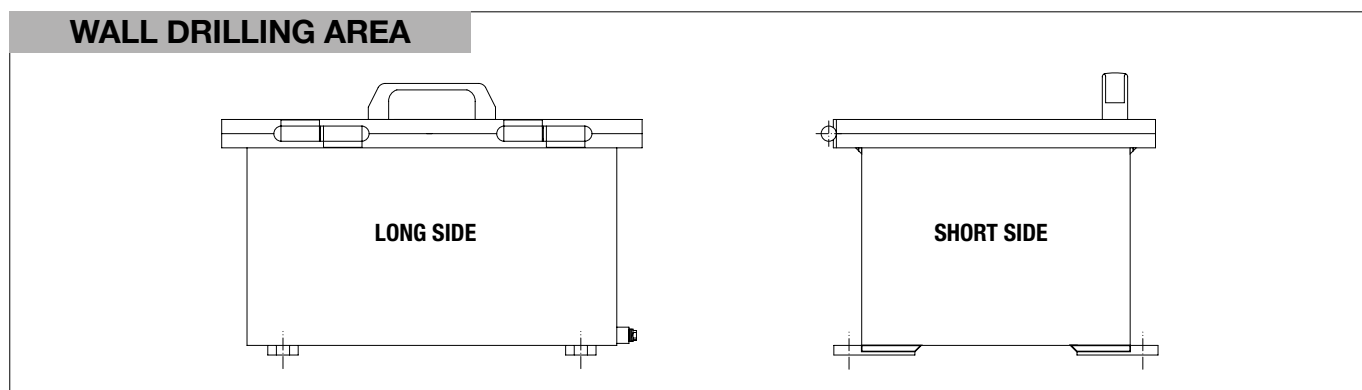


**Body and cover enclosures indicative maximum quantity of holes of the same size**

ENCLOSURE CODE	DRILLING AREA LONG SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
EJB-11 INX	3	2	2	1	1	-	-	-
EJB-21 INX	10	7	5	3	2	2	1	-
EJB-22 INX	15	11	8	6	6	3	2	1
EJB-23 INX	11	8	6	4	3	3	2	1
EJB-30 INX	13	7	5	5	4	3	-	-
EJB-31 INX	28	18	14	11	8	6	3	2
EJB-51 INX	44	27	24	20	12	10	6	3
EJB-61 INX	72	50	36	32	21	21	14	8
EJB-63 INX	36	29	18	16	14	7	5	4
EJB-71 INX	90	55	46	39	32	21	15	10
EJB-73 INX	40	26	22	18	14	12	7	4
EJB-91 INX	112	84	65	55	40	28	23	14
EJB-93 INX	48	42	29	22	10	11	9	5

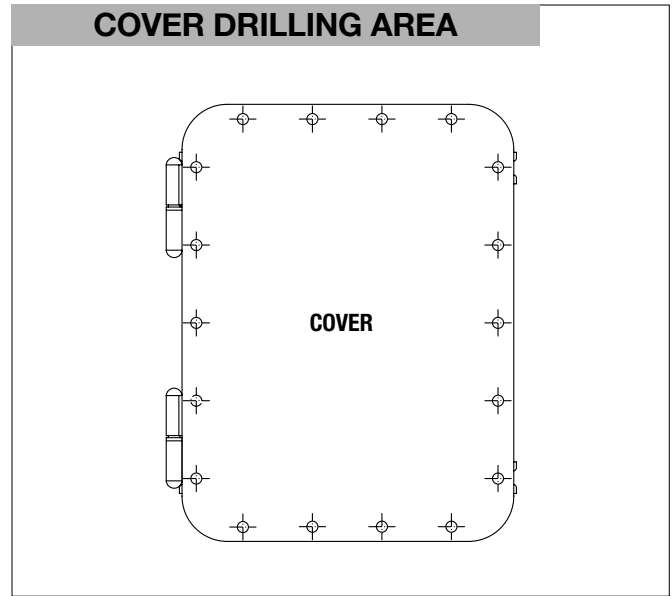
ENCLOSURE CODE	DRILLING AREA SHORT SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
EJB-11 INX	3	2	2	1	1	-	-	-
EJB-21 INX	8	5	4	3	2	1	1	-
EJB-22 INX	9	5	5	4	2	1	1	1
EJB-23 INX	9	6	6	5	2	2	1	1
EJB-30 INX	9	5	4	3	3	2	-	-
EJB-31 INX	20	12	9	8	6	5	2	1
EJB-51 INX	24	15	12	11	6	6	3	2
EJB-61 INX	48	30	24	20	12	12	8	6
EJB-63 INX	24	17	12	10	8	4	3	3
EJB-71 INX	59	35	28	25	21	12	10	6
EJB-73 INX	26	18	14	12	8	11	4	2
EJB-91 INX	70	42	35	35	24	18	13	8
EJB-93 INX	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
EJB-11 INX	4
EJB-21 INX	12
EJB-22 INX	12
EJB-23 INX	16
EJB-30 INX	30
EJB-31 INX	30
EJB-51 INX	54
EJB-61 INX	56
EJB-63 INX	56
EJB-71 INX	48
EJB-73 INX	48
EJB-91 INX	54
EJB-93 INX	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



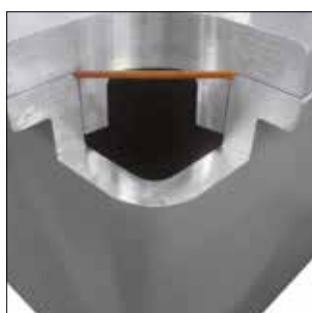
**REFERENCE STANDARDS**

**Directive 2014/34/EU**

EXECUTION	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex db IIC T6...T3</li> <li>⊗ II 2 G Ex db [ja/ib/ic IIA or IIB or IIC Ga/Gc] IIC T6...T3</li> <li>⊗ II 2 D Ex tb IIC T85°C...T200°C</li> <li>⊗ II 2 D Ex tb [ja Da/ib/ic Dc] IIC T85°C...T200°C</li> </ul>
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 0023X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9020U IECEx: IECEx INE 13.0071X Component (IECEx): IECEx INE 13.0085U INMETRO: CEPEL 12.2137 EAC: TC RU C-IT.Г502.B.00689/18 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280

**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



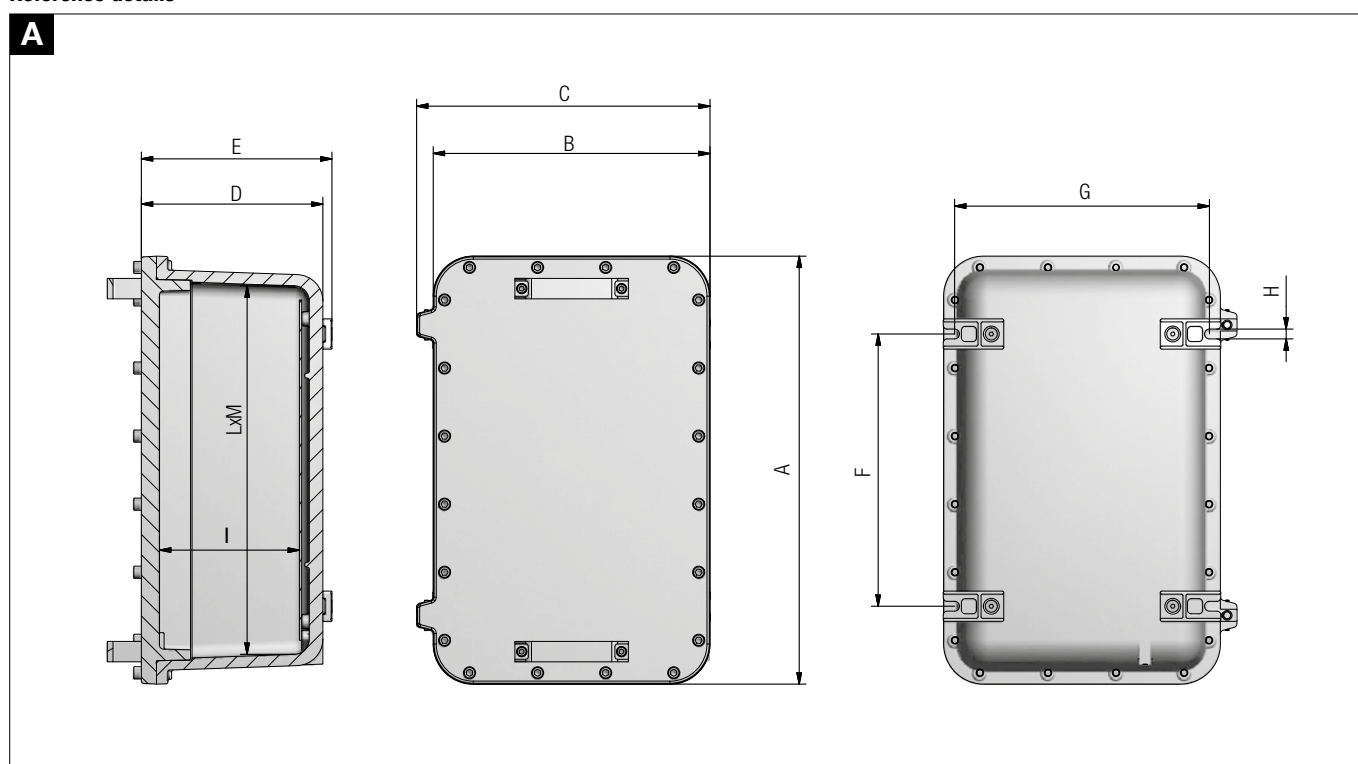
**On Request Accessories:**

- 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
EJC-21	285	245	267	161	171	160	241	11	113	216	176	180 x 140	12,00	A
EJC-30	415	315	338	146	156	294	285	11	94	344	244	300 x 200	21,00	A
EJC-31	415	315	338	228	238	294	285	11	176	344	244	300 x 200	25,00	A
EJC-51	566	366	388	240	252	360	337	13	185	487	287	450 x 250	40,00	A
EJC-61	668	468	490	343	355	500	443	13	277	580	380	530 x 330	80,00	A
EJC-63	668	468	490	217	229	500	443	13	151	580	380	530 x 330	66,00	A

**Reference details**

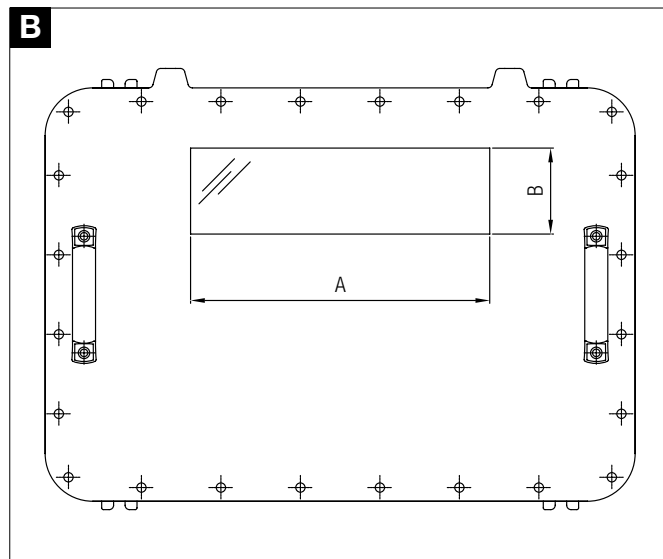


**Glass windows on cover**

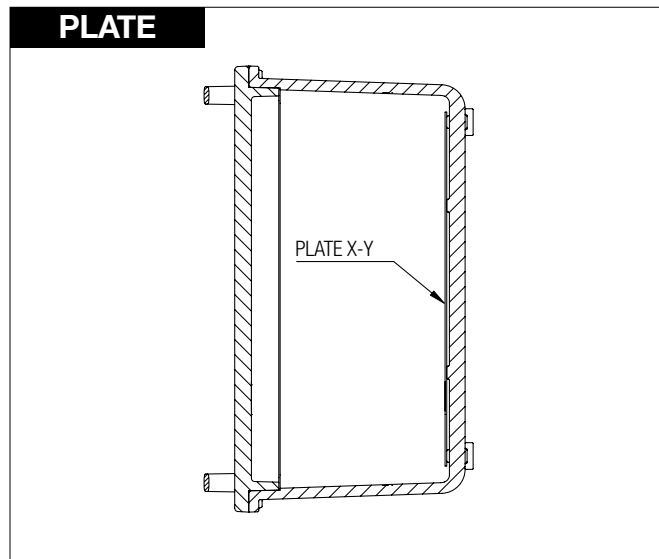
WINDOW CODE	WINDOW TYPE	ENCLOSURE CODE				WINDOW DIMENSIONS		DETAIL
		EJC-21	EJC-30/31	EJC-51	EJC-61/63	A [mm]	B [mm]	
20201.0054	F1	X	X	X	X	60	60	B
20201.0055	F2	X	X	X	X	75	75	B
20201.0056	F3	X	X	X	X	110	75	B
20201.0057	F4	X	X	X	X	150	75	B
20201.0058	F5	-	X	X	X	150	150	B
20201.0059	F6	-	-	X	X	300	75	B
20201.0060	F7	-	-	X	X	300	150	B



Reference details

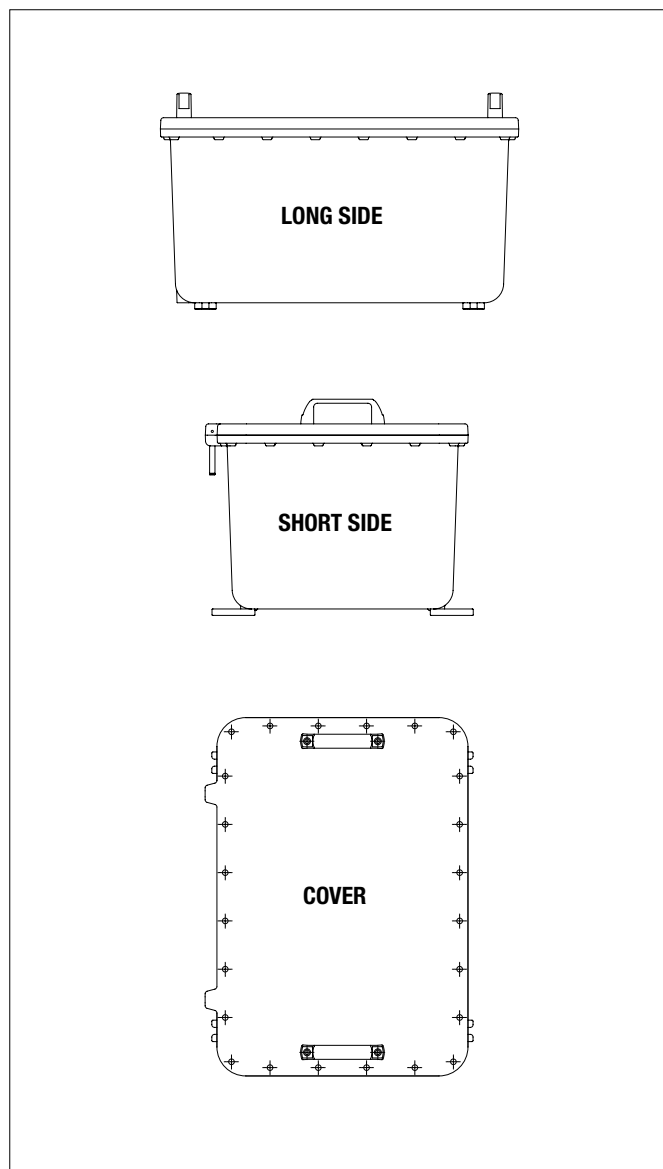


Reference details



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
EJC-21	8	4	3	3	2	2	2	/
EJC-30	7	6	5	5	/	/	/	/
EJC-31	21	18	14	11	8	6	3	2
EJC-51	33	26	16	14	12	7	4	3
EJC-61	60	40	27	24	14	14	10	8
EJC-63	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
EJC-21	6	3	3	2	2	1	1	/
EJC-30	5	4	4	3	/	/	/	/
EJC-31	15	12	9	8	6	4	2	1
EJC-51	18	14	8	8	6	4	2	2
EJC-61	40	24	18	15	8	8	6	6
EJC-63	23	12	12	9	6	4	3	3

COVER DRILLING AREA	
ENCLOSURE CODE	MAX OPERATORS PERMITTED
EJC-21	12
EJC-30	30
EJC-31	30
EJC-51	54
EJC-61	56
EJC-63	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]
	EJC-21	30 x 1	20 x 1	14 x 1	12 x 1	8 x 1	6 x 1	2 x 1	1 x 1
EJC-30	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
EJC-31	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
EJC-51	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
EJC-61	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
EJC-63	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 <sup>o</sup> Ed. (15 Sett. 2006) Explosion-Proof / Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations

**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 0022X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 13_0070X NEC 505: UL 20141204-E302348 - 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:**

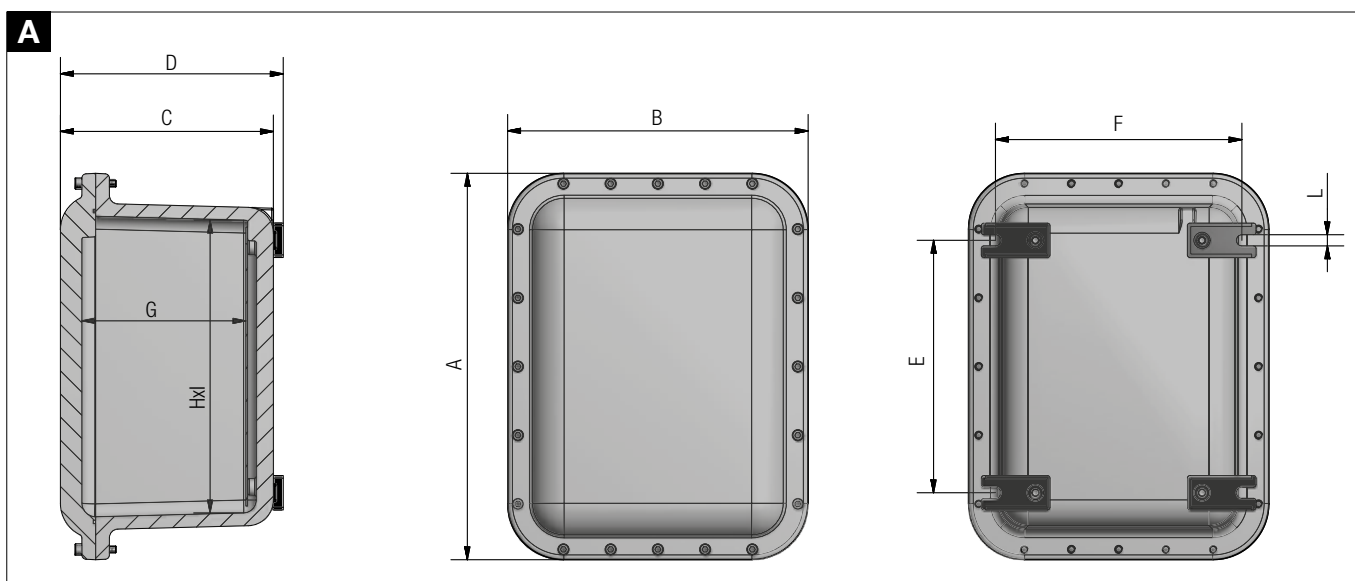
- External epoxy painting (any colours)
- Internal anticondensate painting orange RAL-2004
- O-Ring gaskets on cover
- Drain and breather valves
- Stainless steel AISI-316L hinges

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

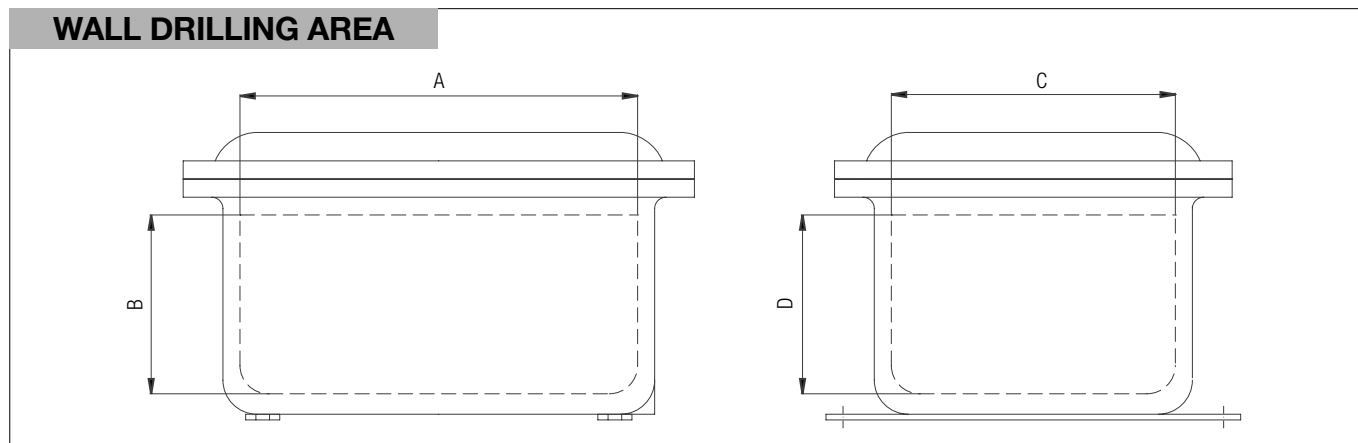
ENCLOSURE CODE	AREA FOR ENTRY INSTALLATION (LONG WALL SIDES)				AREA FOR ENTRY INSTALLATION (SHORT WALL SIDES)			
	A [mm]	B [mm]	A [inch.]	B [inch.]	C [mm]	D [mm]	C [inch.]	D [inch.]
EJB21-UL	190	80	7,50	3,20	150	80	6,00	3,20
EJB31-UL	320	140	12,60	5,60	230	140	9,10	5,60
EJB51-UL	450	120	17,80	4,80	250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

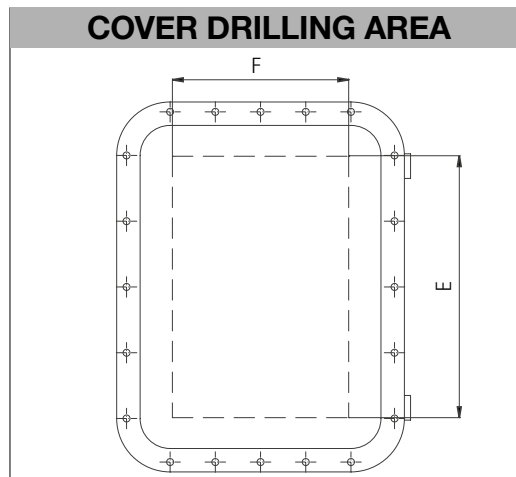
MINIMUM DISTANCE BETWEEN WALL ENTRIES (CENTER TO CENTER)									
1st ROW [mm] - 2nd ROW [inch.]									
4"	-	-	-	-	-	-	-	-	139
-	-	-	-	-	-	-	-	-	(5.47)
3"	-	-	-	-	-	-	-	115	126
M90	-	-	-	-	-	-	-	(4.53)	(4.96)
2 1/2"	-	-	-	-	-	-	101	108	120
M75	-	-	-	-	-	-	(3.98)	(4.25)	(4.72)
2"	-	-	-	-	-	88	94	102	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 4<sup>th</sup> 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	⊗ 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
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	INERIS 13 ATEX 0021X
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9018U IECEx: IECEx INE13.0069X Component: IECEx INE 13.0082U INMETRO: CEPEL 12 2141 EAC: TC RU C-IT.ГБ02.В.00689/18 RINA: ELE139017CS005 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 UL NEC-505: 20141112-E465037 - Type rating NEMA 1, 12, 4 and 4X (GUB Series only, GUBW not included)

**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



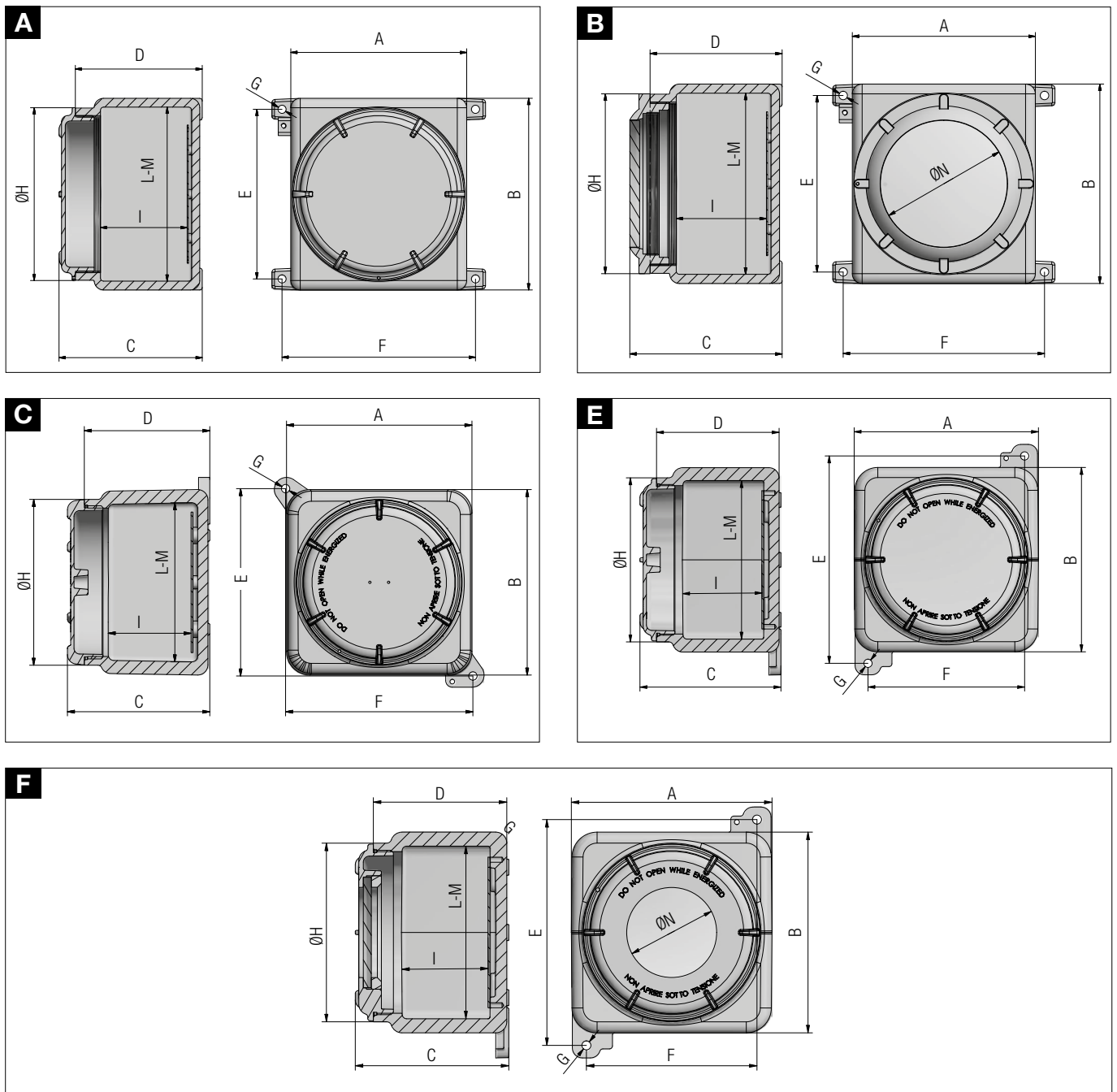
**On Request Accessories:**

- 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	173	170	142	125	145	190	9	142	75	142	145	-	110 - 110	4,00	E
GUB1	200	200	153	133	225	170	9	178	86	172	172	-	150 - 150	5,00	E
GUB03	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	640	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
GUBW03	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



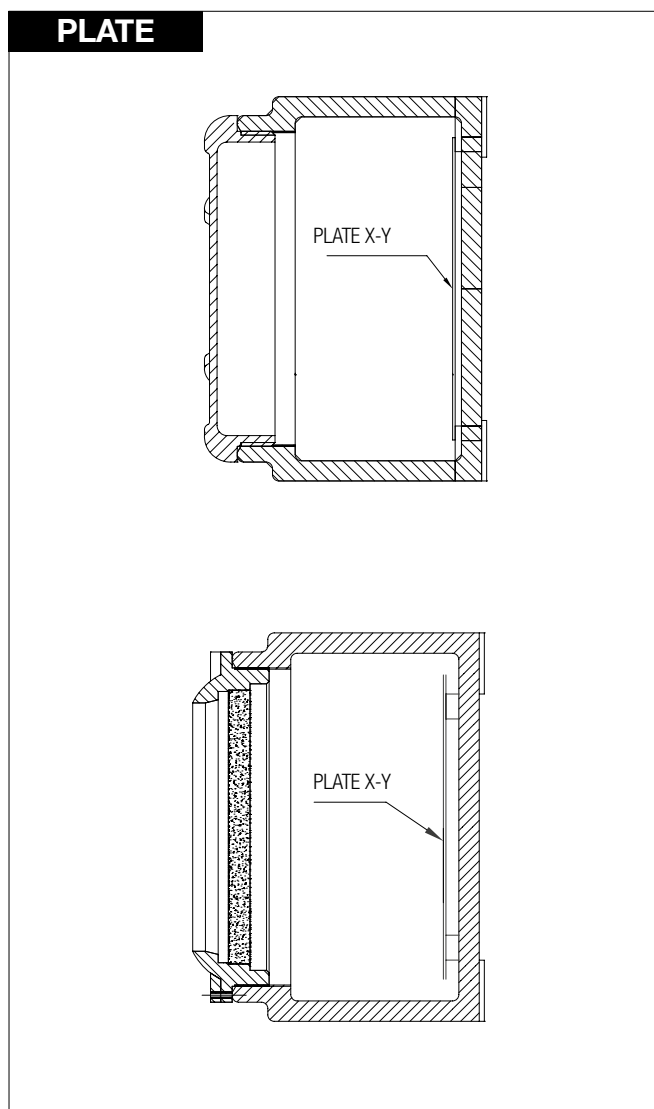
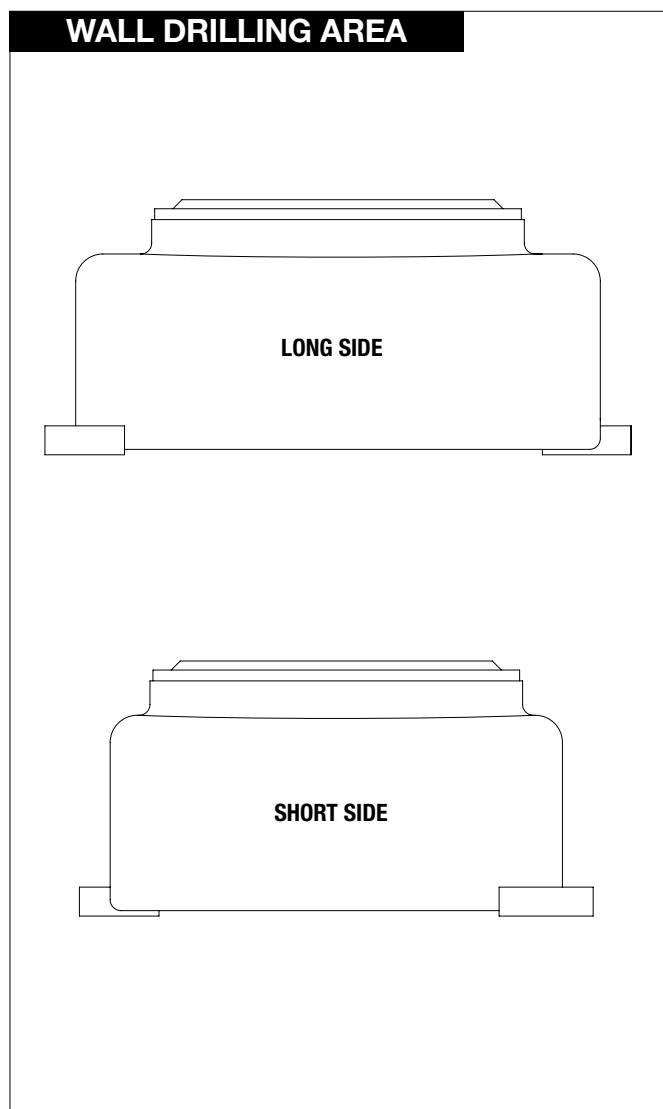


Body enclosures indicative maximum quantity of holes of the same size

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	/
GUB03	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	/
GUBW03	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	/
GUB03	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	/
GUBW03	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
GUB03	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
GUBW03	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 [ja/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	Component: INERIS 13 ATEX 9018U IECEX: IECEX INE13.0069X Component: IECEX INE 13.0082U INMETRO: CEPEL 12 2141 EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE139017CS005 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 UL NEC-505: 20141112-E465037 - Type rating NEMA 1, 12, 4 and 4X (GUBINX Series only, GUBINXW not included)

**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



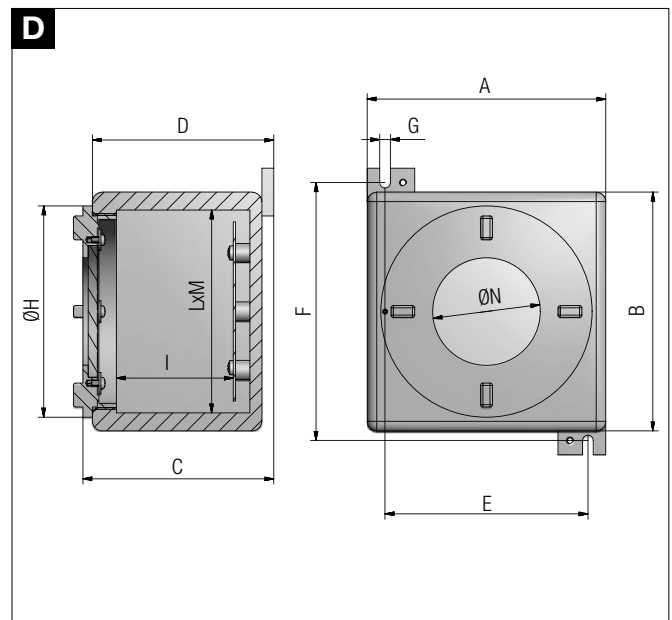
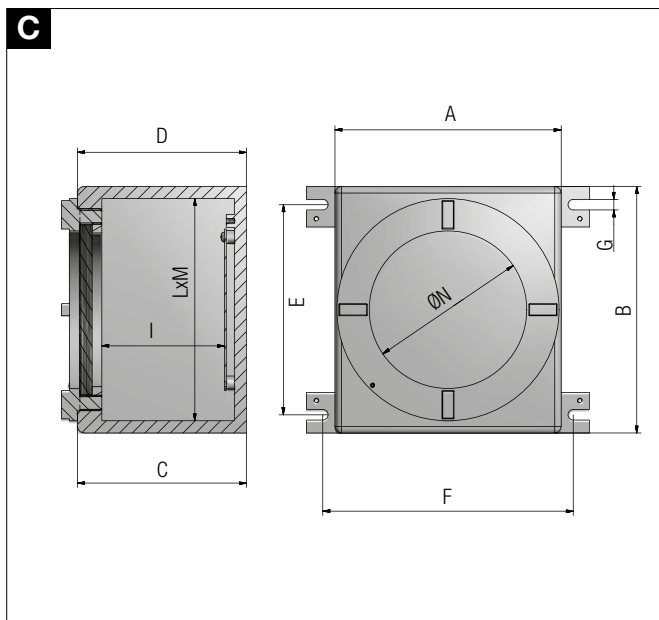
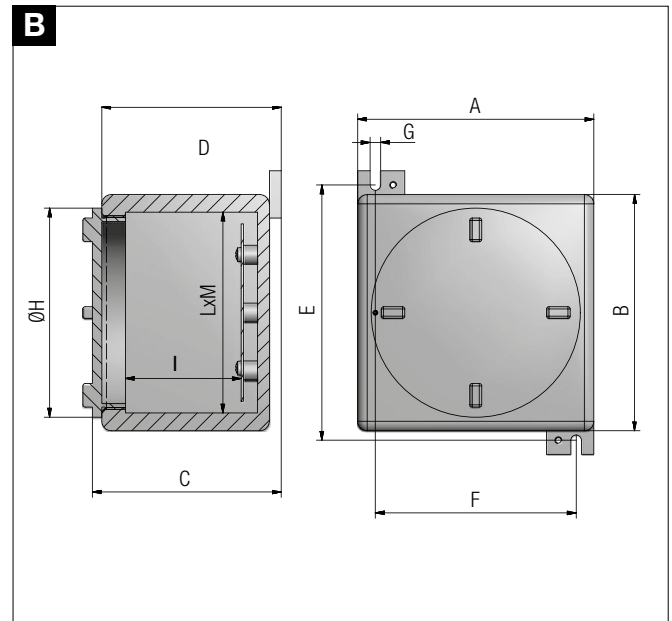
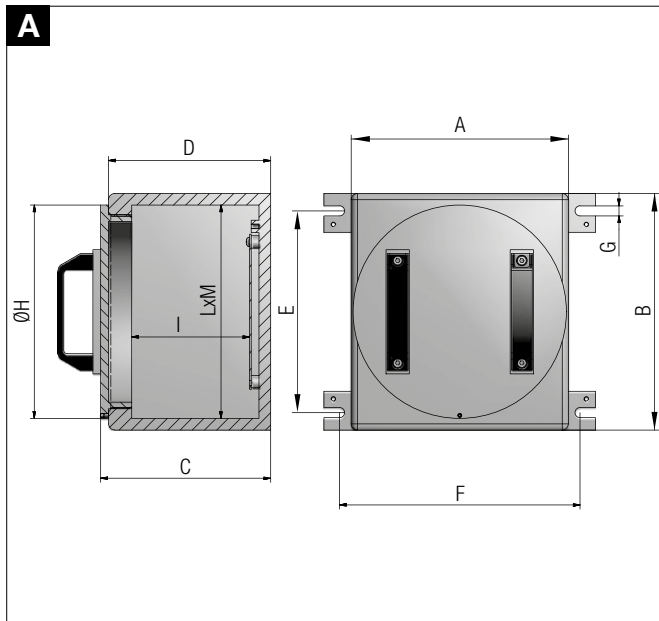
**On Request Accessories:**

- 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
GUB00INX	135	135	100	92	152	105	7	113	47	111	111	-	-	7,00	B
GUB0INX	170	170	141	133	185	145	9	154	82	140	140	-	110 - 110	13,00	B
GUB1INX	200	200	160	152	216	170	9	177	98	170	170	-	150 - 150	19,00	B
GUB03INX	280	310	219	209	260	310	13	275	152	250	280	-	220 - 220	50,00	A
GUB23INX	310	270	165	157	235	350	12	224	110	290	250	-	180 - 180	32,00	B
GUB4INX	420	420	234	226	380	460	13	405	148	390	390	-	280 - 280	83,00	A
GUB5INX	600	600	320	310	550	630	13	600	203	550	550	-	490 - 490	280,00	A
GUBW1INX	200	200	160	152	216	170	9	177	98	170	170	90	150 - 150	19,00	D
GUBW03INX	280	310	219	209	260	310	13	275	152	250	280	195	220 - 220	50,00	C
GUBW23INX	310	270	165	157	235	350	12	224	110	290	250	150	180 - 180	32,00	D
GUBW4INX	420	420	234	226	380	460	13	405	148	390	390	230	280 - 280	83,00	C

Reference details



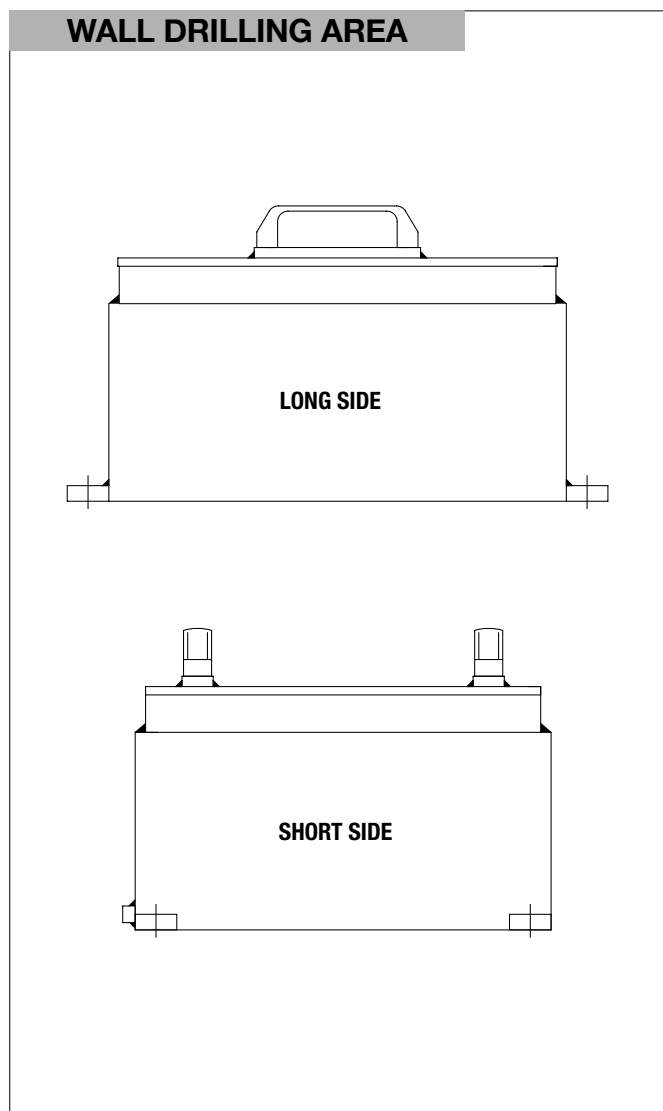


Body enclosures indicative maximum quantity of holes of the same size

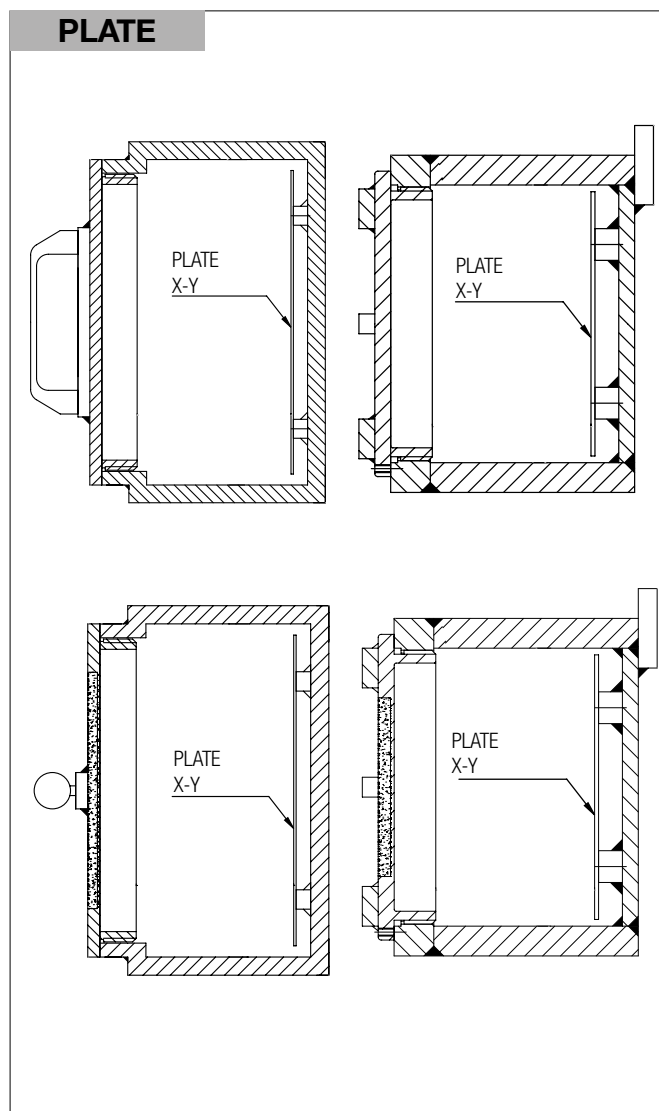
ENCLOSURE CODE	DRILLING AREA LONG SIDE							
	QUANTITY ALLOWED ENTRIES FOR size (from 1 to size 8)							
	1	2	3	4	5	6	7	8
GUB00INX	2	1	1	1	/	/	/	/
GUB0INX	6	3	2	2	1	1	1	/
GUB1INX	6	3	3	2	2	1	1	/
GUB03INX	15	11	9	8	6	4	2	2
GUB23INX	11	10	8	6	4	3	2	/
GUB4INX	23	18	14	11	10	7	4	3
GUB5INX	45	36	27	24	18	12	6	3
GUBW1INX	6	3	3	2	2	1	1	/
GUBW03INX	15	11	9	8	6	4	2	2
GUBW23INX	11	10	8	6	4	3	2	/
GUBW4INX	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
GUB00INX	2	1	1	1	/	/	/	/
GUB0INX	6	3	2	2	1	1	1	/
GUB1INX	6	3	3	2	2	1	1	/
GUB03INX	12	9	8	6	6	3	2	2
GUB23INX	9	8	8	5	3	3	2	/
GUB4INX	23	18	14	11	10	7	4	3
GUB5INX	45	36	27	24	18	12	6	3
GUBW1INX	6	3	3	2	2	1	1	/
GUBW03INX	12	9	8	6	6	3	2	2
GUBW23INX	9	8	8	5	3	3	2	/
GUBW4INX	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]
GUB00INX	8x1	4x1	4x1	2x1	2x1	/	/	/	Ø90
GUB0INX	12x1	6x1	6x1	4x1	4x1	2x1	1x1	/	110 - 110
GUB1INX	20x1	10x1	10x1	6x1	6x1	4x1	2x1	1x1	150 - 150
GUB03INX	34x1	20x1	18x1	14x1	10x1	8x1	6x1	4x1	220 - 200
GUB23INX	26x1	16x1	14x1	12x1	8x1	6x1	4x1	1x1	180 - 180
GUB4INX	48x2	28x2	24x2	20x2	12x2	10x2	8x1	4x1	280 - 280
GUB5INX	64x3	40x3	36x3	30x3	11x3	16x3	16x1	6x2	490 - 490
GUBW1INX	20x1	10x1	10x1	6x1	6x1	4x1	2x1	1x1	150 - 150
GUBW03INX	34x1	20x1	18x1	14x1	10x1	8x1	6x1	4x1	220 - 200
GUBW23INX	26x1	16x1	14x1	12x1	8x1	6x1	4x1	1x1	180 - 180
GUBW4INX	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 03 ATEX 0048X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +130°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 10 ATEX 9005U IECEx: IECEx INE 12.0021X Component: IECEx INE 12.0023U INMETRO: CEPEL 12.2193 Component INMETRO: CEPEL 12.2191U EAC: TC RU C-IT.ГБ02.B.00689/18 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 UL NEC-505: 20131030-E365676 (GUB-S / GUB-SY Series)

### 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



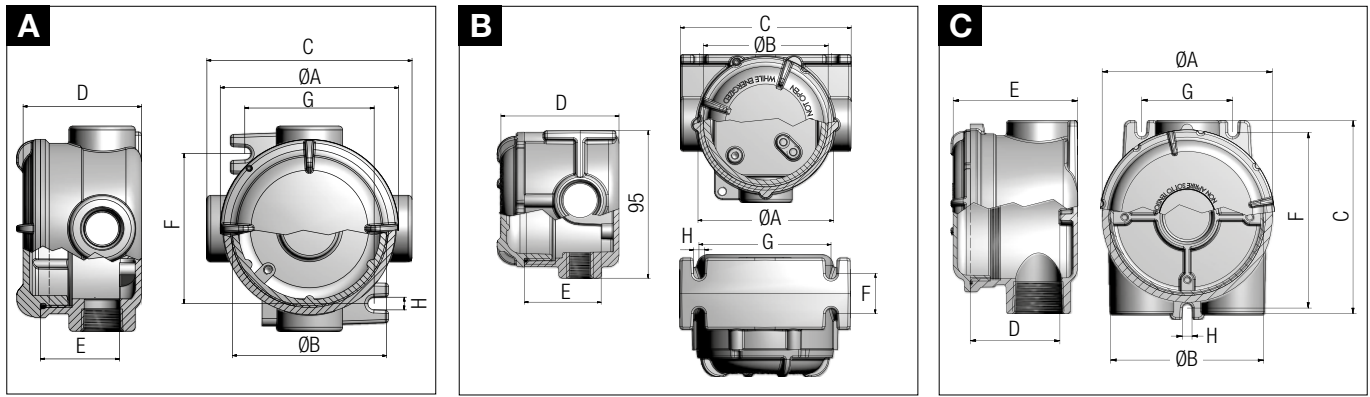
**On Request Accessories:**

- 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
GUA...16	87	77	100	75	40	70	70	7	0,60	A
GUA...17	113	100	130	79	50	95	82	9	0,90	A
GUA...26	87	77	100	75	40	70	70	7	0,60	A
GUA...27	113	100	130	79	50	95	82	9	0,90	A
GUA...36	87	77	100	75	40	70	70	7	0,60	A
GUA...37	113	100	130	79	50	95	82	9	0,90	A
GUA...59	154	135	169	110	75	100	130	7,5	1,30	A
GUA...69	154	135	169	110	75	100	130	7,5	1,30	A
GUAY59	154	135	169	110	75	155	80	9	1,30	C
EAHF26	87	77	110	76	50	26	85	7	0,50	B

Reference details



Hubs arrangement

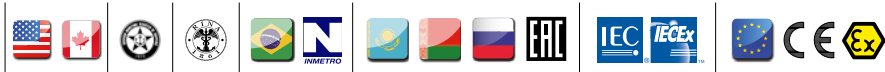
REFERENCE DETAILS	COMPLETE CODE	HUBS SIZE	REFERENCE DETAILS	COMPLETE CODE	HUBS SIZE
	GUAB16	2 x 1/2"		GUAW16	4 x 1/2"
	GUAB17	2 x 1/2"		GUAW17	4 x 1/2"
	GUAB26	2 x 3/4"		GUAW26	4 x 3/4"
	GUAB27	2 x 3/4"		GUAW27	4 x 3/4"
	GUAB36	2 x 1"		GUAW36	4 x 1"
	GUAB37	2 x 1"		GUAW37	4 x 1"
	GUAB59	2 x 1-1/2"		GUAW59	4 x 1-1/2"
	GUAB69	2 x 2"		GUAW69	4 x 2"
	GUAL...	GUAL16		2 x 1/2"	
GUAL17	2 x 1/2"	GUAD17	3 x 1/2"		
GUAL26	2 x 3/4"	GUAD26	3 x 3/4"		
GUAL27	2 x 3/4"	GUAD27	3 x 3/4"		
GUAL36	2 x 1"	GUAD36	3 x 1"		
GUAL37	2 x 1"	GUAD37	3 x 1"		
GUAL59	2 x 1-1/2"	GUAD59	3 x 1-1/2"		
GUAL69	2 x 2"	GUAD69	3 x 2"		
GUAC...	GUAC16	2 x 1/2"		GUAY59	
GUAC17	2 x 1/2"				
GUAC26	2 x 3/4"				
GUAC27	2 x 3/4"				
GUAC36	2 x 1"				
GUAC37	2 x 1"				
GUAC59	2 x 1-1/2"				
GUAC69	2 x 2"				
GUAT...	GUAT16	3 x 1/2"			GUAM16
GUAT17	3 x 1/2"	GUAM17	3 x 1/2"		
GUAT26	3 x 3/4"	GUAM26	3 x 3/4"		
GUAT27	3 x 3/4"	GUAM27	3 x 3/4"		
GUAT36	3 x 1"	GUAM36	3 x 1"		
GUAT37	3 x 1"	GUAM37	3 x 1"		
GUAT59	3 x 1-1/2"	GUAM59	3 x 1-1/2"		
GUAT69	3 x 2"	GUAM69	3 x 2"		
EAHF26	3 x 3/4"				
	GUAX16	4 x 1/2"		GUAJ16	5 x 1/2"
	GUAX17	4 x 1/2"		GUAJ17	5 x 1/2"
	GUAX26	4 x 3/4"		GUAJ26	5 x 3/4"
	GUAX27	4 x 3/4"		GUAJ27	5 x 3/4"
	GUAX36	4 x 1"		GUAJ36	5 x 1"
	GUAX37	4 x 1"		GUAJ37	5 x 1"
	GUAX59	4 x 1-1/2"		GUAJ59	5 x 1-1/2"
	GUAX69	4 x 2"		GUAJ69	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"> <li>⊗ II 2 G Ex d IIB+H2 Gb or IIC Gb</li> <li>⊗ II 2 D Ex tb IIC Db</li> </ul>
RULES OF COMPLIANCE	EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31
EC Type-Examination Certificate	INERIS 13 ATEX 9017U
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +200°C -60°C ÷ +95°C (pilot lights)
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 13_0073U INMETRO: CEPPEL 13.2257U EAC: TC RU C-IT.BH02.B.00608 (-60°C ÷ +60°C) NEC 505: UL 20140220-E466537


### 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


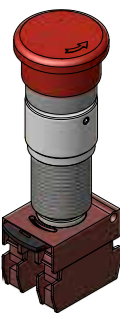
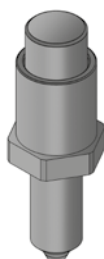
HANDLES-D	NORMAL PUSH BUTTON CODE	PADLOCKABLE PUSH BUTTON CODE	CONTACTS	PUSH BUTTON COLOUR	THREAD SIZE
<b>NORMAL AND PADLOCKABLE TYPE SPRING RETURN PUSH BUTTON - CONTACTS 10AMP</b>					
 <p><b>EFP2#</b></p>  <p><b>EFP2L#</b></p>	EFP2#AZ1	EFP2L#AZ1	1 NO	LIGHT BLUE	ISO-M25
	EFP2#AZ2	EFP2L#AZ2	1 NC	LIGHT 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	

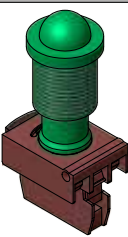
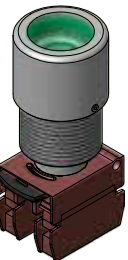
<b>SPRING RETURN MUSHROOM PUSH BUTTON - CONTACTS 10AMP</b>					
	EFP2F#1		1 NO	RED	ISO-M25
	EFP2F#2		1 NC	RED	ISO-M25
	EFP2F#3		1 NO + 1 NC	RED	ISO-M25
	EFP2F#4		2 NO	RED	ISO-M25
	EFP2F#5		2 NC	RED	ISO-M25




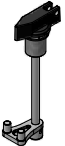




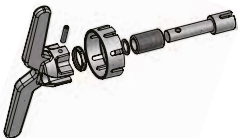
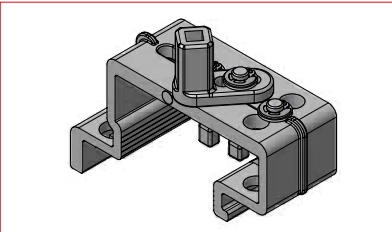
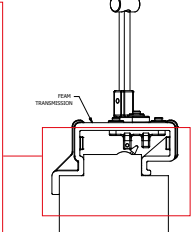


## Technical data

HANDLES-D	CODE	CONTACTS	PUSH BUTTON COLOUR	THREAD SIZE
<b>RELEASE BY KEY STAY-PUT MUSHROOM PUSH BUTTON - CONTACTS 10AMP</b>				
	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
<b>TURN TO RELEASE STAY-PUT MUSHROOM PUSH BUTTON - CONTACTS 10AMP</b>				
	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
<b>PUSHBUTTON KIT IN STAINLESS STEEL FOR SPECIAL APPLICATIONS (WITH/WITHOUT CONTACT)</b>				
	KITPM10X	-	-	ISOM10
	KITPM10XF	-	-	ISOM10

HANDLES-D	CODE	CONTACTS DIAGRAM	SUPPLY	LAMPHOLDER	LAMP COLOUR	SIZE
<b>PILOT LIGHT FOR BACK COVER INSTALLATION</b>						
	EFL1P#AZ	-	12V ÷ 380V ac/dc	Ba-9s	LIGHT BLUE	ISO-M25
	EFL1P#BI	-	12V ÷ 380V ac/dc	Ba-9s	WHITE	ISO-M25
	EFL1P#BL	-	12V ÷ 380V ac/dc	Ba-9s	BLUE	ISO-M25
	EFL1P#GI	-	12V ÷ 380V ac/dc	Ba-9s	YELLOW	ISO-M25
	EFL1P#RO	-	12V ÷ 380V ac/dc	Ba-9s	RED	ISO-M25
	EFL1P#VE	-	12V ÷ 380V ac/dc	Ba-9s	GREEN	ISO-M25
	EFL1P#AR	-	12V ÷ 380V ac/dc	Ba-9s	ORANGE	ISO-M25
<b>SPRING RETURN ILLUMINATED PUSH BUTTON FOR BACK COVER INSTALLATION</b>						
	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
<b>BACK COVER INSTALLATION PADLOCKABLE HANDLE (for selector switch only)</b>			
	EFI-RLL EFI-RLLX (Stainless Steel)	BLACK	1/2" ISO-228
	EFI-RC EFI-RCX (Stainless Steel)	BLACK	1" ISO-228
	2040.00093 2040.00093X (Stainless steel)	BLACK	1/2" ISO-228
<b>BACK COVER INSTALLATION PADLOCKABLE HANDLE (for MCB only)</b>			
	EFI-SC EFI-SCX (Stainless Steel)	BLACK	1/2" ISO-228
<b>PADLOCKABLE HANDLE FOR MCB (ALL POSITION)</b>			
	2040.00578 2040.00578X (Stainless Steel)	BLACK	1/2" ISO-228
	EFIGUB1 EFIGUB1X (Stainless steel)	BLACK	1/2" ISO-228
<b>PADLOCKABLE HANDLE FOR MCCB 63A MAX (ALL POSITION)</b>			
	2040.00258 2040.00258X (Stainless Steel)	BLACK	1/2" ISO-228
<b>63÷400A SIZE PADLOCKABLE HANDLE (ALL POSITIONS)</b>			
	EFI-SL EFI-SLX (Stainless steel)	BLACK	1/2" ISO-228
<b>PADLOCKABLE DOUBLE HANDLE (ALL POSITIONS)</b>			
	EFI-MCCBR10/D EFI-MCCBR10X/D (Stainless steel)	BLACK	3/4" ISO-228
HANDLES-D		CODE	
<b>ROTARY DEVICE FOR SCHNEIDER MCB</b>			
			
		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 0069X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-40°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 14.0014X EAC: TC RU C-IT.ГБ02.B.00689/18 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280

**Mechanical characteristics**

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



**On Request Accessories:**

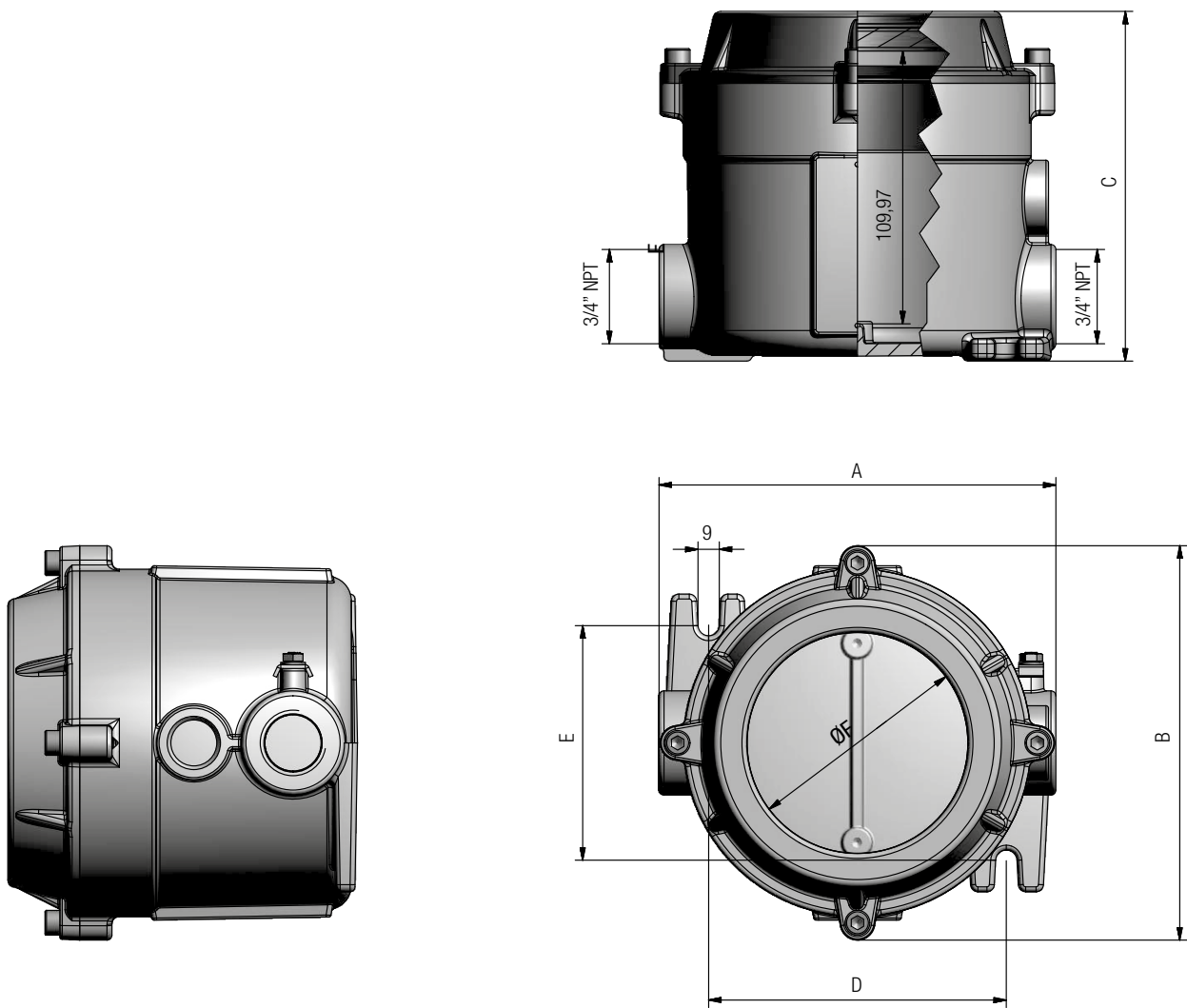
- External epoxy painting with colour on request
- Internal anticondensate painting
- AISI 316L stainless steel drain breather valve

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
EMH9S	160	159	141	120	95	89	110	8	1,50	1 x 3/4"	NO	A
EMH92S	160	159	141	120	95	89	110	8	1,50	2 x 3/4"	NO	A
EMH9SV	160	159	141	120	95	89	110	8	1,50	1 x 3/4"	YES	A
EMH92SV	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 02 ATEX 0067X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C (+160°C with ceramic terminals)
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9028U IECEX: IECEX INE11.0016 INMETRO: CEPEL 12.2159 EAC: TC RU C-IT.Г502.B.00689/18 RINA: ELE139017CS002 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141112-E465037 - Type rating NEMA 1, 12, 4 and 4X

**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



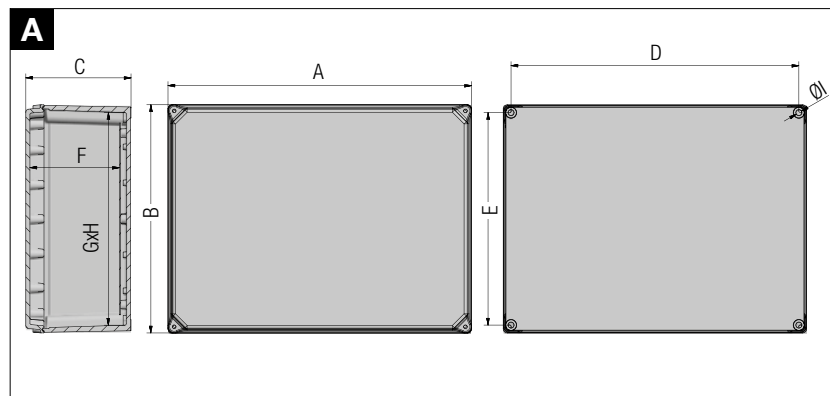
**On Request Accessories:**

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

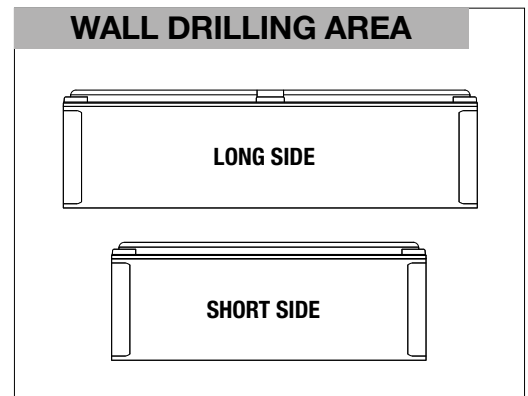
**Technical Features**

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
ESA1313	130	130	87	115	115	70	112	112	6	110 - 70	1,20	A
ESA1717	170	170	97	155	155	81	151	151	6	150 - 150	1,50	A
ESA2216	220	160	96	205	145	80	141	201	6	200 - 100	3,80	A
ESA2222	220	220	112	205	205	95	201	201	6	200 - 200	4,40	A
ESA3322	330	220	123	310	200	103	201	311	8	294 - 154	6,40	A
ESA3333	330	330	131	310	310	111	311	311	8	290 - 290	8,80	A
ESA4433	440	330	154	420	310	131	311	421	8	400 - 290	11,40	A
ESA5242	520	420	183	496	394	159	398	499	8	460 - 370	20,20	A
ESA6348	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
ESA1313	2	1	1	1	/	/	/	/
ESA1717	5	3	2	2	2	1	/	/
ESA2216	6	3	3	3	2	2	/	/
ESA2222	9	5	3	3	3	2	2	/
ESA3322	12	7	6	5	4	3	3	/
ESA3333	12	7	6	5	4	3	2	/
ESA4433	20	14	12	12	6	5	3	/
ESA5242	30	18	16	12	12	8	4	3
ESA6348	36	24	18	16	12	10	6	4

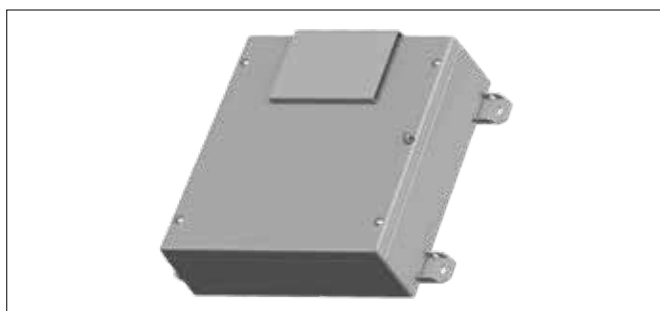
ENCLOSURE CODE	DRILLING AREA SHORT SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
ESA1313	2	1	1	1	/	/	/	/
ESA1717	5	3	2	2	2	1	/	/
ESA2216	4	2	2	2	1	1	/	/
ESA2222	8	5	3	3	3	2	2	/
ESA3322	8	5	4	4	3	2	2	/
ESA3333	12	7	6	5	4	3	2	/
ESA4433	14	10	8	8	4	3	2	/
ESA5242	28	18	14	11	10	7	4	1
ESA6348	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]
ESA1313	10 x 1	5 x 1	4 x 1	4 x 1	3 x 1	2 x 1	1 x 1	/	112 - 70
ESA1717	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
ESA2216	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
ESA2222	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
ESA3322	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
ESA3333	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
ESA4433	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
ESA5242	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
ESA6348	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"> <li>⊗ II 2 G Ex e IIB or IIC T6 ÷ T3 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C ÷ T200°C Db</li> </ul>
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 02 ATEX 0067X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C (+160°C with ceramic terminals)
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9028U IECEx: IECEx INE11.0016 INMETRO: CEPEL 12.2159 EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE139017CS002 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141112-E465037 Type rating NEMA 1, 12, 4 and 4X

**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		O	T	P	O	K	D [mm]
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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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	O	T	P	O	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
0	without flanges
1	n. 1 flange long side
2	n. 2 flanges long side
3	n. 1 flange 3 mm thickness long side
4	n. 2 flanges 3 mm thickness long side
5	n. 1 double flange long side
6	n. 2 double flanges long side

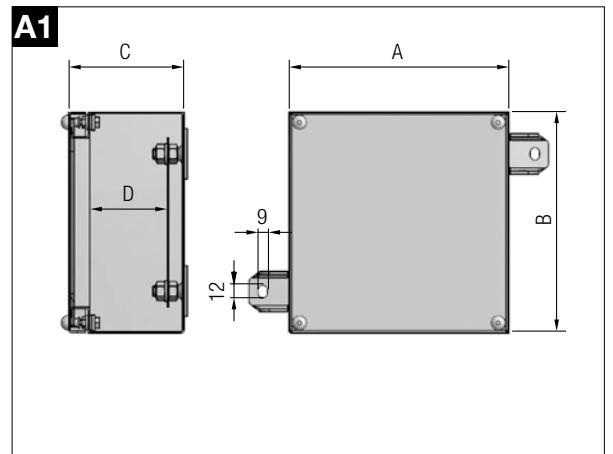
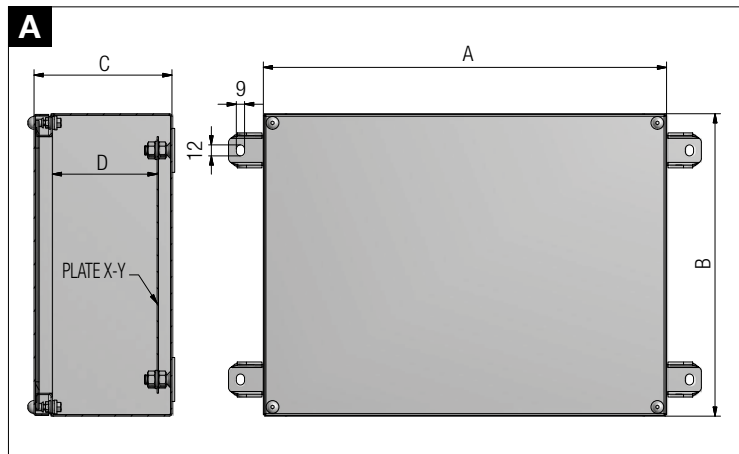
N°	Short Side Flange
0	without flanges
1	n. 1 flange short side
2	n. 2 flanges short side
3	n. 1 flange 3 mm thickness short side
4	n. 2 flanges 3 mm thickness short side
5	n. 1 double flange short side
6	n. 2 double flanges short side

Code	Type of closing
CSS	closing lid with screws
CVL	closing lid with hinges and screws, long side
CVC	closing lid with hinges and screws, short side
SHL	closing lid with hinges and key, long side
SHC	closing lid with hinges and key, short side
PKL	closing lid with hinges and padlock, long side
PKC	closing lid with hinges and padlock, short side

Code	Accessories
O	without accessories
T	with internal documents holder
P	with plateholder

Code	Fixing Lugs
O	fixing lugs excluded
K	fixing lugs included

Reference Details

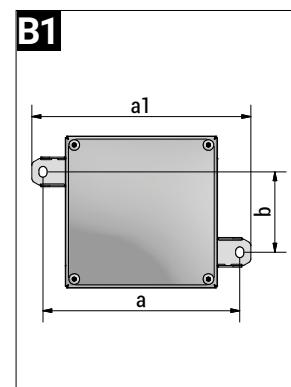
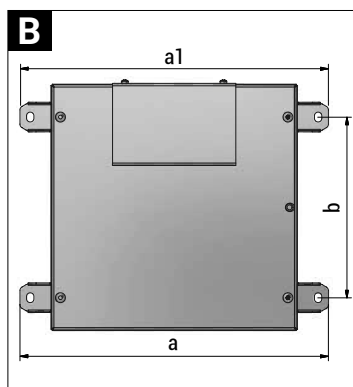




**DISTANCE BETWEEN FIXING CENTERS**

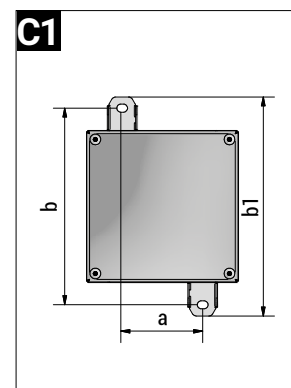
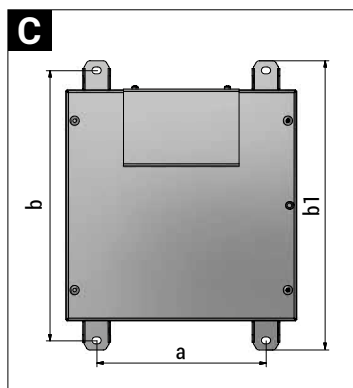
**Horizontal position**

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	* for further details, please contact our technical sales department			
ESX#200180	* for further details, please contact our technical sales department			



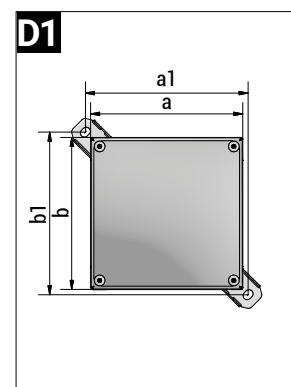
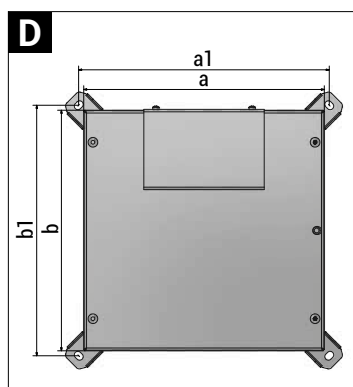
**Vertical position**

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	* for further details, please contact our technical sales department			
ESX#200180	* for further details, please contact our technical sales department			



**45° position**

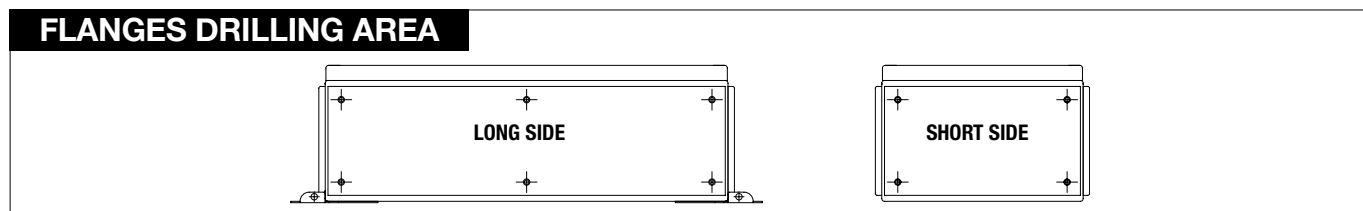
Enclosure	a	b	a1	b1	DETAIL
ESX#1313	143	143	175	175	D1
ESX#1717	183	183	215	215	D1
ESX#2216	233	178	265	205	D
ESX#2222	233	233	265	265	D
ESX#3322	343	233	375	265	D
ESX#3333	343	343	375	375	D
ESX#4040	413	413	445	445	D
ESX#4433	453	343	485	375	D
ESX#5242	533	433	565	465	D
ESX#6348	643	493	675	525	D
ESX#150110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

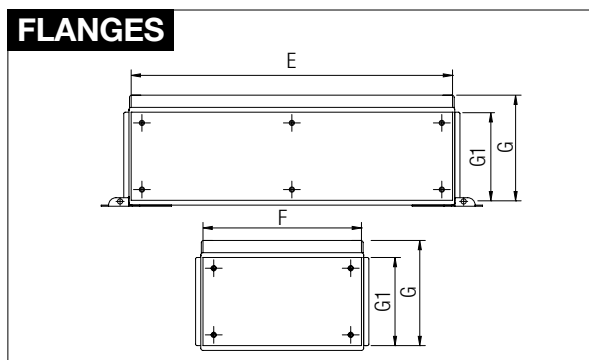
ENCLOSURE CODE	DRILLING AREA SHORT SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
ESX#2216	6	3	2	2	1	1	1	/
ESX#2222	8	5	4	3	2	2	1	/
ESX#3322	8	5	4	3	2	2	1	/
ESX#3333	12	8	7	4	4	3	3	/
ESX#4040	14	10	8	6	5	4	3	/
ESX#4433	14	9	7	5	4	3	3	/
ESX#5242	32	22	18	14	10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



**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**

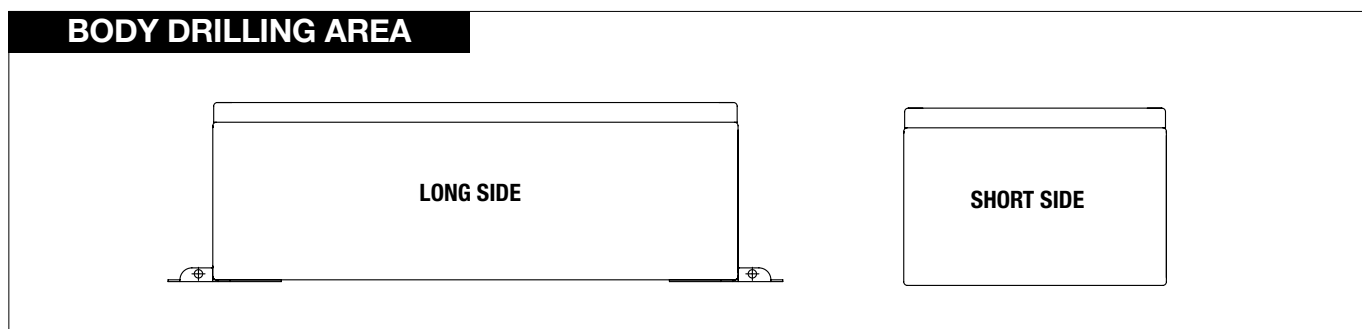
ENCLOSURE CODE	SECT. 2,5 [sq/mm]	SECT. 6,0 [sq/mm]	SECT. 10,0 [sq/mm]	SECT. 16,0 [sq/mm]	SECT. 35,0 [sq/mm]	SECT. 50,0 [sq/mm]	SECT. 70,0 [sq/mm]	SECT. 240,0 [sq/mm]	INT.PLATE X - Y [mm]
ESX#1313	8 x 1	5 x 1	4 x 1	4 x 1	3 x 1	2 x 1	1 x 1	/	80 - 80
ESX#1717	22 x 1	12 x 1	10 x 1	8 x 1	7 x 1	5 x 1	4 x 1	/	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	<ul style="list-style-type: none"> <li>⊗ II 2G Ex e IIA, IIB, IIC T6, T5 Gb</li> <li>⊗ II 2G Ex ia/ib IIA, IIB, IIC T6, T5 Gb</li> <li>⊗ II 2D Ex tb IIIC T80 °C, T95 °C Db IP 66</li> <li>⊗ II 2D Ex ia/ib IIIC T80 °C, T95 °C Db</li> </ul>
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	PTB 08 ATEX 1064X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-20 °C (-55 °C) to +40 °C at T6 -20 °C (-55 °C) to +55 °C at T5
OTHER AVAILABLE CERTIFICATES	Component: PTB 08 ATEX 1062U IECEx: IECEx PTB 09.0009X IECEx (component): IECEx PTB 09.0008U CSA: c-us 2557738 Kc (Korean certification): 15-AV4BO-0120 EAC: TC RU C-SI.BH02.B.00160/19

**Mechanical characteristics**

Material	glass-fibre reinforced polyester, EN 60079-0, halogen-free black surface resistance < 10 <sup>9</sup> Ω
Cover	black: RAL 9005
Lid screws	stainless steel, captive cross-head (+ -) (other models on request)
Standard seals	EPDM -20 °C to +95 °C optional: silicone -55 °C to +100 °C
Mechanical resistance	impact energy 7 Nm (EN/IEC 60079-0)
Protection class	IP 66 EN/IEC 60529
Rated voltage	max. 1100 V



**On Request Accessories:**

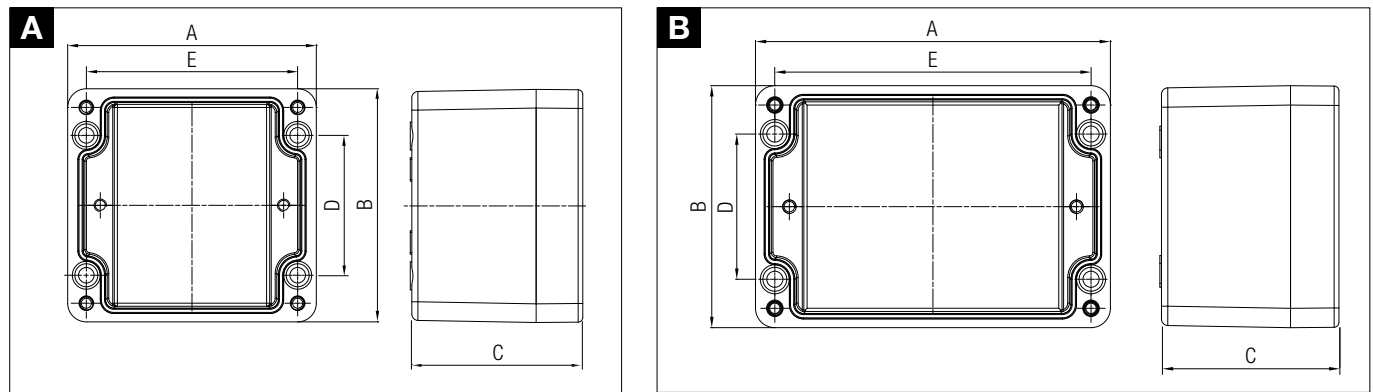
- Drain and breather valves

**Technical Features**

CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	I [mm]	INT. PLATE X - Y [mm]	WEIGHT [Kg]	DETAIL
07-51**-0800/7555	80	75	55	45	70	7	-	0,23	A
07-51**-1100/7555	110	75	55	45	99	7	-	0,28	B
07-51**-1600/7555	160	75	55	45	150,5	7	-	0,37	B
07-51**-1900/7555	190	75	55	45	180	7	-	0,43	B
07-51**-1221/2090	122	120	90	82	111	7	109 - 106	0,66	A
07-51**-2201/2090	220	120	90	82	209,5	7	207-106	1,04	B
07-51**-1601/6090	160	160	90	110	146,5	8	143,5 -144	1,28	A
07-51**-2601/6090	260	160	90	110	248	7	244 -144	1,75	B
07-51**-2002/5012	200	250	120	180	200	7	185 - 231	2,32	B
07-51**-2552/5012	255	250	120	200	242	7	240 - 233	2,73	B
07-51**-2552/5016	255	250	160	200	242	7	240 - 233	3,27	A

(\*\*) ENCLOSURE'S TYPE: ..03= BLACK EX E DISTRIBUTION BOX - ..05= BLACK EX I DISTRIBUTION BOX - ..78= BLACK IP66 DISTRIBUTION BOX

**Reference Details**



**Body enclosures indicative maximum quantity of holes of the same size**

ENCLOSURE CODE	DRILLING AREA LONG SIDE										DRILLING AREA SHORT SIDE										
	Quantity allowed entries for size (from M12 to M63)										Quantity allowed entries for size (from M12 to M63)										
	M12 x 1.5	M16 x 1.5	M16 x 1.5 extended	M20 x 1.5	M20 x 1.5 extended	M25 x 1.5	M32 x 1.5	M40 x 1.5	M50 x 1.5	M63 x 1.5	M12 x 1.5	M16 x 1.5	M16 x 1.5 extended	M20 x 1.5	M20 x 1.5 extended	M25 x 1.5	M32 x 1.5	M40 x 1.5	M50 x 1.5	M63 x 1.5	
07-51**-0800/7555	4	2	2	2	1	1	\	\	\	\	1	1	\	\	\	\	\	\	\	\	\
07-51**-1100/7555	6	4	3	3	2	2	\	\	\	\	1	1	\	\	\	\	\	\	\	\	\
07-51**-1600/7555	12	6	5	4	4	3	\	\	\	\	1	1	\	\	\	\	\	\	\	\	\
07-51**-1900/7555	15	8	6	5	5	4	\	\	\	\	1	1	\	\	\	\	\	\	\	\	\
07-51**-1221/2090	13	9	5	5	4	3	2	1	1	\	4	4	2	2	2	1	1	1	\	\	\
07-51**-2201/2090	28	18	12	11	10	5	3	3	2	\	4	4	2	2	2	1	1	1	\	\	\
07-51**-1601/6090	18	14	8	8	6	4	2	2	1	\	8	8	5	4	4	2	2	1	\	\	\
07-51**-2601/6090	33	26	17	14	12	7	4	3	3	\	8	8	5	4	4	2	2	1	\	\	\
07-51**-2002/5012	24	16	10	9	7	4	3	2	2	2	12	12	10	8	8	4	3	2	2	2	\
07-51**-2552/5012	53	34	23	20	18	9	7	4	3	2	12	12	10	8	8	4	3	2	2	2	2
07-51**-2552/5016	53	34	23	20	18	9	7	4	3	2	12	12	10	8	8	4	3	2	2	2	2

(\*\*) ENCLOSURE'S TYPE: ..03= BLACK EX E DISTRIBUTION BOX - ..05= BLACK EX I DISTRIBUTION BOX - ..78= BLACK IP66 DISTRIBUTION BOX

**Indicative quantity of terminals and relevant section**

CODE ENCLOSURE	AKZ4	WDU 2.5	WDU 2.5 bl	WDU 4	CODE ENCLOSURE	AKZ4	WDU 2.5	WDU 2.5 bl	WDU 4
07-51**-0800/7555	8 x 1	\	\	\	07-51**-1601/6090	18 x 2	24 x 1	23 x 1	20 x 1
07-51**-1100/7555	13 x 1	\	\	\	07-51**-2601/6090	34 x 2	43 x 1	42 x 1	34 x 1
07-51**-1600/7555	21 x 1	\	\	\	07-51**-2002/5012	\	43 x 2	43 x 2	35 x 2
07-51**-1900/7555	26 x 1	\	\	\	07-51**-2552/5012	\	43 x 2	42 x 3	35 x 2
07-51**-1221/2090	14 x 1	16 x 1	16 x 1	14 x 1	07-51**-2552/5016	\	43 x 2	42 x 3	35 x 2
07-51**-2201/2090	30 x 1	35 x 1	35 x 1	30 x 1					

(\*\*) ENCLOSURE'S TYPE: ..03= BLACK EX E DISTRIBUTION BOX - ..05= BLACK EX I DISTRIBUTION BOX - ..78= BLACK IP66 DISTRIBUTION BOX



**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	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex de IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db (External actuating elements)</li> </ul>
	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex db eb IIC Gb</li> <li>⊗ I M 2 Ex db eb I Mb (Internal pilot lamp module)</li> </ul>
	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex db eb ia IIC Gb</li> <li>⊗ I M 2 Ex db eb ia I Mb (Ex ia internal pilot lamp module)</li> </ul>
RULES OF COMPLIANCE	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex db eb IIC Gb</li> <li>⊗ I M 2 Ex db eb I Mb (Internal switch module with terminals)</li> </ul>
	EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-11; EN/IEC 60079-31
EC Type-Examination Certificate	CML 13 ATEX 3010U (Actuating elements) CML 17 ATEX 1106U (Pilot lamp modules) LCIE 13 ATEX 3007U (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 13.0009U (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.BH02.B.00608 (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

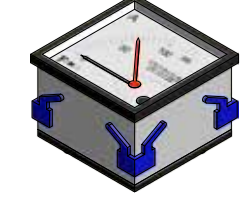
05-0003-000700 \*: 5 labels (red, green, yellow, white, black) included

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

PULL TO RELEASE MUSHROOM PUSH BUTTON				
HANDLES-DE	COMPLETE OPER. CODE	SINGLE ACTUATING AND MODULE CODES	CONTACT BLOCK	BODY DIAMETER (mm)
	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
	AMDE#	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)																																		
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DIFFERENT SWITCH DIAG. CONFIGURATION ARE AVAILABLE ON DEMAND



## 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-O-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 SWICTH				
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
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**

<b>CONTROL STATIONS - GWRCS</b>	
<b>Directive 2014/34/EU</b>	
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 0042
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-50°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13ATEX 9009U IECEx: IECEx INE 13.0058 IECEx (component): IECEx INE 13.0021U INMETRO: CEPPEL 13.2287 INMETRO (component): CEPEL 13.2273U EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE139017CS001 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141112-E465037 - Type rating NEMA 1, 12, 4 and 4X

<b>Mechanical characteristics - GWRCS</b>	
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



**On Request Accessories:**

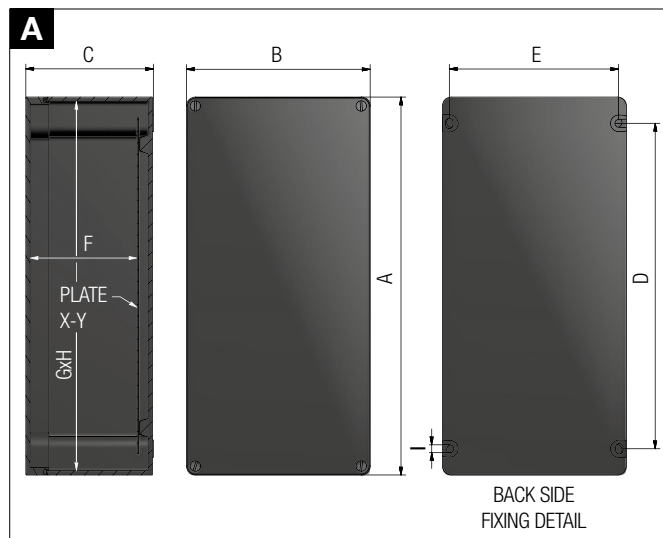
- Drain and breather valves

**Technical Features**

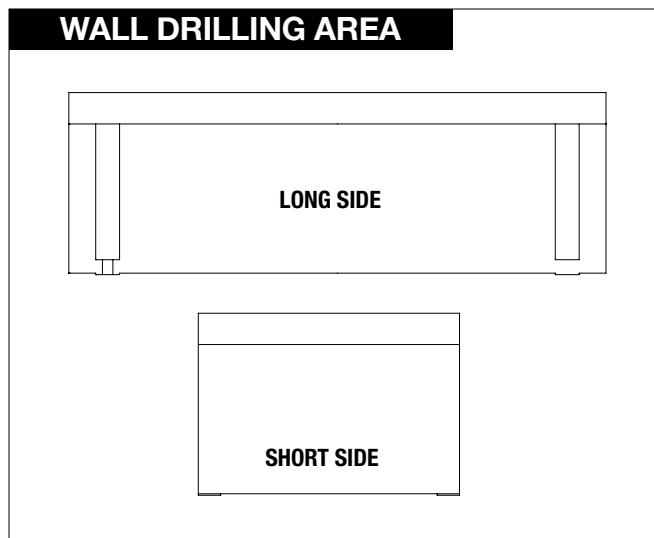
CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	INT. PLATE X - Y [mm]	WEIGHT [Kg]	DETAIL
GWR22(1)	175	175	121	162	125	100	167	167	7	135 - 135	1,25	A
GWR42(1)	360	175	121	310	161	102	352	167	7	320 - 135	2,50	A
GWR44(1)	360	360	121	346	307	102	352	352	7	320 - 320	3,40	A
GWR84(1)	730	360	168	670	340	147	720	350	8	670 - 310	8,00	A

(1) ENCLOSURE'S COLOUR: N=BLACK RAL 9005 - B: LIGHT BLUE RAL 5015. EXAMPLES: GWR22N - GWR42B

**Reference Details**



**Reference Details**



**Body enclosures indicative maximum quantity of holes of the same size**

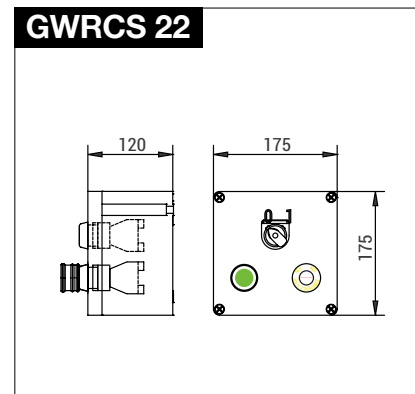
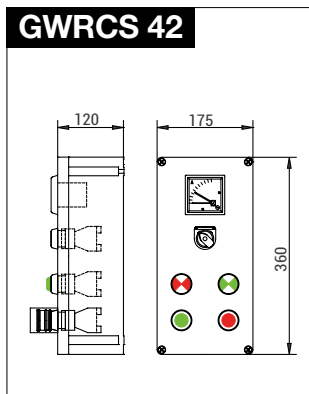
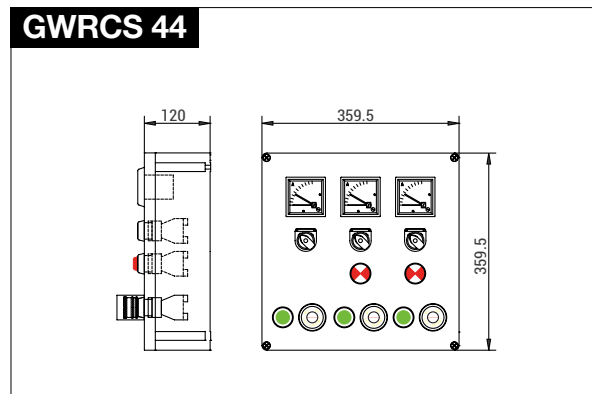
ENCLOSURE CODE	DRILLING AREA LONG SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
GWR22	5	3	2	2	1	1	1	-
GWR42	12	8	7	5	4	4	3	-
GWR44	12	8	7	5	4	4	3	-
GWR84	35	23	20	17	13	9	7	5

ENCLOSURE CODE	DRILLING AREA SHORT SIDE							
	QUANTITY ALLOWED ENTRIES FOR SIZE (from 1 to size 8)							
	1	2	3	4	5	6	7	8
GWR22	5	3	2	2	1	1	1	-
GWR42	5	3	2	2	1	1	1	-
GWR44	12	8	7	5	4	4	3	-
GWR84	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]
GWR22	18 x 2	10 x 2	10 x 1	8 x 1	6 x 1	4 x 1	4 x 1	-	135 - 135
GWR42	48 x 2	16 x 2	16 x 2	20 x 1	12 x 1	4 x 1	4 x 1	-	320 - 135
GWR44	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
GWR84	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

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

<b>CONTROL STATIONS - ESACS - ESXCS</b>	
<b>Directive 2014/34/EU</b>	
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 02 ATEX 0067X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9028U IECEX: IECEx INE11.0016 INMETRO: CEPEL 12.2159 EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE139017CS001 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 NEC 505: UL 20141112-E465037 Type rating NEMA 1, 12, 4 and 4X Kc (Korean certification): 2014-024207-02

<b>Mechanical characteristics - ESACS</b>	
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

<b>Mechanical characteristics - ESXCS</b>	
Body	stainless steel AISI 316I sp. 1,5mm
Cover	stainless steel AISI 316I sp. 1,5mm
Screws	stainless steel AISI 316L
Internal plate	stainless steel AISI 316L
Gasket	silicon
Strenght	4 Joule impact resistance

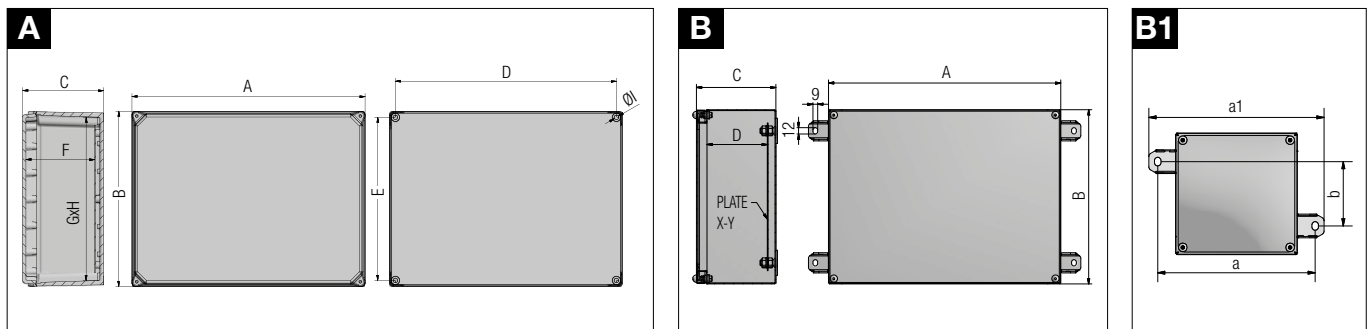


<b>On Request Accessories:</b>
• External epoxy painting with colour on request
• Internal anticondensate painting orange RAL 2004 (ESX)
• Drain and breather valves
• Removable flanges (only stainless steel enclosures)

Technical Features - ESACS

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
ESA1313	130	130	87	115	115	70	112	112	6	110 - 70	1,20	A
ESA1717	170	170	97	155	155	81	151	151	6	150 - 150	1,50	A
ESA2216	220	160	96	205	145	80	141	201	6	200 - 100	3,80	A
ESA2222	220	220	112	205	205	95	201	201	6	200 - 200	4,40	A
ESA3322	330	220	123	310	200	103	201	311	8	294 - 154	6,40	A
ESA3333	330	330	131	310	310	111	311	311	8	290 - 290	8,80	A
ESA4433	440	330	154	420	310	131	311	421	8	400 - 290	11,40	A
ESA5242	520	420	183	496	394	159	398	499	8	460 - 370	20,20	A
ESA6348	630	480	181	615	465	156	459	609	8	550 - 400	21,30	A

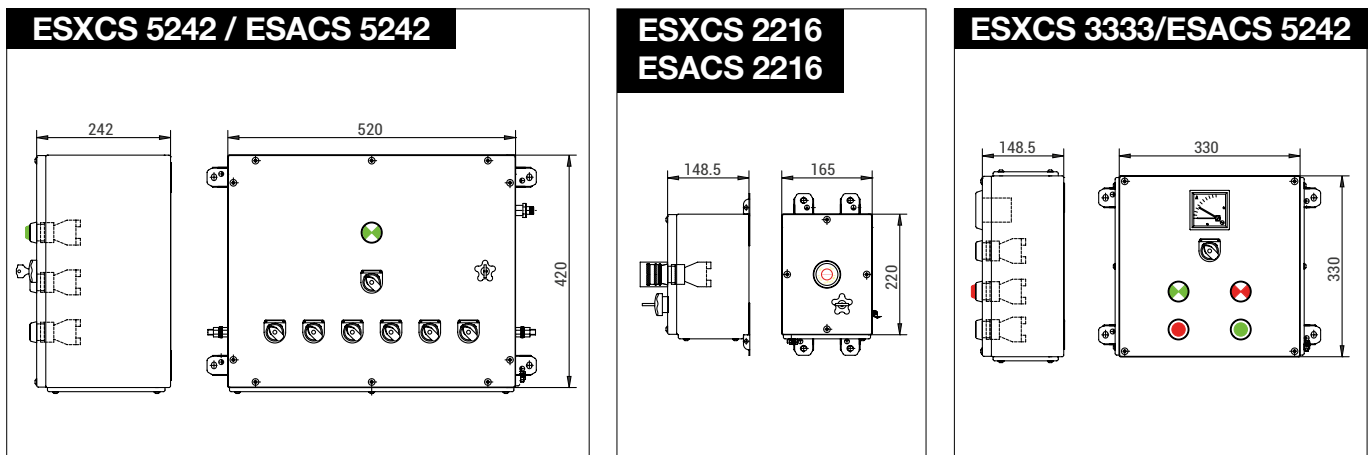
Reference Details



Technical Features - ESXCS

LONG SIDE TYPE	SHORT SIDE		HEIGHT		LONG SIDE FLANGE		SHORT SIDE FLANGE		TYPE OF CLOSING	ACCES-SORIES	FIXING LUGS	INTERNAL HEIGHT	PLATE X-Y	WEIGHT [Kg]	DETAIL
	TYPE	B [mm]	TYPE	C [mm]	0 1 2 3 4 5 6	0 1 2 3 4 5 6	D [mm]	[mm]							
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	B1		
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	B1		
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	B		
		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	B		
		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	B		
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	B		
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	B		
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	B		
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	B		
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	B		
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	B		

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



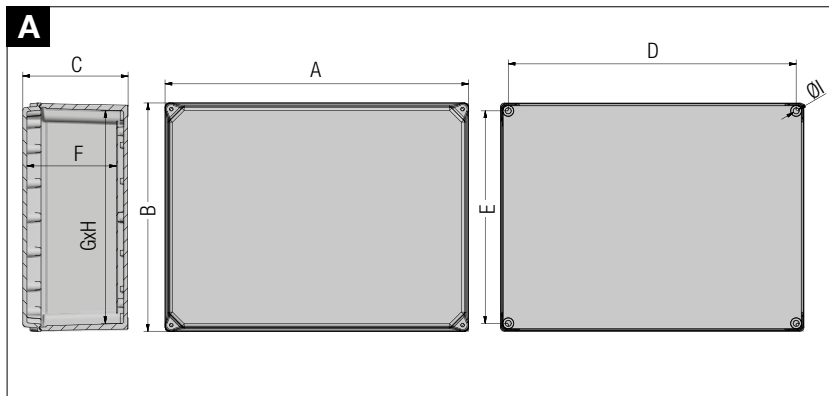
**On Request Accessories:**

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

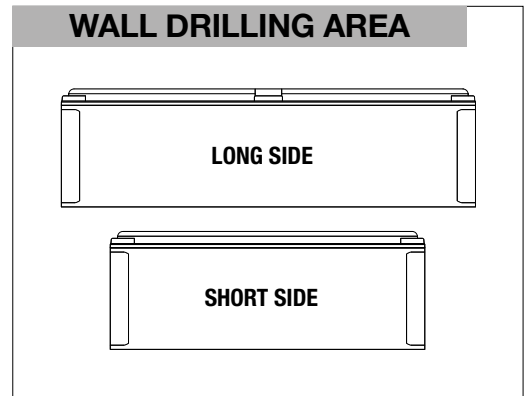
**Tehnichal Features**

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
ES1313	130	130	87	115	115	70	112	112	6	110 - 70	1,20	A
ES1717	170	170	97	155	155	81	151	151	6	150 - 150	1,50	A
ES2216	220	160	96	205	145	80	141	201	6	200 - 100	3,80	A
ES2222	220	220	112	205	205	95	201	201	6	200 - 200	4,40	A
ES3322	330	220	123	310	200	103	201	311	8	294 - 154	6,40	A
ES3333	330	330	131	310	310	111	311	311	8	290 - 290	8,80	A
ES4433	440	330	154	420	310	131	311	421	8	400 - 290	11,40	A
ES5242	520	420	183	496	394	159	398	499	8	460 - 370	20,20	A
ES6348	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
ESA1313	2	1	1	1	/	/	/	/
ESA1717	5	3	2	2	2	1	/	/
ESA2216	6	3	3	3	2	2	/	/
ESA2222	9	5	3	3	3	2	2	/
ESA3322	12	7	6	5	4	3	3	/
ESA3333	12	7	6	5	4	3	2	/
ESA4433	20	14	12	12	6	5	3	/
ESA5242	30	18	16	12	12	8	4	3
ESA6348	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
ESA1313	2	1	1	1	/	/	/	/
ESA1717	5	3	2	2	2	1	/	/
ESA2216	4	2	2	2	1	1	/	/
ESA2222	8	5	3	3	3	2	2	/
ESA3322	8	5	4	4	3	2	2	/
ESA3333	12	7	6	5	4	3	2	/
ESA4433	14	10	8	8	4	3	2	/
ESA5242	28	18	14	11	10	7	4	1
ESA6348	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]
ES1313	10 x 1	5 x 1	4 x 1	4 x 1	3 x 1	2 x 1	1 x 1	/	112 - 70
ES1717	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
ES2216	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
ES2222	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
ES3322	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
ES3333	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
ES4433	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
ES5242	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
ES6348	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

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**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 09 ATEX 0028X
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 11.0017X INMETRO: CEPEL 12.2177X EAC: TC RU C-IT.BH02.B.00587 (-75°C ÷ +180°C) RINA: ELE139017CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 CCOE-PESO: P405709/1

**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 (1)	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#	01	ISO-M20	M	1/2"NPT	N	1/2"	G	3,5	6,0	10,0	15,0	32,0	NICKEL PL. BRASS	ON
								6,0	8,5				14,0	19,0
								8,5	11,0	15,0	20,0			
PAPD# PAPD-R#	02	ISO-M25	M	3/4"NPT	N	3/4"	G	11,0	13,5	19,0	24,0	36,0	STAINLESS STEEL	IX
								13,5	16				NICKEL PL. BRASS	ON
								19,0	22,0	20,0	26,0		45,0	NICKEL PL. BRASS
PAPD# PAPD-R#	03	ISO-M32	M	1"NPT	N	1"	G	16,0	19,0	25,0	31,0	45,0	STAINLESS STEEL	IX
								19,0	22,0				NICKEL PL. BRASS	ON
								22,0	25,0	26,0	32,0		53,0	NICKEL PL. BRASS
PAPD# PAPD-R#	04	ISO-M40	M	1 1/4"NPT	N	1 1/4"	G	22,0	25,0	31,0	37,0	53,0	STAINLESS STEEL	IX
								25,0	28,0				34,0	40,0
								22,0	25,0	30,0	37,0		61,0	NICKEL PL. BRASS
PAPD# PAPD-R#	05	ISO-M50	M	1 1/2"NPT	N	1 1/2"	G	25,0	28,0	36,0	43,0	61,0	STAINLESS STEEL	IX
								28,0	31,0				40,0	47,0
								31,0	34,0	42,0	48,0		71,0	NICKEL PL. BRASS
PAPD# PAPD-R#	06	ISO-M63	M	2"NPT	N	2"	G	34,0	37,0	47,0	53,0	71,0	STAINLESS STEEL	IX
								37,0	40,0				50,0	56,0
								40,0	43,0	52,0	58,0		84,0	NICKEL PL. BRASS
PAPD# PAPD-R#	07	ISO-M75	M	2 1/2"NPT	N	2 1/2"	G	40,0	43,0	52,0	58,0	84,0	STAINLESS STEEL	IX
								43,0	46,0				58,0	64,0
								46,0	49,0	61,0	67,0		101,0	NICKEL PL. BRASS
PAPD# PAPD-R#	08	ISO-M90	M	3"NPT	N	3"	G	49,0	52,0	65,0	72,0	101,0	STAINLESS STEEL	IX
								52,0	55,0				71,0	78,0
								56,0	59,0	74,0	81,0		126,0	NICKEL PL. BRASS
PAPD# PAPD-R#	09	ISO-M100	M	4"NPT	N	4"	G	57,0	60,0	81,0	88,0	126,0	STAINLESS STEEL	IX
								60,0	63,0				88,0	96,0
								63,0	66,0	96,0	104,0		STAINLESS STEEL	IX

**CABLE GLAND ORDERING**

**EXAMPLES**

PAPD#	01	M	ON	= PAPD#01MON (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.)
PAPD#	03	N	IX	= PAPD#03NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL 1"NPT THR.)

**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	ON = NICKEL PLATED MARINE BRASS - IX = 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 IIC 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 09 ATEX 0028X
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 11.0017X INMETRO: CEPEL 12.2177X EAC: TC RU C-IT.BH02.B.00587 (-75°C ÷ +180°C) RINA: ELE139017CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 CCOE-PESO: P405709/1 Deluge certification* for sizes 1÷6 with <b>silicon rubber rings only:</b> 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 (1)	SIZE	ENTRY THREAD SIZE				DIA. UNDER ARMOUR		OUTER SHEATH DIA.		HEXAGON	MATERIAL			
		METRIC (2)	NPT (2)	ISO 228 (2)		min [mm]	max [mm]	min [mm]	max [mm]	[mm]	(3)			
PAP# PAP-R#	00	ISO-M16	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
		ISO-M20	M	1/2"NPT	N	1/2"	G	4,0	7,0	10,0	15,0	32,0	NICKEL PL. BRASS	ON
								7,0	10,0				STAINLESS STEEL	IX
PAP# PAP-R# PAPDL#* PAPRDL#*	01	ISO-M20	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
								10,5	13,0					
	02	ISO-M25	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					
	03	ISO-M32	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					
	04	ISO-M40	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					
05	ISO-M50	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						
06	ISO-M63	M	2"NPT	N	2"	G	36,0	39,0	42,0	48,0	71,0	NICKEL PL. BRASS	ON	
							39,0	42,0				STAINLESS STEEL	IX	
							42,0	45,0						
07	ISO-M75	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						
08	ISO-M90	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						
09	ISO-M100	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						

CABLE GLAND ORDERING

EXAMPLES

PAP#	01	M	ON	= PAP#01MON (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.)
PAP#	03	N	IX	= PAP#03NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL 1"NPT THR.)
PAPDL#	03	N	IX	= PAPDL#03NIX (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 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 09 ATEX 0028X
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 11.0017X INMETRO: CEPEL 12.2177X EAC: TC RU C-IT.BH02.B.00587 (-75°C ÷ +180°C) RINA: ELE139017CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 CCOE-PESO: P405709/1

**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 (1)	SIZE	ENTRY THREAD SIZE				DIA. UNDER ARMOUR		OUTER SHEATH DIA. max [mm]	HEXAGON Ø [mm]	MATERIAL			
		METRIC (2)	NPT (2)	ISO 228 (2)	min [mm]	max [mm]	(3)			(3)			
PA# PA-R#	00	ISO-M16	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
		ISO-M20	M	1/2"NPT	N	1/2"	G	4,0	7,0	10,0	32,0	NICKEL PL. BRASS	ON
								7,0	10,0			STAINLESS STEEL	IX
PA# PA-R#	01	ISO-M20	M	1/2"NPT	N	1/2"	G	5,5	8,0	13,0	32,0	NICKEL PL. BRASS	ON
								8,0	10,5			STAINLESS STEEL	IX
								10,5	13,0				
PA# PA-R#	02	ISO-M25	M	3/4"NPT	N	3/4"	G	10,5	13,0	18,0	36,0	NICKEL PL. BRASS	ON
								13,0	15,5			STAINLESS STEEL	IX
								15,5	18,0				
PA# PA-R#	03	ISO-M32	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
								21,0	24,0				
PA# PA-R#	04	ISO-M40	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
								27,0	30,0				
PA# PA-R#	05	ISO-M50	M	1 1/2"NPT	N	1 1/2"	G	24,0	27,0	36,0	61,0	NICKEL PL. BRASS	ON
								27,0	30,0			STAINLESS STEEL	IX
								30,0	33,0				
								33,0	36,0				
PA# PA-R#	06	ISO-M63	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
								42,0	45,0				
PA# PA-R#	07	ISO-M75	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
								48,0	51,0				
								51,0	54,0				
PA# PA-R#	08	ISO-M90	M	3"NPT	N	3"	G	52,0	56,0	68,0	101,0	NICKEL PL. BRASS	ON
								56,0	59,0			STAINLESS STEEL	IX
								59,0	62,0				
								62,0	65,0				
								65,0	68,0				
PA# PA-R#	09	ISO-M100	M	4"NPT	N	4"	G	68,0	74,0	92,0	126,0	NICKEL PL. BRASS	ON
								74,0	80,0			STAINLESS STEEL	IX
								80,0	86,0				
								86,0	92,0				

CABLE GLAND ORDERING EXAMPLES

PA#	01	M	ON	= PA#01MON	(NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.)
PA#	03	N	IX	= PA#03NIX	(NON-BARRIER CABLE GLAND STAINLESS STEEL 1"NPT THR.)

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 09 ATEX 0028X
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 11.0017X INMETRO: CEPEL 12.2175X EAC: TC RU C-IT.BH02.B.00587 (-75°C ÷ +180°C) RINA: ELE139017CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 CCOE-PESO: P405709/1

**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 (1)	SIZE	ENTRY THREAD SIZE			INNER SHEATH DIA.		HEXAGON ϕ [mm]	MATERIAL			
		METRIC (2)	NPT (2)	ISO 228 (2)	min [mm]	max [mm]		(3)	(3)		
PNA# PNA-R#	00	ISO-M16	M	3/8"NPT	3/8"	G	4,0	7,0	24,0	NICKEL PL. BRASS	ON
							7,0	10,0		STAINLESS STEEL	IX
		ISO-M20	M	1/2"NPT	1/2"	G	4,0	7,0	32,0	NICKEL PL. BRASS	ON
							7,0	10,0		STAINLESS STEEL	IX
PNA# PNA-R#	01	ISO-M20	M	1/2"NPT	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#	02	ISO-M25	M	3/4"NPT	3/4"	G	10,5	13,0	36,0	NICKEL PL. BRASS	ON
							13,0	15,5		STAINLESS STEEL	IX
							15,5	18,0			
							18,0	21,0			
PNA# PNA-R#	03	ISO-M32	M	1"NPT	1"	G	18,0	21,0	45,0	NICKEL PL. BRASS	ON
							21,0	24,0		STAINLESS STEEL	IX
PNA# PNA-R#	04	ISO-M40	M	1 1/4"NPT	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#	05	ISO-M50	M	1 1/2"NPT	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#	06	ISO-M63	M	2"NPT	2"	G	36,0	39,0	71,0	NICKEL PL. BRASS	ON
							39,0	42,0		STAINLESS STEEL	IX
							42,0	45,0			
PNA# PNA-R#	07	ISO-M75	M	2 1/2"NPT	2 1/2"	G	42,0	45,0	84,0	NICKEL PL. BRASS	ON
							45,0	48,0		STAINLESS STEEL	IX
							48,0	51,0			
							51,0	54,0			
							52,0	56,0			
PNA# PNA-R#	08	ISO-M90	M	3"NPT	3"	G	56,0	59,0	101,0	NICKEL PL. BRASS	ON
							59,0	62,0		STAINLESS STEEL	IX
							62,0	65,0			
							65,0	68,0			
							68,0	74,0			
PNA# PNA-R#	09	ISO-M100	M	4"NPT	4"	G	74,0	80,0	126,0	NICKEL PL. BRASS	ON
							80,0	86,0		STAINLESS STEEL	IX
							80,0	86,0			
							86,0	92,0			

**CABLE GLAND ORDERING EXAMPLES**

PNA#	01	M	ON	= PNA#01MON (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.)
PNA#	03	N	IX	= PNA#03NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL 1/2"NPT THR.)

**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 09 ATEX 0028X
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 11.0017X INMETRO: CEPEL 12.2175X EAC: TC RU C-IT.BH02.B.00587 (-75°C ÷ +180°C) RINA: ELE139017CS004 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 CCOE-PESO: P405709/1

**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)





**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*
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\*EPDM rubber on request

**GASKETS**

Material	nylon 6.0
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**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

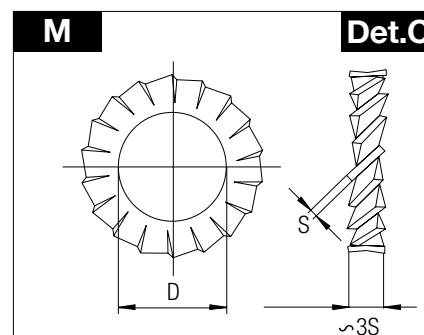
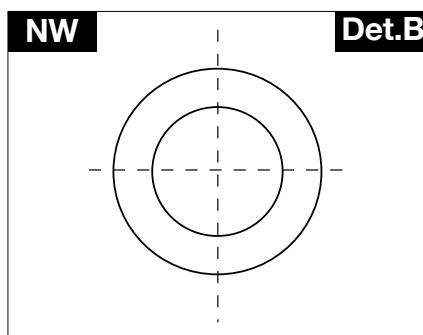
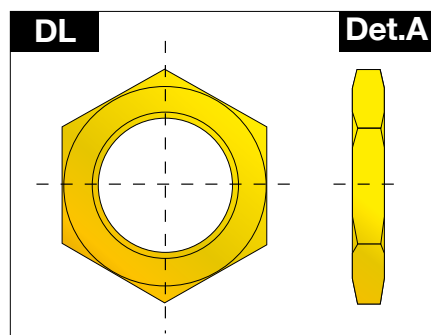


Technical Features

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
NW0	3/8"	3/8"	M16
NW1	1/2"	1/2"	M20
NW2	3/4"	3/4"	M25
NW3	1"	1"	M32
NW4	1-1/4"	1-1/4"	M40
NW5	1-1/2"	1-1/2"	M50
NW6	2"	2"	M63
NW7	2-1/2"	2-1/2"	M75
NW8	3"	3"	M90
NW9	4"	4"	M100

WASHERS		
TYPE	ØD [mm]	DETAIL
M20	20	C
M25	25	C
M32	32	C
M40	40	C
M50	50	C
M63	63	C

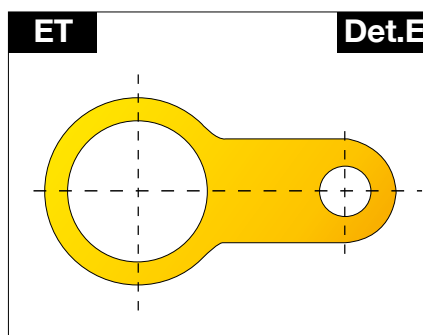
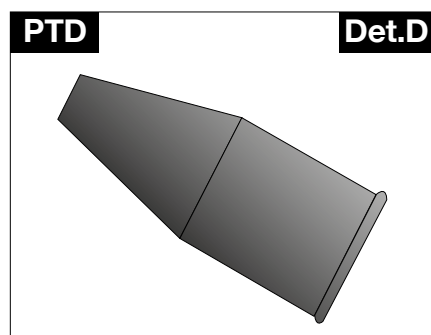


SHROUDS*			
DETAIL D	THREADS / SIZE		
TYPE	NPT	UNI-228	ISO
PTD0	3/8"	3/8"	M16
PTD1	1/2"	1/2"	M20
PTD2	3/4"	3/4"	M25
PTD3	1"	1"	M32
PTD4	1-1/4"	1-1/4"	M40
PTD5	1-1/2"	1-1/2"	M50
PTD6	2"	2"	M63
PTD7	2-1/2"	2-1/2"	M75
PTD8	3"	3"	M90
PTD9	4"	4"	M100

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:

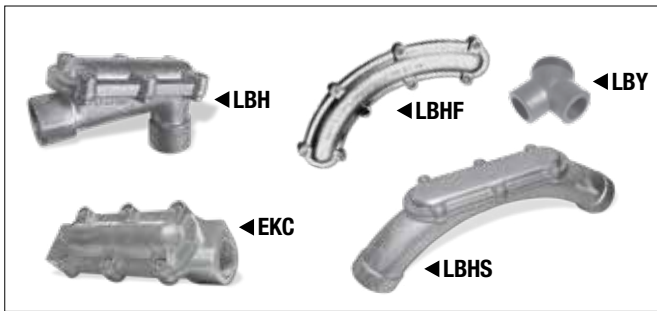
Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.



## EX CONDUIT FITTINGS

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**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"> <li>⊗ II 2 G Ex db IIC Gb</li> <li>⊗ II 2 G Ex eb IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db</li> </ul>
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 0007X (LBH - LBY only)
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +130°C
OTHER AVAILABLE CERTIFICATES	<ul style="list-style-type: none"> <li>IECEx: IECEx INE 16.0014X (LBH - LBY only)</li> <li>INMETRO: CEPTEL 13.2229U</li> <li>EAC: TC RU C-IT.BH02.B.00587</li> <li>RINA: ELE18111CS_015</li> <li>RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280</li> <li>UL NEC 505: 20131204-E465038 (LBY series only)</li> <li>CCOE-PESO: P413653/1</li> </ul>

**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:**

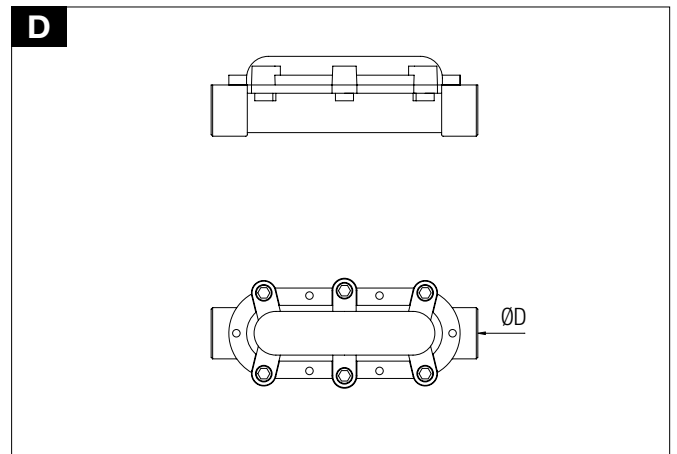
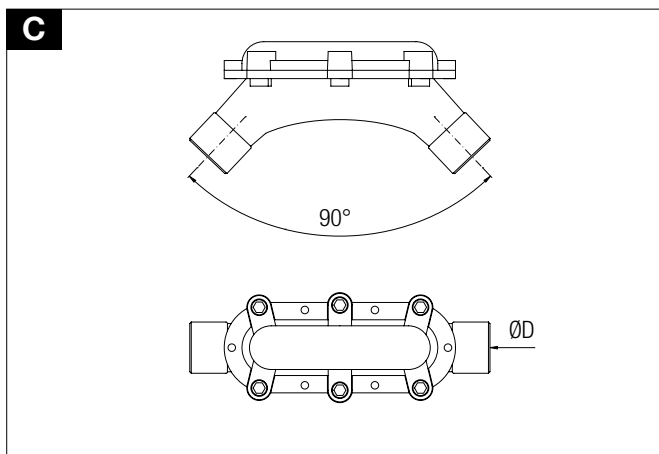
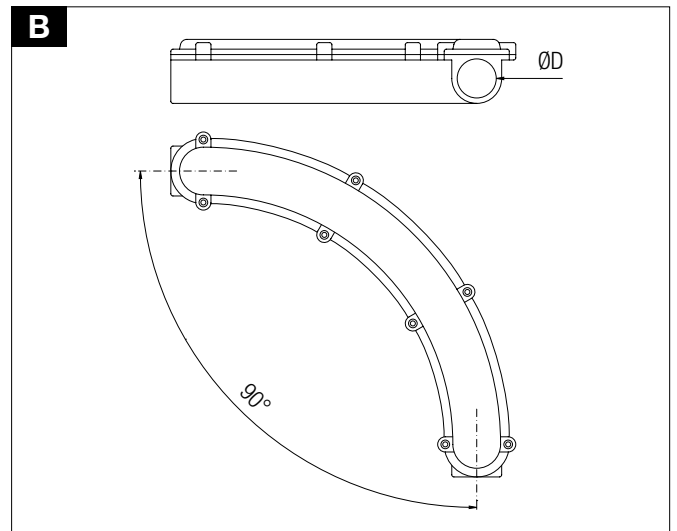
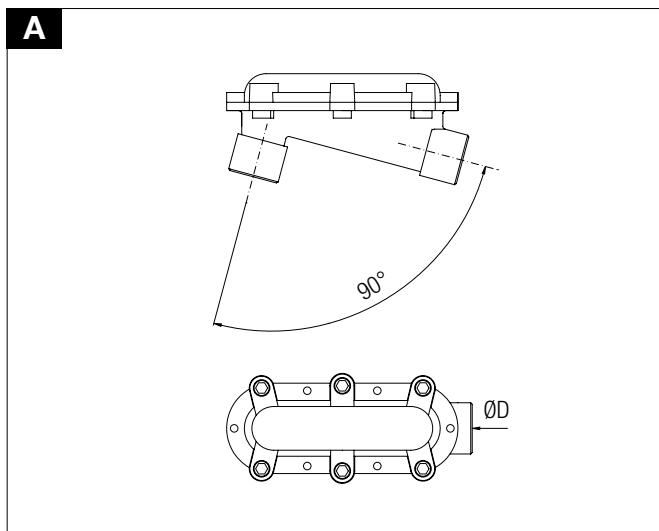
- Different thread from standard
- Stainless steel screws
- Painting



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"> <li>⊗ II 2 G Ex d IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db</li> </ul>
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 12 ATEX 0069X (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"> <li>IECEX: IECEX INE 12.0051X (three pieces union)</li> <li>INMETRO: CEPPEL 13.2243U (three pieces union)</li> <li>EAC: TC RU C-IT.BH02.B.00587 (-60°C ÷ +80°C)</li> <li>RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280</li> <li>UL NEC-505: 20131204-E465038 (three pieces union)</li> </ul>

**SEALING FITTINGS - Mechanical characteristics**

Material	marine grade copper free aluminum light alloy
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**THREE PIECE UNIONS - Mechanical characteristics**

Material	galvanized steel
Gasket	silicon rubber EPDM



**On Request Accessories:**

- Different threads from standard
- Different materials from standard

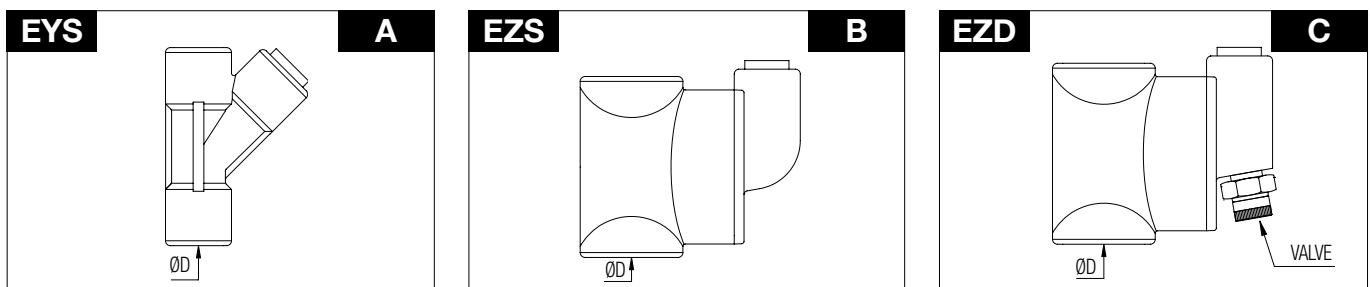
Technical Features

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 CRV-420 BI-COMPONENT SEALING COMPOUND PLEASE REFER TO SEALING TABLE FOR QUANTITIES.

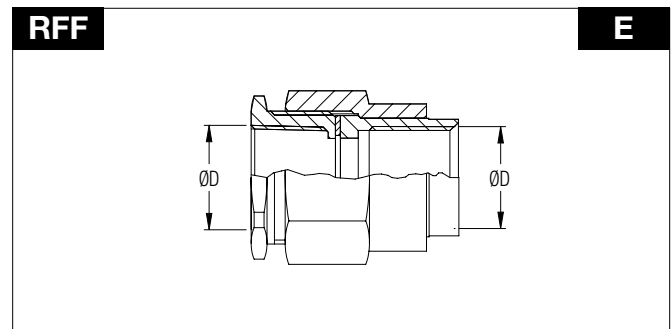
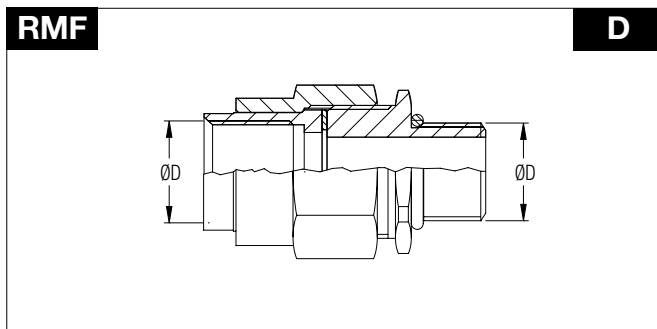


THREE PIECES UNION - Technical Features

THREE PIECE UNION MALE/FEMALE Ex d IIC		
TYPE	ØD	DETAIL
RMF1	1/2"	D
RMF2	3/4"	D
RMF3	1"	D
RMF4	1-1/4"	D
RMF5	1-1/2"	D
RMF6	2"	D
RMF7	2-1/2"	D
RMF8	3"	D

THREE PIECE UNION MALE/MALE Ex d IIC		
TYPE	ØD	DETAIL
RMM1	1/2"	D
RMM2	3/4"	D
RMM3	1"	D
RMM4	1-1/4"	D
RMM5	1-1/2"	D
RMM6	2"	D
RMM7	2-1/2"	D
RMM8	3"	D

THREE PIECE UNION FEMALE/FEMALE Ex d IIC		
TYPE	ØD	DETAIL
RFF1	1/2"	E
RFF2	3/4"	E
RFF3	1"	E
RFF4	1-1/4"	E
RFF5	1-1/2"	E
RFF6	2"	E
RFF7	2-1/2"	E
RFF8	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"> <li>⊗ II 2 G Ex db IIC Gb</li> <li>⊗ II 2 G Ex eb IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db</li> </ul>
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 0007X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +130°C
OTHER AVAILABLE CERTIFICATES	<ul style="list-style-type: none"> <li>IECEX: IECEX INE 16.0014X</li> <li>INMETRO: CEPEL 13.2223U</li> <li>EAC: TC RU C-IT.BH02.B.00587</li> <li>RINA: ELE18111CS_015</li> <li>RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280</li> <li>UL NEC-505: 20131204-E465038</li> <li>CCOE-PESO: P413653/1</li> </ul>

**Mechanical characteristics**

Reducers materials	galvanized steel (AZ)
Adaptors materials	OT-58 marine brass (OT) - nichel plated brass (ON) - AISI-316L stainless steel (IX) - 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



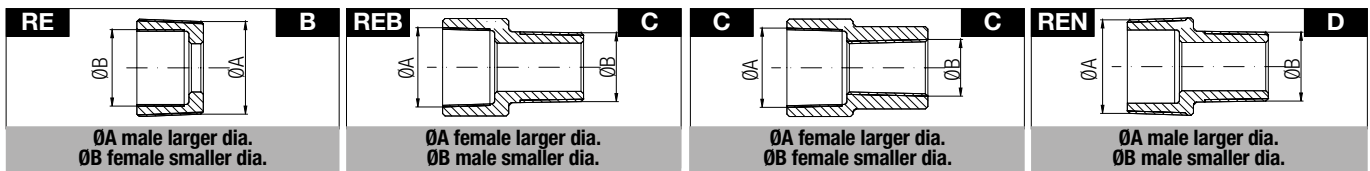
**On Request Accessories:**

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

	TYPE	SIZE LARGER DIAMETER	THREAD	SIZE SMALLER DIAMETER	THREAD	MATERIAL
<b>EXAMPLE 1</b>	RE	02	R-Rc	01	G	ON
<b>EXAMPLE 2</b>	REB	03	N	-	M40	IX

**EXAMPLE 1:** RE02K01GON= RUDUCER TYPE RE MALE 3/4" 6125 - FEMALE 1/2" ISO228 NIKEL PLATED BRASS

**EXAMPLE 2:** REB03NM40IX= 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.





**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"> <li>⊗ II 2 G Ex db IIC Gb</li> <li>⊗ II 2 G Ex eb IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db</li> </ul>
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 0007X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	60°C ÷ +130°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 16.0014X INMETRO: CEPEL 13.2219U (plug) CEPEL 13.2221U (drain breather valve) CEPEL 13.2225U (nipples and coupling) CEPEL 13.2227U (elbows) EAC: TC RU C-IT.BH02.B.00587 RINA: ELE18111CS_015 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280 UL NEC-505: 20131204-E465038 CCOE-PESO: P413653/1

**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:**

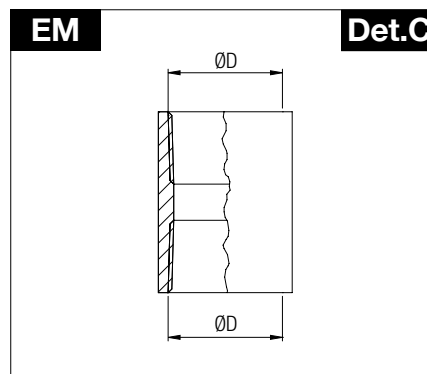
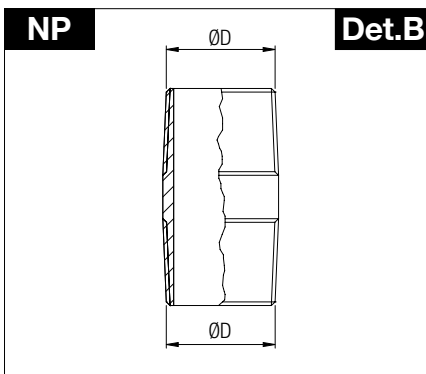
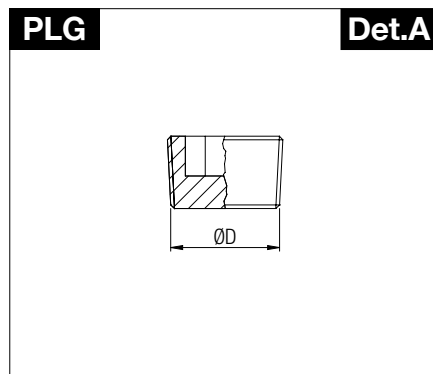
- Different threads from standard
- Different metal materials from standard

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"

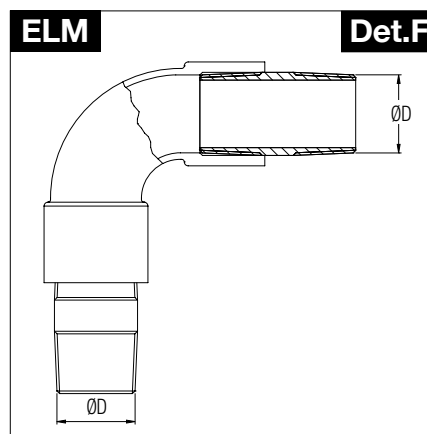
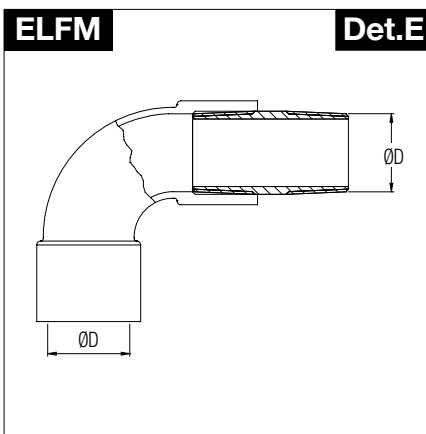
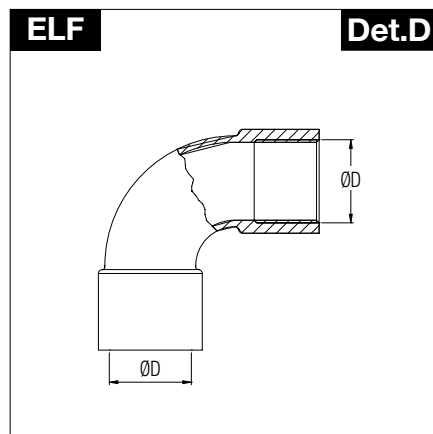
DETAIL "C"	
COUPLING	
TYPE	ØD
EM1	1/2"
EM2	3/4"
EM3	1"
EM4	1-1/4"
EM5	1-1/2"
EM6	2"
EM7	2-1/2"
EM8	3"
EM9	3-1/2"
EM10	4"
EM11	5"
EM12	6"



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
ELFM1	1/2"
ELFM2	3/4"
ELFM3	1"
ELFM4	1-1/4"
ELFM5	1-1/2"
ELFM6	2"
ELFM7	2-1/2"
ELFM8	3"
ELFM9	3-1/2"
ELFM10	4"
ELFM11	5"
ELFM12	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"





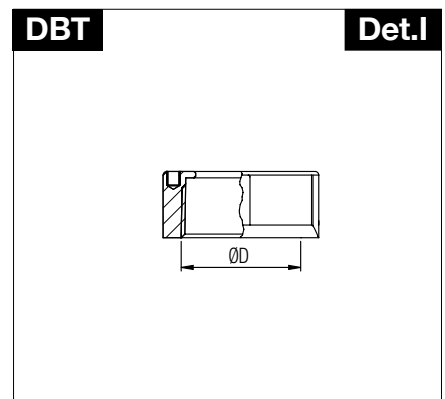
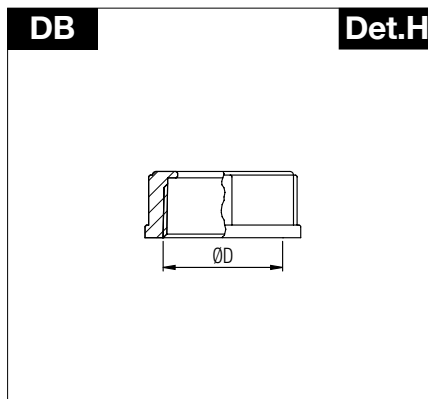
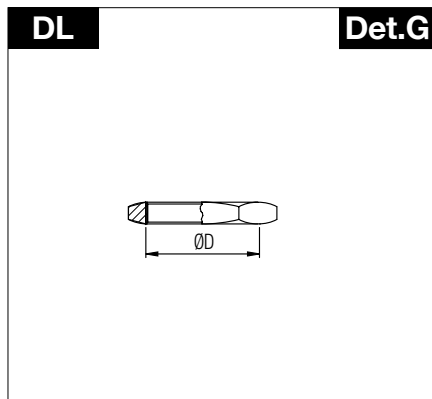
Technical Features

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"

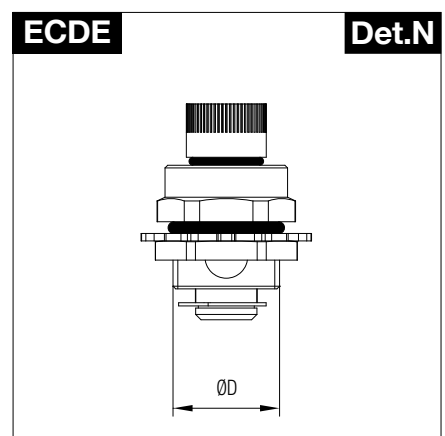
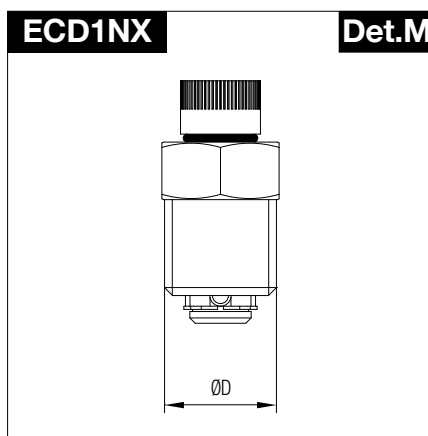
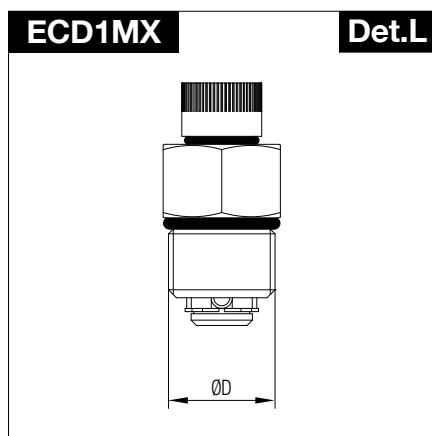
(\*) REMARK: locknuts DL type and bushings DB-DBT type are not covered by Ex certificate.



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

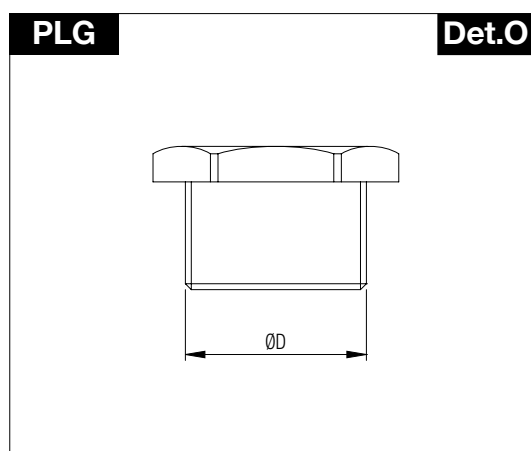
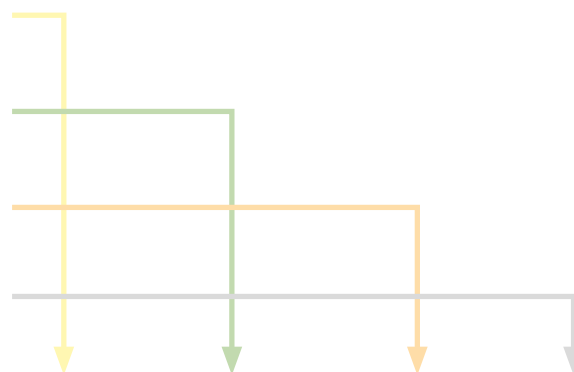
DETAIL "N"	
DRAIN/BREATHER VALVE FOR ESA/ESX ENCLOSURES	
TYPE	ØD
ECDE	M20





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	
IX (stainless steel), ON (marine brass)	



	TYPE	THREAD DIAMETER	TYPE OF THREAD	MATERIAL
<b>EXAMPLE 1</b>	PLG	6	R-Rc	ON
<b>EXAMPLE 2</b>	PLG	3	N	IX
<b>EXAMPLE 3</b>	PLG	2	G	IX
<b>EXAMPLE 4</b>	PLG	2	M	IX
<b>EXAMPLE 5</b>	PLG	5	R-Rc	IX

- EXAMPLE 1:** PLG6KON= NICKEL PLATED BRASS STOPPING PLUG 2"UNI-6125
- EXAMPLE 2:** PLG3NIX= STAINLESS STEEL AISI-316L STOPPING PLUG 1"NPT
- EXAMPLE 3:** PLG20GIX= STAINLESS STEEL AISI-316L STOPPING PLUG 3/4"ISO-228
- EXAMPLE 4:** PLG2MIX= STAINLESS STEEL AISI-316L STOPPING PLUG ISO-M25
- EXAMPLE 5:** PLG5KIX= 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"> <li>⊗ II 2 G Ex d IIC Gb</li> <li>⊗ II 2 D Ex tb IIIC Db</li> </ul>
RULES OF COMPLIANCE	EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31
EC Type-Examination Certificate	INERIS 12 ATEX9012U
PROTECTION DEGREE	IP66/67
AMBIENT TEMPERATURE	-50°C ÷ +130°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 12.0043U INMETRO: CEPEL 13.2241 EAC: TC RU C-IT.BH02.B.00587 (-60°C ÷ +130°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02521.280

**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	23	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)

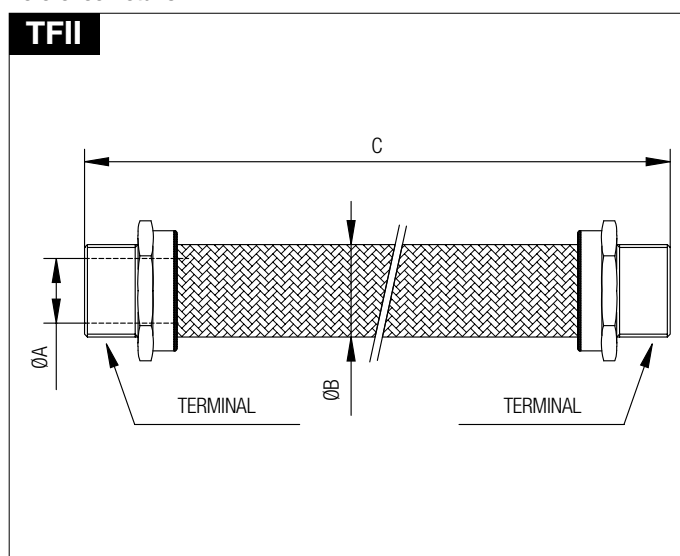
	TERMINAL ENDS	SIZE	C - LENGHT [mm]	TERMINAL'S MATERIAL
TFII#	H	2N	0500	XC or XB
TFII#	N	6N	1000	GB

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

Reference Details



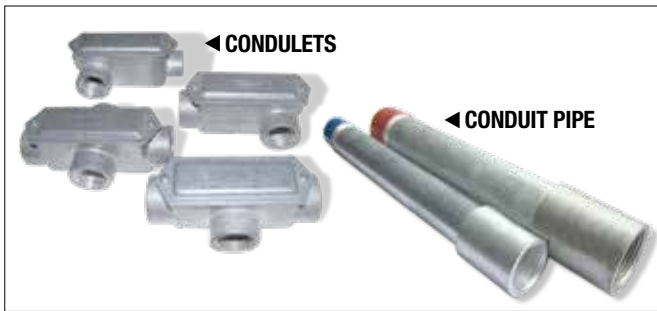
Standard lengths

STANDARD LENGHTS [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	IP 66
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.

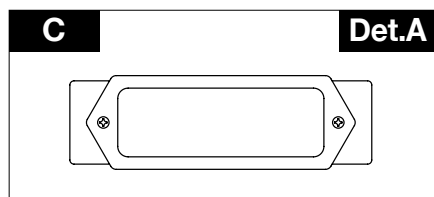


**On Request Accessories:**

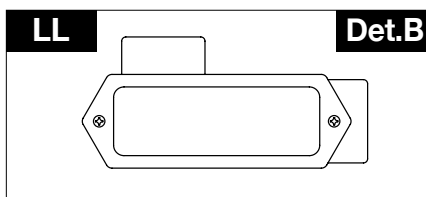
- Different threads from standard

**Technical Features**

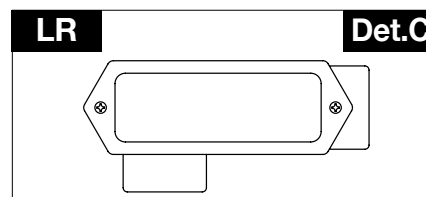
DETAIL "A"	
CONDULETS TYPE "C"	
TYPE	HUBS SIZE
C17	2 x 1/2"
C27	2 x 3/4"
C37	2 x 1"
C47	2 x 1-1/4"
C57	2 x 1-1/2"
C67	2 x 2"
C77	2 x 2-1/2"
C87	2 x 3"



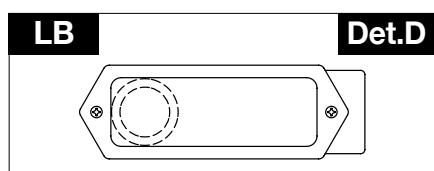
DETAIL "B"	
CONDULETS TYPE "LL"	
TYPE	HUBS SIZE
LL17	2 x 1/2"
LL27	2 x 3/4"
LL37	2 x 1"
LL47	2 x 1-1/4"
LL57	2 x 1-1/2"
LL67	2 x 2"
LL77	2 x 2-1/2"
LL87	2 x 3"



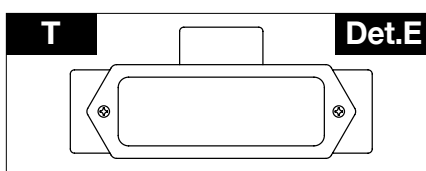
DETAIL "C"	
CONDULETS TYPE "LR"	
TYPE	HUBS SIZE
LR17	2 x 1/2"
LR27	2 x 3/4"
LR37	2 x 1"
LR47	2 x 1-1/4"
LR57	2 x 1-1/2"
LR67	2 x 2"
LR77	2 x 2-1/2"
LR87	2 x 3"



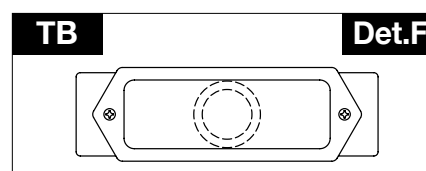
DETAIL "D"	
CONDULETS TYPE "LB"	
TYPE	HUBS SIZE
LB17	2 x 1/2"
LB27	2 x 3/4"
LB37	2 x 1"
LB47	2 x 1-1/4"
LB57	2 x 1-1/2"
LB67	2 x 2"
LB77	2 x 2-1/2"
LB87	2 x 3"



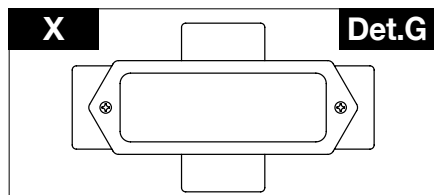
DETAIL "E"	
CONDULETS TYPE "T"	
TYPE	HUBS SIZE
T17	3 x 1/2"
T27	3 x 3/4"
T37	3 x 1"
T47	3 x 1-1/4"
T57	3 x 1-1/2"
T67	3 x 2"
T77	3 x 2-1/2"
T87	3 x 3"



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
ADPE1	1/2"
ADPE2	3/4"
ADPE3	1"
ADPE4	1-1/4"
ADPE5	1-1/2"
ADPE6	2"
ADPE7	2-1/2"
ADPE8	3"
ADPE10	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

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**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 0047X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 11.0034X INMETRO: CEPTEL 13.2253X EAC: TC RU C-IT.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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:**

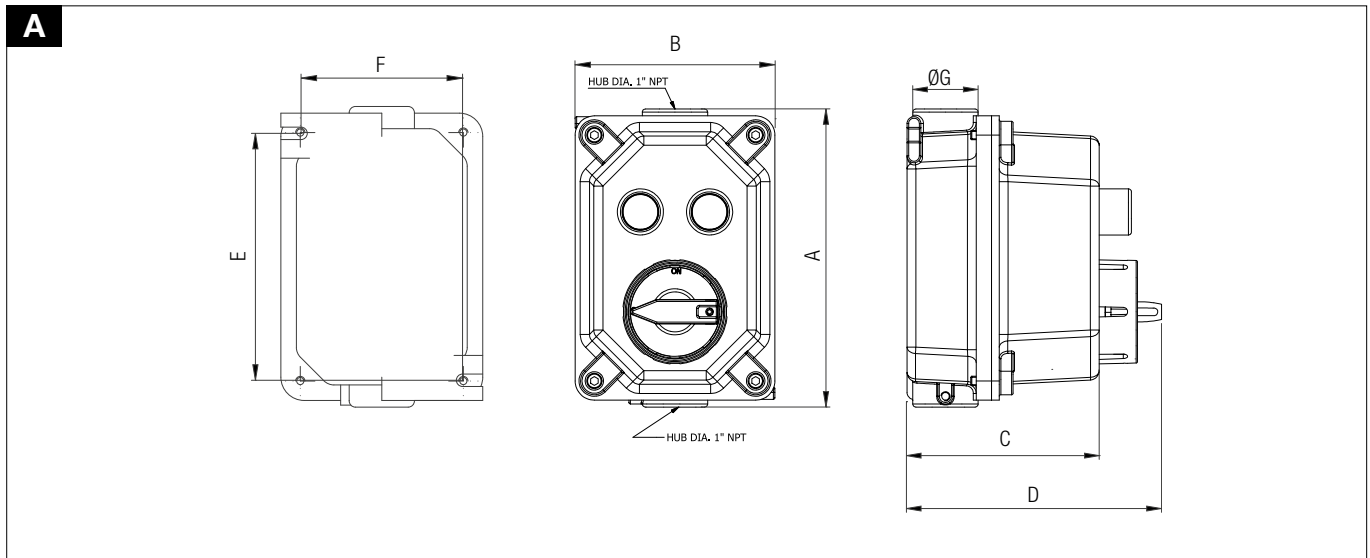
- External epoxy painting with colour on request
- Cable entries with different threads from standards



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	1" NPT	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"> <li>⊗ II 2 G Ex d IIB T6/T5 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C/T100°C Db</li> </ul>
RULES OF COMPLIANCE	EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-31
EC Type-Examination Certificate	INERIS 03 ATEX 0047X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 11.0034X INMETRO: CEPEL 13.2253X EAC: TC RU C-IT.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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	1" NPT	T4 T5	T100°C T125°C	3,45	A
EFSC218 3I3V25 EFSC2183I3V26	195	185	130	118	145	1" NPT	T4 T5	T100°C T125°C	3,10	B
EFSC218 GUSC...	195	185	130	118	155	1" NPT	T4 T5	T100°C T125°C	3,10	C
EFSC218 GUSV...	195	185	130	118	145	1" NPT	T4 T5	T100°C T125°C	3,20	D
EFSC218 SMT...	195	185	130	118	130	1" NPT	T4 T5	T100°C T125°C	2,90	E

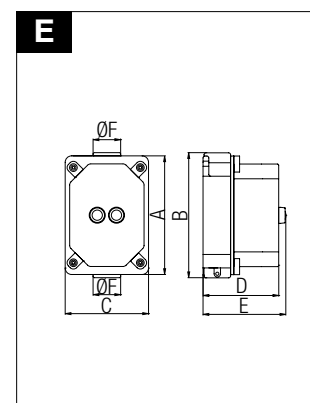
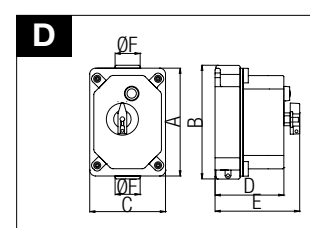
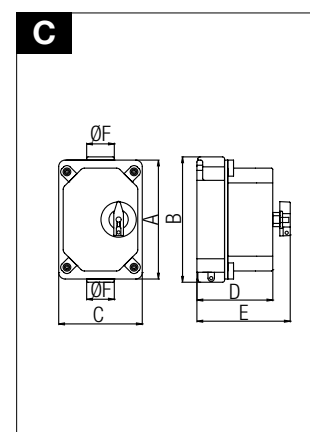
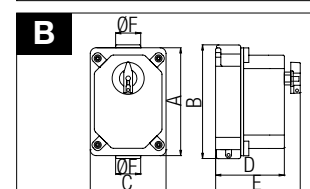
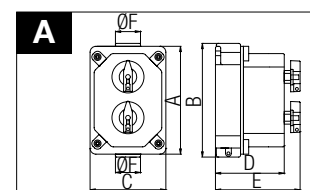
SELECTOR SWITCHES 500V 50-60Hz				
CODE	SELECTOR SWITCHES Q.TY		RATE [In]	DETAIL
	PADLOCK HANDLE	NORMAL HANDLE		
EFSC218M310	-	2	10A	A
EFSC218M310L	1	1	10A	A

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"> <li>⊗ II 2 G Ex d IIC T6/T5 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C/T100°C Db</li> </ul>
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.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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

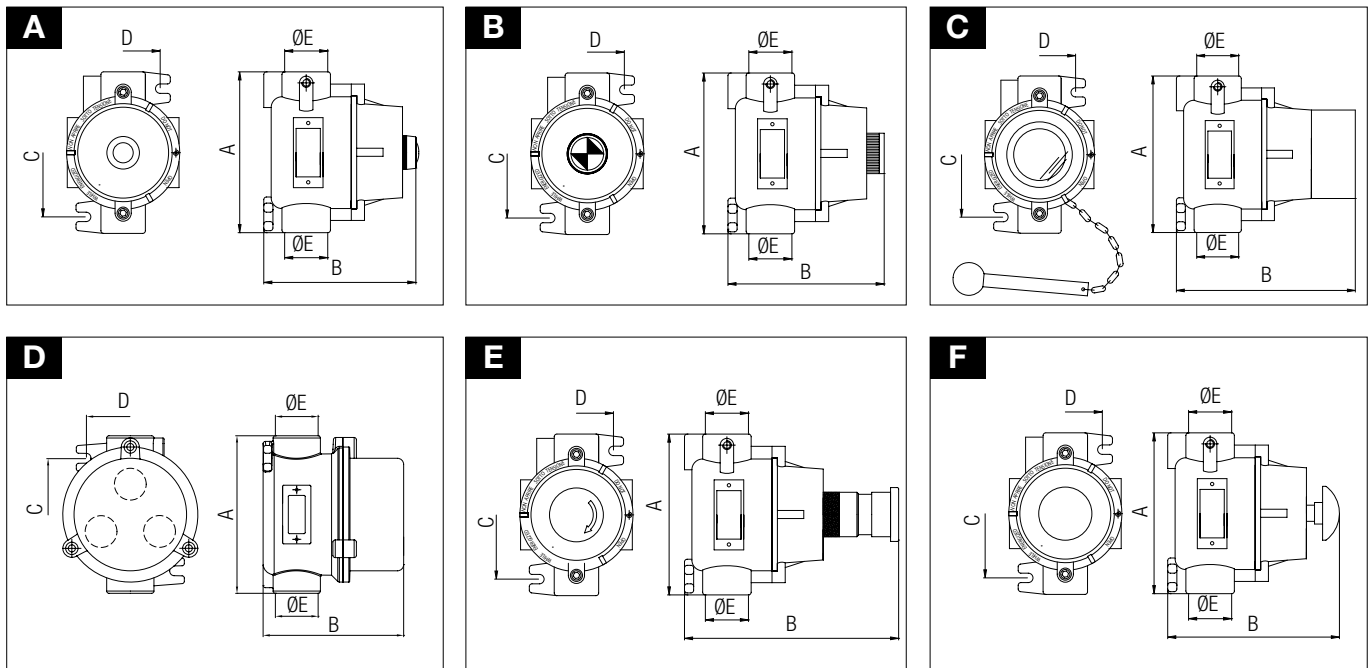
CODE	A [mm]	B [mm]	C [mm]	D [mm]	ØE [mm]	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	WEIGHT [Kg]	DETAIL
EFDC1/2	120	115	95	55	3/4" NPT	T6 T5	T85°C T100°C	0,90	A
EFDC3	120	120	95	55	3/4" NPT	T6 T5	T85°C T100°C	0,90	B
EFDC1E	120	135	95	55	3/4" NPT	T6 T5	T85°C T100°C	1,00	C
EFDC...R	140	125	100	80	1" NPT	T6 T5	T85°C T100°C	1,50	D
EFDC1EFSR	120	160	95	55	3/4" NPT	T6 T5	T85°C T100°C	0,90	E
EFDC1EF	120	130	95	55	3/4" NPT	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"> <li>⊗ II 2 G Ex d IIC T6/T5 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C/ T100°C Db</li> </ul>
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: CEPTEL 13.2255X EAC: TC RU C-IT.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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	3/4" NPT	T6 / T5	T85°C / T100°C	0,90	A
EFSC3...	140	150	100	80	1" NPT	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

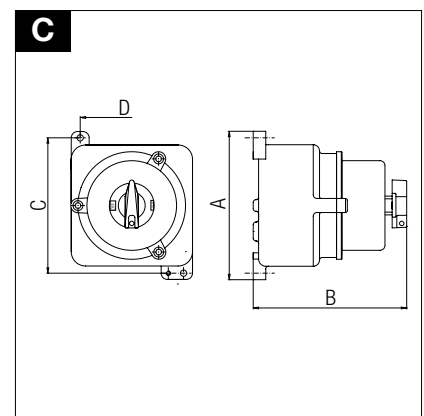
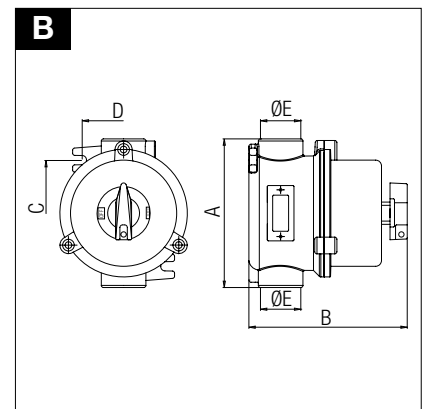
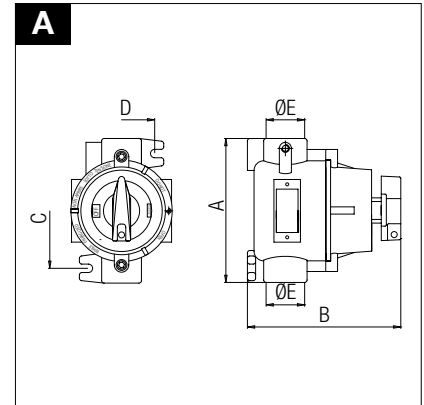
Motor switch diagram arrangements

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	<ul style="list-style-type: none"> <li>⊗ II 2 G Ex d IIC T6/T5 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C/ T100°C Db</li> </ul>
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.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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:**

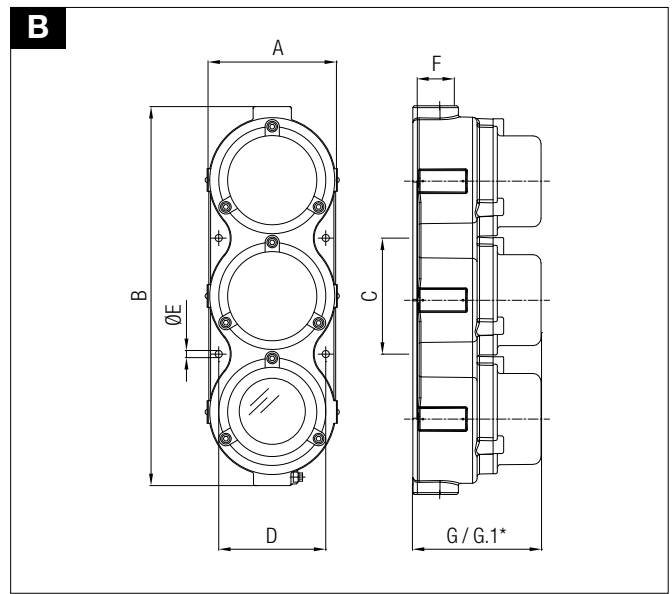
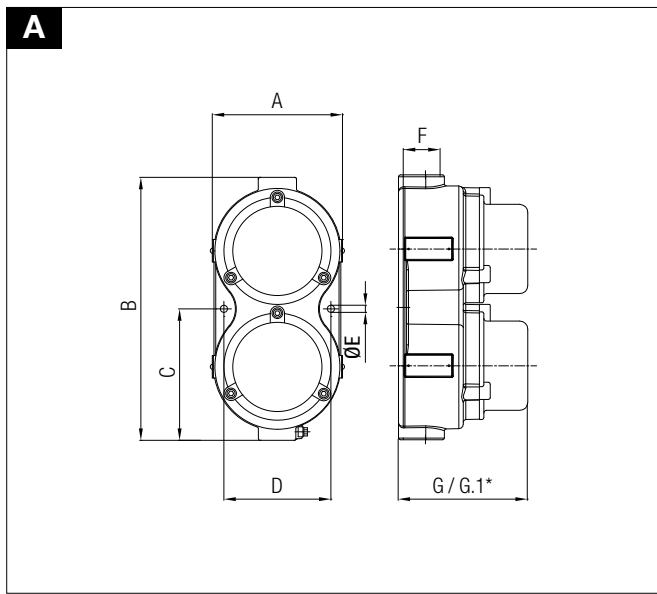
- External epoxy painting with colour on request
- Cable entries with different threads from standards



Technical Features

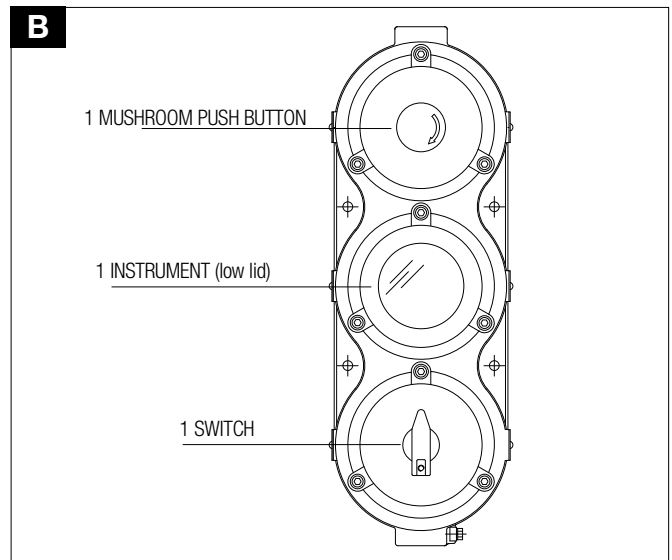
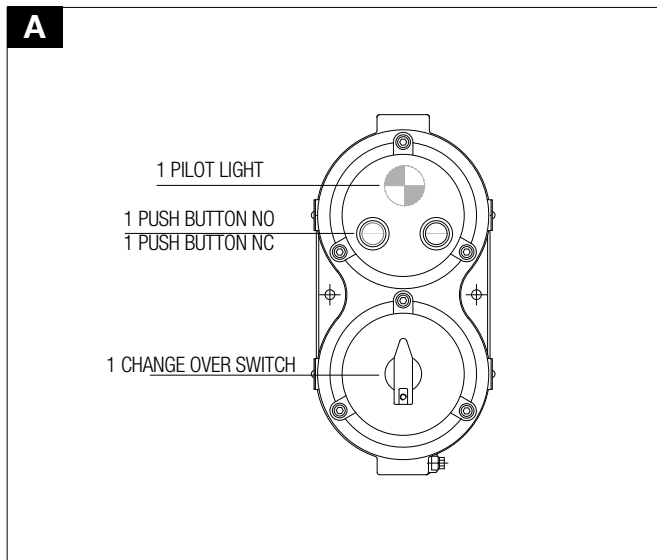
CODE	A [mm]	B [mm]	C [mm]	D [mm]	Ø E [mm]	F [mm]	G [mm]	G.1 [mm]	TEMPERATURE CLASS (GAS)	TEMPERATURE CLASS (DUSTS)	DETAIL
EFDC3D	145	295	147,5	120	9	1" NPT	145	125	T6 T5	T85°C T100°C	A
EFDC3T	145	425	130	120	9	1" NPT	145	125	T6 T5	T85°C T100°C	B

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 (as EFDC...R, see bulletin 65)
- UP TO 3 PUSH BUTTON (as EFDC...R, see bulletin 65)
- 1 MUSHROOM PUSH BUTTON (as EFDC..., see bulletin 65)
- 1 SELECTOR SWITCH (as EFSC..., see bulletin 66)

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 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 0013X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE18.0007X EAC: TC RU C-IT.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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

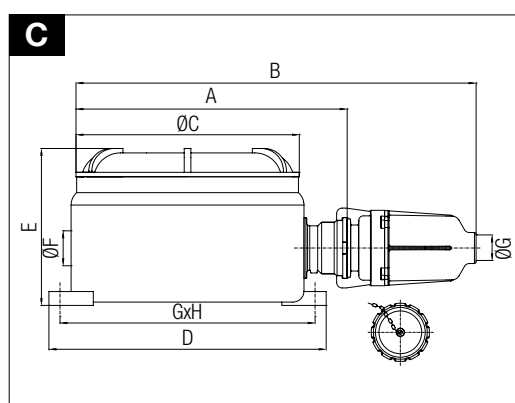
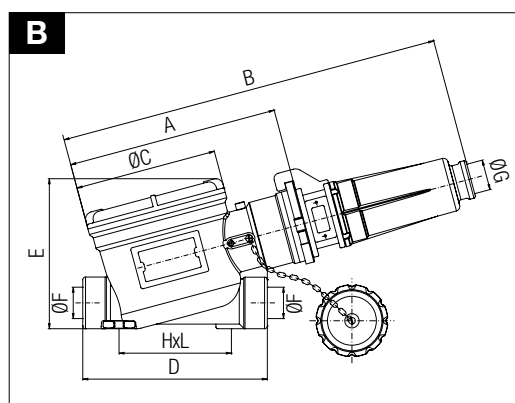
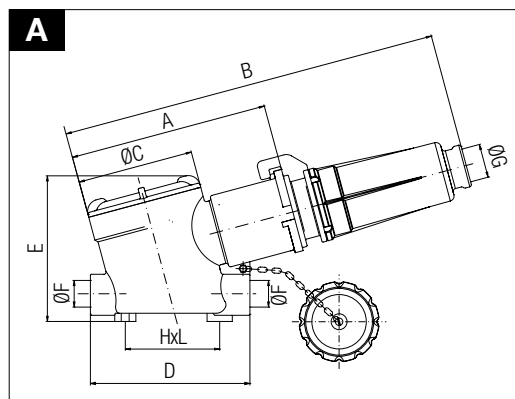
125A INTERLOCKED SOCKETS AND PLUGS				
SOCKET CODE	PLUG CODE	POLES	VOLTAGE (50/60Hz)	CURRENT
FSQC125-3	BP125-3	3P+T (PE)	380/500V	125A
FSQC125-4	BP125-4	4P+T (PE)	380/500V	125A

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"> <li>⊗ Ex II 2 G Ex db IIC T6...T4 Gb</li> <li>⊗ Ex II 2 D Ex tb IIIC T85°C...T135°C Db</li> </ul>
RULES OF COMPLIANCE	EN/IEC 60079-0, EN/IEC 60079-1, EN/IEC 60079-31
EC Type-Examination Certificate	INERIS 18 ATEX 0015X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE18.0009X EAC: TC RU C-IT.BH02.B.00608 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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]	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

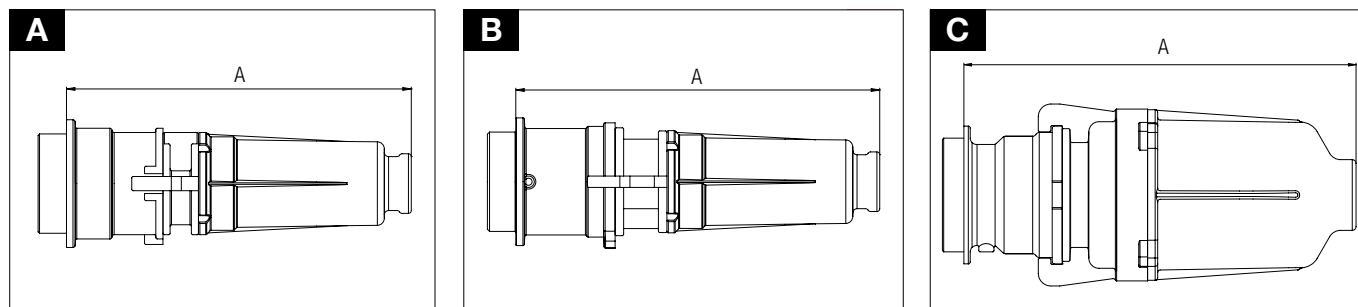
\*WITHOUT ENCLOSURE (TO BE ORDERED SEPARATELY)

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

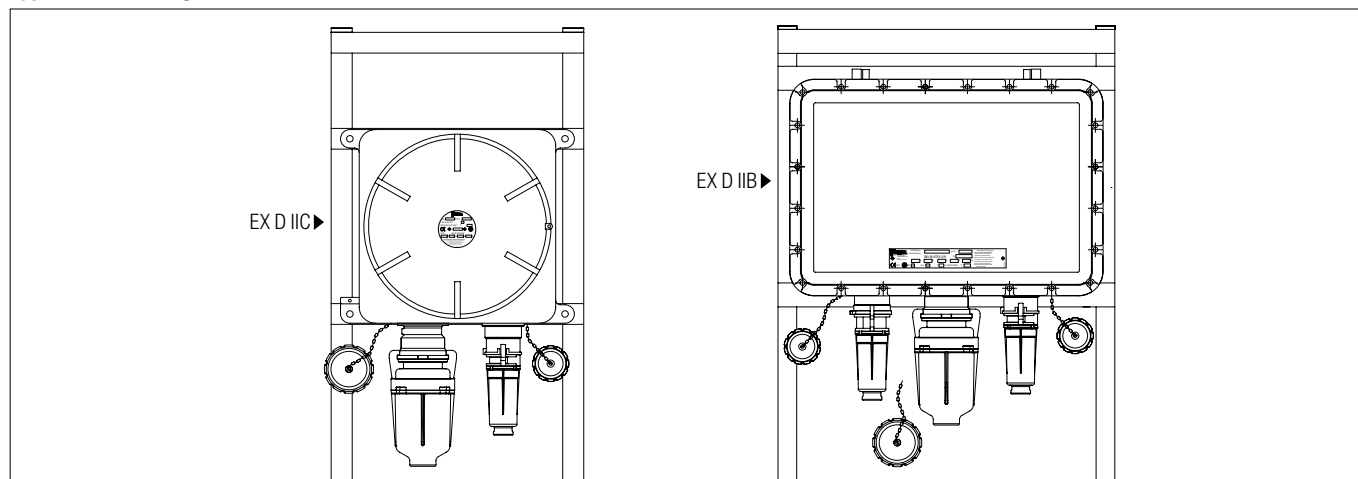
INTERLOCKED SOCKETS WITH CIRCUIT BREAKER				
SOCKET CODE	POLES	VOLTAGE (50/60Hz)		CURRENT
FSQCP235	2P+T (PE)	220/250V		32A
FSQCP335	3P+T (PE)	380/415V		32A
FSQCP435	4P+T (PE)	380/500V		32A
FSQCP260	2P+T (PE)	220/250V		63A
FSQCP360	3P+T (PE)	380/500V		63A
FSQCP460	4P+T (PE)	380/500V		63A

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

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**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.BH02.B.00608 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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.

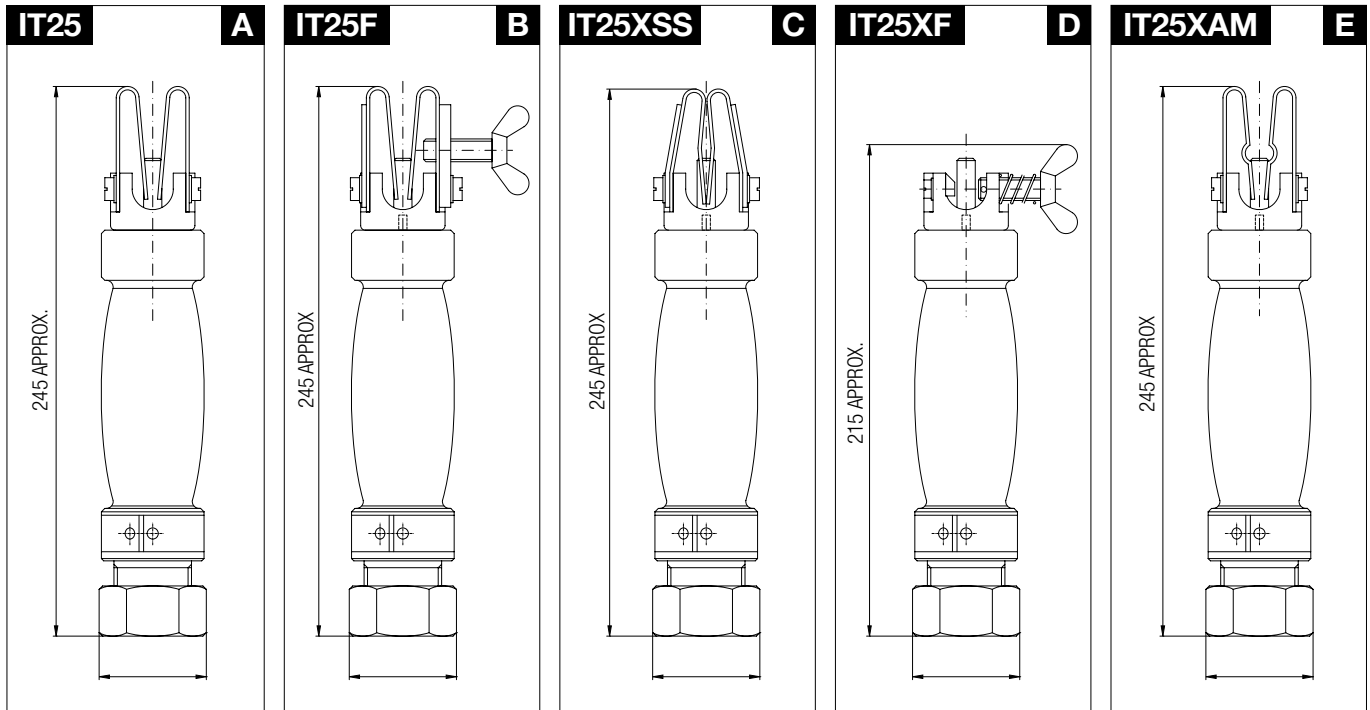




**Technical Features**

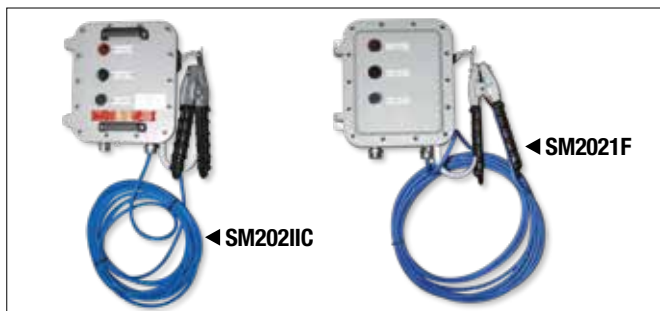
TYPE	TYPE OF CONNECTION DESCRIPTION	WEIGHT [Kg]	DETAIL
IT25	NORMAL SPRING CLAMPING	0,7	A
IT25F	SPRING CLAMPING & MECHANICAL FIXING	0,7	B
IT25XSS	THIN STRUCTURE CLAMPING	0,7	C
IT25XF	METAL BARREL CLAMPING	0,7	D
IT25XAM	ROUND SHAPED EARTHING FIXING	0,7	E

**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**

**SM2021F 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 0022X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9019U IECEx: IECEx INE 13_0070X INMETRO: CEPEL 12.2139 EAC: TC RU C-IT.ГБ02.B.00689/18 RINA: ELE18111CS_012 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280 NEC 505: UL 20141204-E302348 - Type rating NEMA 1, 12, 4 and 4X

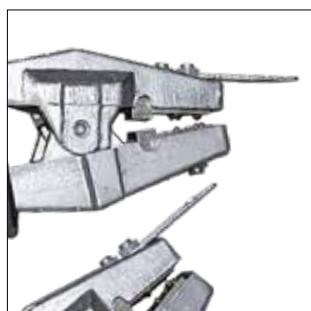
**SM2021IIC ELECTRONIC SYSTEM**

**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 0023X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +80°C
OTHER AVAILABLE CERTIFICATES	Component: INERIS 13 ATEX 9019U IECEx: IECEx INE 13.0071X Component: IECEx INE 13.0085U INMETRO: CEPEL 12.2137 EAC: TC RU C-IT.ГБ02.B.00689/18 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**Mechanical characteristics**

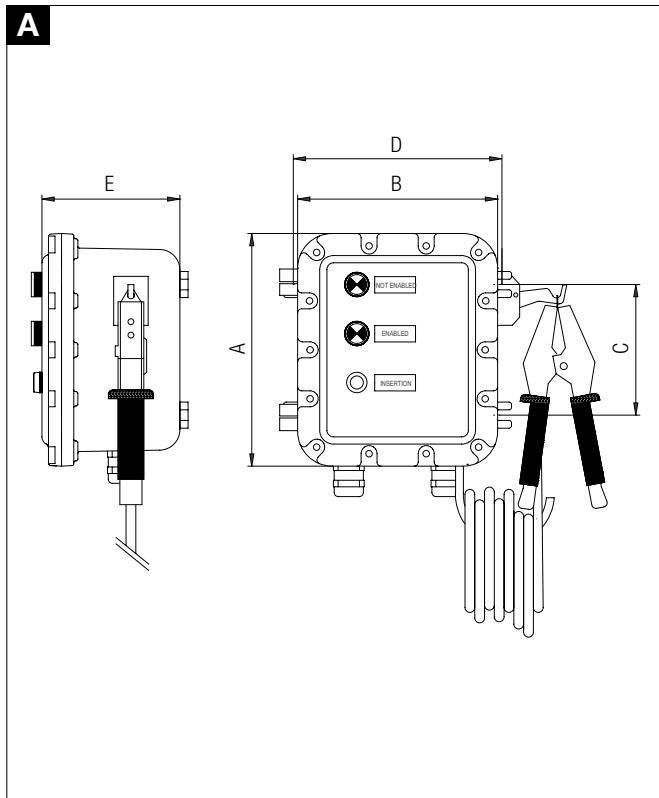
Body	marine grade copper free aluminum light alloy
Cover	marine grade copper free aluminum light alloy
Screws	stainless steel
Internal plate	hot dip galvanized steel
External Painting	epoxy powders RAL-9006 Grey coloured
Hinges	casted on enclosure's body and cover (SM2021F)



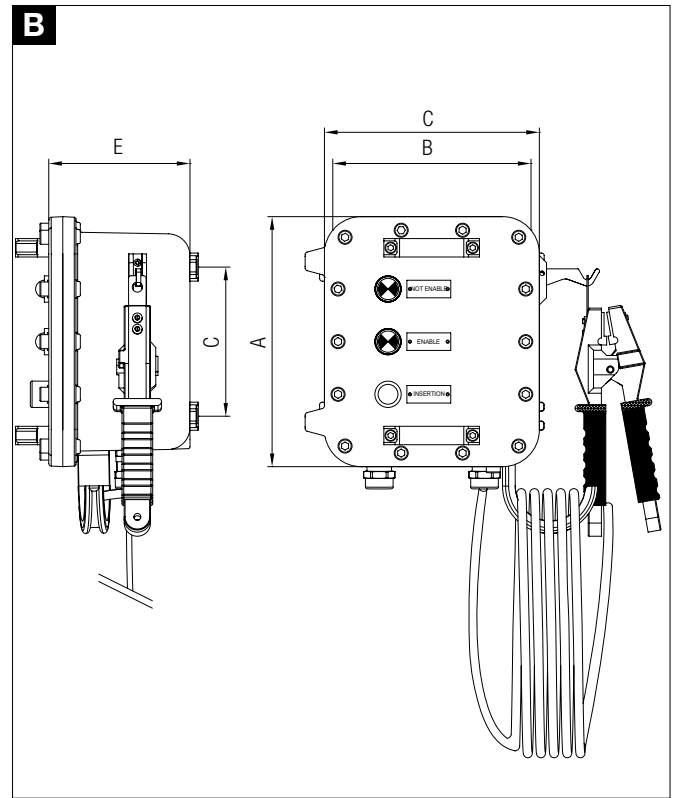
**Technical Features**

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.

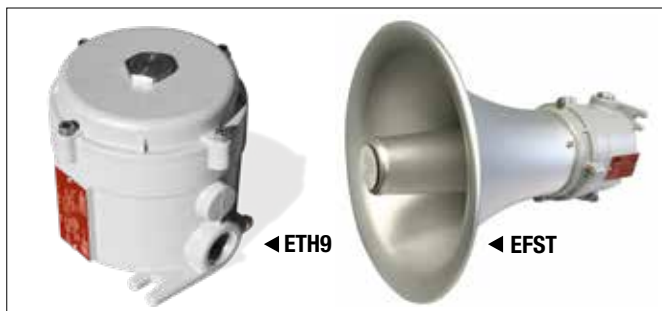
Earthing clamp for verification is normally complete with 8m of cable.

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 0012X
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C ÷ +60°C
OTHER AVAILABLE CERTIFICATES	IECEX: IECEX INE 15_0013X EAC: TC RU C-IT.BH02.B.00608 RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280

**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	EXA14ATEX0046
PROTECTION DEGREE	IP66
AMBIENT TEMPERATURE	-60°C +60°C
OTHER AVAILABLE CERTIFICATES	EAC: TC RU C-IT.BH02.B.00608 (-60°C ÷ +60°C) RUSSIAN MARINE CERTIFICATE (RMRS): 19.02523.280 IECEX: IECEX EXA 14.0003

**Mechanical characteristics**

Body	marine grade copper free aluminum light alloy
Cover	marine grade copper free aluminum light alloy
Screws	stainless steel



**On Request Accessories:**

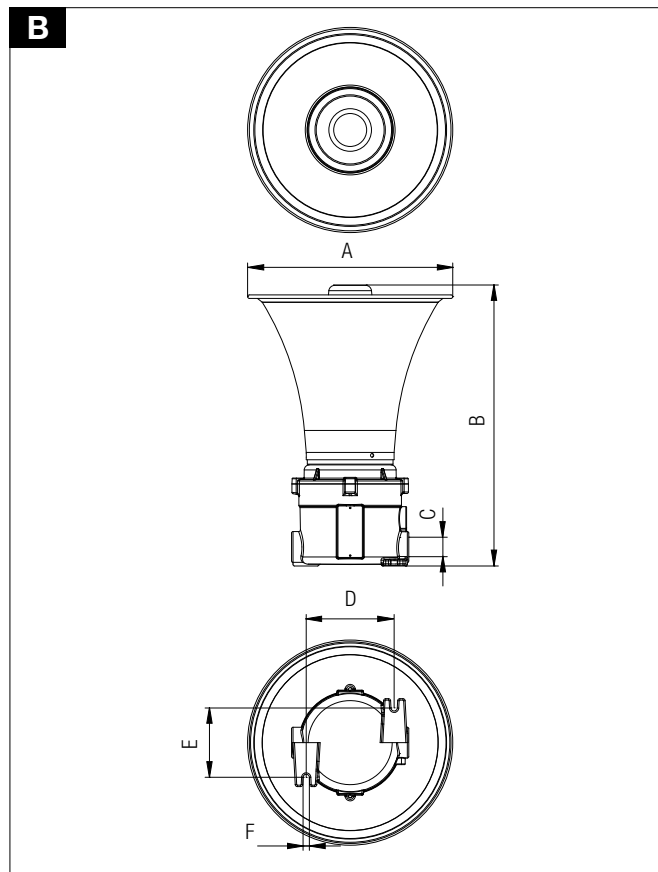
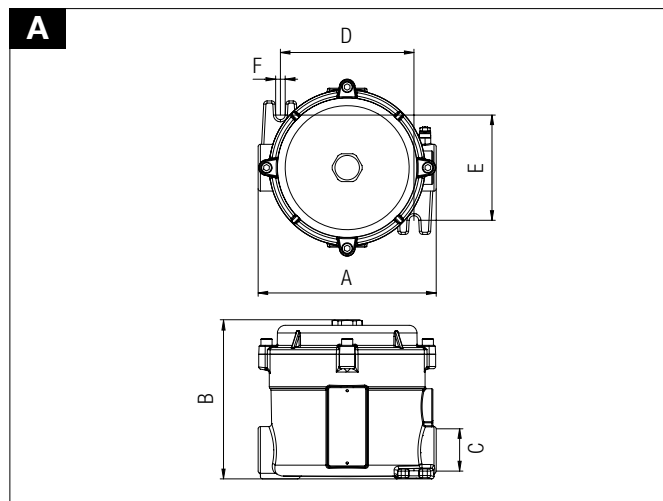
- External epoxy painting (any colours)
- Threaded cable entry different than standard

**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**

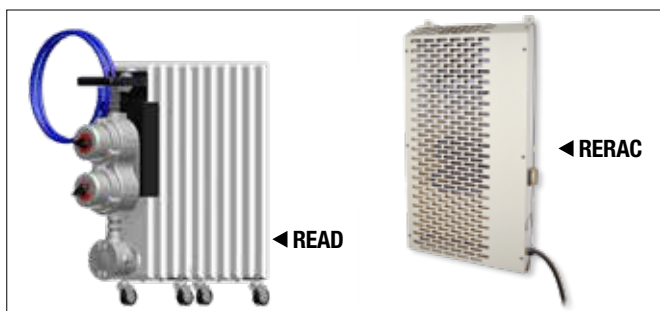


EFST MULTI-TONE ELECTRONIC SIREN - SOUND FEATURES	
LEVEL	100 db @ 1m
FREQUENCY	440 ÷ 1600 Hz
AVAILABLE MODULATIONS 5	
1 - TWO TONE	400 Hz / 0,1 sec. - 554 Hz / 0,1 sec.
2 - YELP	750 Hz / 2 sec. ON - 2 sec. OFF
3 - WAIL	400÷800 Hz / 2.5 sec. UP - 2.5 sec. DOWN
4 - PULSED	554 Hz / 1 sec. ON - 1 sec. OFF
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"> <li>⊗ II 2 G Ex d IIC T6 Gb</li> <li>⊗ II 2 D Ex tb IIIC T85°C Db</li> </ul>
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.01323

**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...)

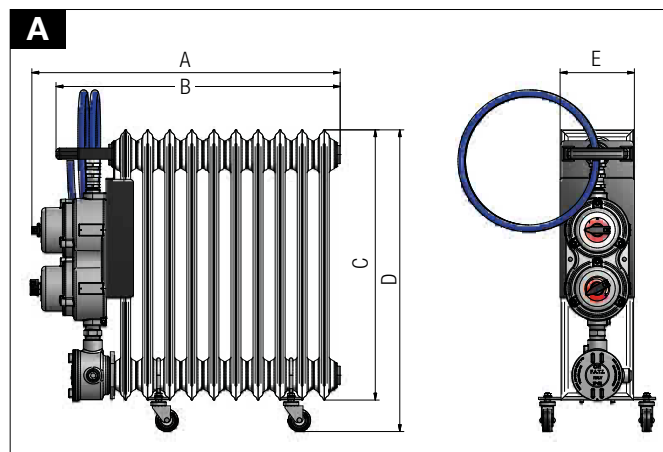
**Technical Features**

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

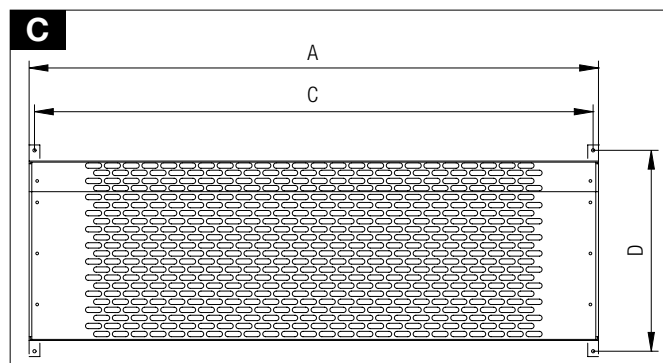
CODE	TENSION	POWER [W]	DETAIL
READ1000W	230V - 50/60Hz	1000	A
READ2000W	230V - 50/60Hz	2000	A </td

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

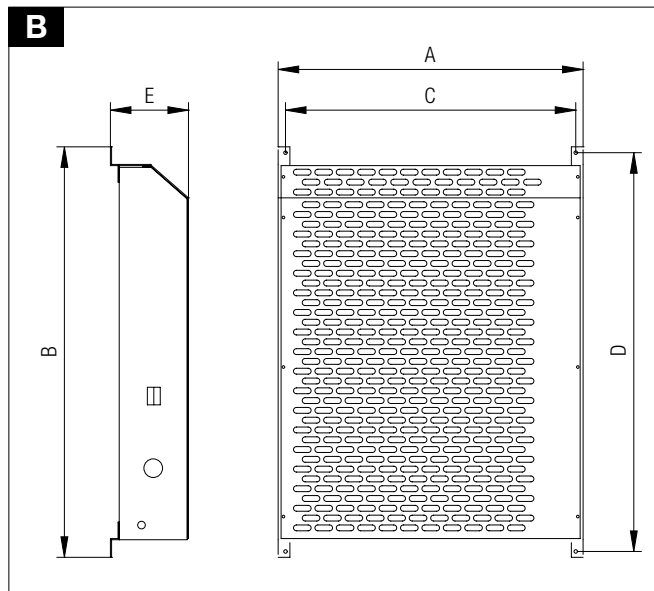
**Reference Details**



**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:**

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**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



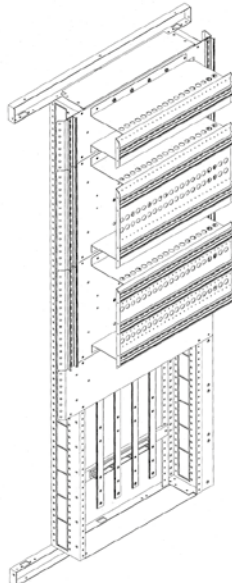
#### On Request Accessories:

- Other degree protection level
- Stainless steel AISI316L framework and interior panel

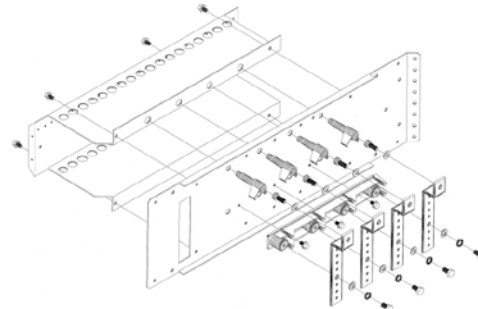


**Weatherproof sheet steel or stainless steel 304/316 control panel, interchangeable plate version**

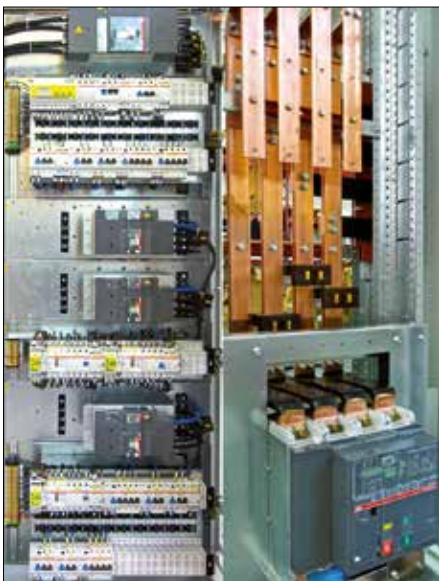
**Flexibility**



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 FEAM, wired or already fitted and shipped to destination.

**REMARK:**

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