



ATEX catalogue book 2017-2018

SOLUTIONS FOR EXPLOSIVE ATMOSPHERES



Tested Quality

Palazzoli ATEX equipments are designed and manufactured in order to avoid the risk of ignition.

Each equipment is approved and certified by a notified body in compliance with the Directive 2014/34/EU which guarantees the conformity for installation in hazardous areas.

Each ATEX enclosure is tested as follows in compliance with EN 60079-0 standards:



- 1) Operating temperature
in order to determine the maximum operating temperature of the equipment.



- 2) Temperature Endurance Test
in climatic room at the maximum service temperature measured with the previous test with 90% humidity for 4 weeks, and at the minimum temperature $-25^{\circ}\text{C} \div -30^{\circ}\text{C}$ for one day.



- 3) Impact test
tested at $+10^{\circ}\text{C} \div 15^{\circ}\text{C}$ and $-5^{\circ}\text{C} \div 10^{\circ}\text{C}$ of the maximum operating temperature.



- 4) IPXX protection rating test
(dust and water).



- 5) Tests on specific methods of protection
(pressure test, restricted breathing test, dielectric tests).

The technical characteristics of the equipments included in this catalogue are defined after the sequence of the above reported tests, in the indicated order and on the same sample piece.

Palazzoli products for Zones 1, 2, 21, 22 are approved by a notified body and have IECEx certification.

In compliance with the Directive 2014/34/EU of the European Parliament, IMQ notified that Palazzoli has a production quality system according to the Annex VII of the Directive.

[illegible]

CERTIFICAT	CERTIFICATO 
	CERTIFICATE OF EXAMINE CE DEL TIPO <i>Apparecchiature e Sistemi di Protezione destinati ad essere utilizzati in atmosfera potenzialmente esplosiva</i> Direttiva 94/CE
[1]	Numero del Certificato di Esame CE del Tipo:
	TÜV IT 14 ATEX 633
[2]	Apparecchiatura o Sistema di Protezione: <i>Pulsiverner stagna fluorescenti con alimentazione elettronica per installazione fissa Serie RHCN-EX</i>
[3]	Costruttore: <i>Palazzoli S.p.A.</i>
	Indirizzo: <i>Via Federico Palazzoli, 31 125128 Ivrea (BI) - ITALIA</i>
[4]	Questa apparecchiatura o sistema di protezione è in base ai documenti descritti pure riportati in esso.
[5]	Il TÜV Italia, organismo notificato n° 0948 in conformità all'articolo 9 della Direttiva [94/CE] del Consiglio dell'Unione Europea del 23 Marzo 1994, certifica che questa apparecchiatura o sistema di protezione è conforme ai Requisiti Essenziali di Sicurezza e Salute per il proprio e la costruzione di apparecchiature e sistemi di protezione finalizzati ad essere utilizzati in atmosfere potenzialmente esplosive, definiti nell'Allegato II della Direttiva.
	Le verifiche ed i risultati di prove sono registrati nel rapporto a campione riservato n° R 14 EX 025 .
[6]	La conformità ai Requisiti Essenziali di Sicurezza e Salute è assicurata dalla conformità alle: EN 60079-0 : 2012; EN 60079-15 : 2010; EN 60079-31 : 2008
[10]	Il simbolo "CC" posto dopo il numero del certificato indica che l'apparecchiatura o il sistema di protezione è soggetto a condizioni speciali per un utilizzo esteso, specificate nell'allegato al presente certificato.
[11]	Questo CERTIFICATO DI ESAME CE DEL TIPO è relativo soltanto al progetto, all'esame ed alle prove dell'apparecchiatura o sistema di protezione specificato in accordo con la Direttiva 94/CE. L'utilizzo regolare di questa Direttiva si applica al processo di produzione e fornitura dell'apparecchiatura o sistema di protezione. Questi aspetti non sono soggetti del presente certificato.
[12]	 II 3D Ex na IIC T4 Gc II 2D Ex Ex IIC T85°C Db
	Questo certificato, allegato incluso, può essere riprodotto solo integralmente e senza alcuna variazione.
	Data di emissione: 29 Aprile 2014
	Approvato  Germano Oliva Institute Service Director
	
	Il TÜV Italia è stato autorizzato dal governo italiano ad operare quale organismo di certificazione di sicurezza e qualità ed è stato abilitato al rilascio delle certificazioni secondo le norme UNI EN ISO 9001. Questa Dichiarazione è valida come prova ufficiale in base alla legge, quando essa è stata rilasciata. Questo documento è considerato integro secondo la UNI EN ISO 9001.
	TÜV Italia • Gruppo TÜV SÜD • Via Cavour 126, P.O. Box 3008 Santo Spirito Salsomaggiore (BO) • Italia • www.tuv.it

TAIS-EX Series

Zones 1, 2, 21, 22

BOXES IN ANTISTATIC THERMOSETTING (GRP)



	GAS			DUST		
ZONE	0	1	2	20	21	22
USABLE		X	X		X	X

Watertight modular boxes in antistatic thermosetting (GRP) suitable for applications in areas at risk of explosive atmospheres as defined in ATEX Directive 2014/34/EU. The cover is attached to the back box by means of stainless steel screws, while the sealing is guaranteed by a gasket in non-ageing elastomer.

The boxes are predisposed for the installation of either an EN50022 rail for mounting composable terminals or a backplate in anti-corrosion tropicalized steel.

CERTIFICATES	INSTRUCTIONS

Conformity to standards	ATEX Directive 2014/34/EU EN 60079-0:2012 +A11:2013 EN 60079-7:2007 EN 60079-31:2014 Directive 2014/35/EU EN 62208:2011
ATEX execution	II 2G 2D Ex e IIC Gb Ex tb IIIC Db
Material	Antistatic thermosetting (GRP)
Surface resistivity (prevention of electrostatic charge deposit)	< 10 ⁹ Ω
Protection rating (IP as per IEC/EN 60529)	IP66
Colour	RAL 9005 (black)
Resistance to abnormal heat and fire ("Glow Wire" as per IEC/EN 60695-2-10)	960°C
Self-extinguishing grade (as per UL94)	V0
Insulation class	II
Operating temperature	-40°C ÷ +40°C -40°C ÷ +50°C -40°C ÷ +60°C -40°C ÷ +70°C -40°C ÷ +75°C (see the table below)



Table of the maximum power dissipation allowed of the TAIS-EX boxes

Code	40°C ÷ +40°C (W)	40°C ÷ +50°C (W)	40°C ÷ +60°C (W)	40°C ÷ +70°C (W)	40°C ÷ +75°C (W)
532200EX	18	12	8	4	2
532201EX	19	17	11	6	3
532202EX	23	22	15	7	4
532203EX	24	22	17	8	4
532204EX	25	25	23	15	8
532035EX*	8	6	4	2	1
532045EX	10	6	4	2	1
532055EX	12	9	6	3	1
532116EX	13	10	7	3	2
532117EX	15	10	7	3	2
532118EX	20	14	9	5	2
532005EX	11	10	7	3	2
532006EX	11	7	4	2	1
532015EX	16	9	6	3	2
532016EX	15	10	7	3	2
532017EX	17	13	8	4	2
532018EX	22	22	15	7	4

*The minimum operating temperature is -20° C.

SUITABLE FOR ZONES 1-2 (GAS) AND 21-22 (DUST)



TAIS-EX SERIES
Junction boxes
in thermosetting (GRP)
with easy accessorizing
IP66

External dimensions (mm)	Maximum power dissipation allowed (W)	Palazzoli code	Pack Q.ty
125x185x125	18	532200EX	1
190x185x125	19	532201EX	1
250x185x125	23	532202EX	1
290x185x125	24	532203EX	1
380x185x125	25	532204EX	1

Notes: maximum power dissipation allowed value is for a maximum ambient temperature of 40° C.



TAIS-EX SERIES
Junction boxes
in thermosetting (GRP)
with **low cover**
IP66

External dimensions (mm)	Maximum power dissipation allowed (W)	Palazzoli code	Pack Q.ty
92x92x68	8	532035EX*	1
125x92x68	10	532045EX	1
185x92x68	12	532055EX	1
125x125x100	13	532116EX	1
185x125x100	15	532117EX	1
250x125x100	20	532118EX	1

Notes: maximum power dissipation allowed value is for a maximum ambient temperature of 40° C

*The minimum operating temperature is -20° C.



TAIS-EX SERIES
Junction boxes
in thermosetting (GRP)
with **high cover**
IP66

External dimensions (mm)	Maximum power dissipation allowed (W)	Palazzoli code	Pack Q.ty
92x92x100	11	532005EX	1
125x92x100	11	532006EX	1
185x92x100	16	532015EX	1
125x125x125	15	532016EX	1
185x125x125	17	532017EX	1
250x125x125	22	532018EX	1

Notes: maximum power dissipation allowed value is for a maximum ambient temperature of 40° C.



TAIS SERIES
Back plates
in galvanized steel
for junction boxes

For boxes with code	Back plate dimensions (mm)	Palazzoli code	Pack Q.ty
532035EX-532005EX	59x59	532705	1
532045EX-532006EX	92x58	532714	1
532055EX-532015EX	142x62	532715	1
532116EX-532016EX	86x86	532716	1
532117EX-532017EX	100x86	532717	1
532118EX-532018EX	175x86	532718	1
532200EX-532240EX	95x145	532700	1
532201EX	160x145	532701	1
532202EX-532242EX	220x145	532702	1
532203EX	260x145	532703	1
532204EX-532244EX	333x145	532704	1



TAIS SERIES
Milling cutters,
cup shaped, in steel,
for quick drill connection,
tungsten carbide gear teeth,
specific for thermosetting

Hole type	Diameter (mm)	Palazzoli code	Pack Q.ty
M20 - M25 - M32 - M40	20,5 - 25,5 - 32,5 - 40,5	538410	1

ALUPRES-EX Series

Zones 1, 2, 21, 22

BOXES IN ALUMINIUM ALLOY



	GAS			DUST		
ZONE	0	1	2	20	21	22
USABLE		X	X		X	X

Watertight wall-mounting boxes in aluminium alloy suitable for applications in areas at risk of explosive atmospheres as defined in ATEX Directive 2014/34/EU.

Back box and cover are treated with ecological anticorrosion passivation with fluoro-zirconium and finished with hot polymerized scratch-resistant non-toxic polyester painting. The colour is RAL 9005 black.

The cover is attached to the back box by means of stainless steel screws, while the sealing is guaranteed by a gasket in non-ageing elastomer. Predisposed for internal and external earth connection.

CERTIFICATES	INSTRUCTIONS

Conformity to standards	ATEX Directive 2014/34/EU EN 60079-0:2012 + A11:2013 EN 60079-7:2007 EN 60079-31:2014 Directive 2014/35/EU EN 62208:2011
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ATEX execution	II 2G 2D Ex e IIC Gb Ex tb IIIC Db
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Material	Aluminium alloy
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Surface treatment	Passivation with fluoro-zirconium
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Painting	Hot polymerized non-toxic polyester
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Colour	RAL 9005 (black)
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Protection rating (IP as per IEC/EN 60529)	IP66
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Insulation class	I
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Operating temperature	-40°C ÷ +40°C -40°C ÷ +50°C -40°C ÷ +60°C -40°C ÷ +65°C (see the table below)
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Table of the maximum power dissipation allowed of the ALUPRES-EX boxes

Code	-40°C ÷ +40°C (W)	-40°C ÷ +50°C (W)	-40°C ÷ +60°C (W)	-40°C ÷ +65°C (W)
511910EX*	10	7	4	2
511913EX	20	13	7	3
150021EX	30	16	8	4
511920EX	40	24	12	6
511921EX	42	28	14	7
511911EX	12	10	5	2
511912EX	23	13	6	3
511917EX	40	23	11	6
511922EX	45	25	13	6
511923EX	65	40	20	10

*The minimum operating temperature is -20° C.

SUITABLE FOR ZONES 1-2 (GAS) AND 21-22 (DUST)



ALUPRES-EX SERIES
Junction boxes
in aluminium alloy with
blind walls and back plate
IP66

External dimensions (mm)	Maximum power dissipation allowed (W)	Palazzoli code	Pack Q.ty
92x92x77	10	511910EX*	1
125x125x113	20	511913EX	1
155x155x73	30	150021EX	1
185x185x145	40	511920EX	1
252x185x145	42	511921EX	1

Equipment included: screws for internal and external earth connection. Supplied with internal mounting plate (except code 511910EX).

Notes: maximum power dissipation allowed value is for a maximum ambient temperature of 40° C.

*The minimum operating temperature is -20° C.



ALUPRES-EX SERIES
Junction boxes
in aluminium alloy with
windowed walls and back plate
IP66

External dimensions (mm)	Maximum power dissipation allowed (W)	Window type	Palazzoli code	Pack Q.ty
125x92x77	12		511911EX	1
185x92x77	23		511912EX	1
252x125x113	40		511917EX	1
220x220x108	45		511922EX	1
252x252x197	65		511923EX	1

Equipment included: screws for internal and external earth connection. Supplied with internal mounting plate (except code 511911EX and 511912EX).

Notes: maximum power dissipation allowed value is for a maximum ambient temperature of 40° C.



ALUPRES-EX SERIES
Flanges in aluminium alloy,
with metric threading,
for windowed boxes
IP66

For windows	Threading type	Projection (mm)	Palazzoli code	Pack Q.ty
F0	M25x1,5	18	541050EX	1
F1	M25x1,5	18	541055EX	1
F1	M32x1,5	51	540180EX	1
F3	M40x1,5	51	540190EX	1
F5	M50x1,5	51	540195EX	1

Technical accessories: cable glands at page 24.



ALUPRES-EX SERIES
Flanges in aluminium alloy,
for raised closing,
for windowed boxes
IP66

For windows	Projection (mm)	Palazzoli code	Pack Q.ty
F1	32	540061EX	1
F3	50	540063EX	1
F5	80	540065EX	1

CUSTOMIZED ATEX TERMINAL BOXES

Boxes of TAIS-EX in thermosetting (GRP) and ALUPRES-EX in aluminium alloy can be completed with cable glands and terminals to realize customized terminal boxes, suitable to be installed in zones 1,2, 21 and 22, in compliance with the ATEX Directive 2014/34/EU.

The customized configurations are certified by a Notified Body and can be realized by Palazzoli on customer's specifications. To realize these configurations, the following information are needed:

1. Number and type of the composable terminals

The EN50022 rail inside the box can be completed with ATEX composable terminals in compliance with the ATEX Directive and certified with Ex-e method of protection. The maximum number of terminals depends on the box dimensions, as per the table below, and the maximum power dissipation allowed.

2. Number, type and dispositions of the cable glands

Each box can be drilled on the 4 sides with a maximum number of entries that depends on the cable gland dimensions and side area. Palazzoli cable glands can be used, or those of any brand from M12 to M50, in compliance with ATEX directive and certified with Ex-e/Ex-tb method of protection. Junction boxes with windowed walls can be completed with their proper flanges, blind or with threading, as per the table below.

SERIES	CODE EMPTY BOX	DIMENSIONS (BxHxP)	RAILS LENGTH (mm)	MAXIMUM NUMBER OF CABLE GLANDS THAT CAN BE INSTALLED ON EACH SIDE													
				LONG SIDE OF THE BOX (B)							SHORT SIDE OF THE BOX (H)						
				M12	M16	M20	M25	M32	M40	M50	M12	M16	M20	M25	M32	M40	M50
TAIS-EX	532200EX	185x125x125	145	12	8	6	3	2	2	-	6	4	3	2	1	1	-
	532201EX	190x185x125	160	12	8	6	3	2	2	-	12	8	6	3	2	2	-
	532202EX	250x185x125	220	16	14	12	5	4	3	-	12	8	6	3	2	2	-
	532203EX	290x185x125	260	20	16	14	6	5	4	-	12	8	6	3	2	2	-
	532204EX	380x185x125	333	26	24	22	9	7	6	-	12	8	6	3	2	2	-
	532035EX	92x92x68	59	2	1	1	-	-	-	-	2	1	1	-	-	-	-
	532045EX	125x92x68	92	4	3	3	2	-	-	-	2	1	1	-	-	-	-
	532055EX	185x92x68	142	6	4	4	2	-	-	-	2	1	1	-	-	-	-
	532116EX	125x125x100	86	7	4	3	2	1	1	-	6	4	3	2	1	1	-
	532117EX	185x125x100	100	12	8	6	3	2	2	1	6	4	3	2	1	1	-
	532118EX	250x125x100	175	16	14	12	6	4	3	-	6	4	3	2	1	1	-
	532005EX	92x92x100	59	2	1	1	-	-	-	-	2	1	1	-	-	-	-
	532006EX	125x92x100	92	4	3	3	2	-	-	-	2	1	1	-	-	-	-
	532015EX	185x92x100	142	6	4	4	2	-	-	-	2	1	1	-	-	-	-
	532016EX	125x125x125	86	7	5	4	2	1	-	-	6	5	4	2	1	-	-
ALUPRES-EX	532017EX	185x125x125	100	12	7	6	4	3	-	-	6	5	4	2	1	-	-
	532018EX	250x125x125	175	16	10	8	5	4	-	-	6	5	4	2	1	-	-
	511910EX	92x92x77	69	3	2	2	1	-	-	-	3	2	2	1	-	-	-
	511913EX	125x125x113	100	8	5	4	2	2	-	-	8	5	4	2	2	-	-
	150021EX	155x155x73	122	10	6	5	3	1	-	-	10	6	5	3	1	-	-
	511920EX	185x185x145	160	18	12	10	8	4	3	2	18	12	10	8	4	3	2
	511921EX	252x185x145	200	24	16	14	10	5	4	3	18	12	10	8	4	3	2
	511911EX	125x92x77	100	3	3	2	-	-	-	-	-	-	-	-	-	-	-
	511912EX	185x92x77	150	6	5	4	-	-	-	-	-	-	-	-	-	-	-
	511917EX	252x125x113	200	16	14	6	5	4	-	-	2	1	-	-	-	-	-
	511922EX	220x220x108	190	3	3	2	2	-	-	-	3	3	2	2	-	-	-
	511923EX	252x252x197	210	32	28	18	10	8	6	3	15	8	6	6	2	2	1

3. Maximum operating current for each terminal

By specifying this value, the maximum power dissipation can be calculated more precisely, with the possibility to optimize the box dimensions. In case this value will not be available, the maximum rated current will be considered by increasing the dimensions of the box to be used.

4. Ambient temperature

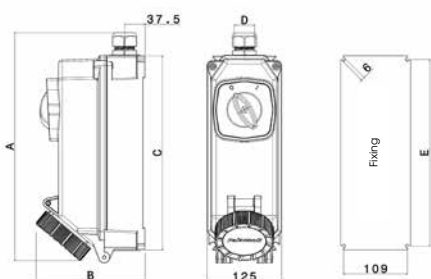
Boxes of TAIS-EX in thermosetting (GRP) and ALUPRES-EX in aluminium alloy can be installed within the indicated operating temperature range. The complete tables are at page 18 for the TAIS-EX series and page 20 for the ALUPRES-EX series. By choosing accurately the temperature range, the box dimensions can be optimised.

SERIES	AMBIENT TEMPERATURE	SERIES	AMBIENT TEMPERATURE
TAIS-EX	-40 °C ÷ +40 °C	ALUPRES-EX	-40 °C ÷ +40 °C
	-40 °C ÷ +50 °C		-40 °C ÷ +50 °C
	-40 °C ÷ +60 °C		-40 °C ÷ +60 °C
	-40 °C ÷ +70 °C		-40 °C ÷ +65 °C
	-40 °C ÷ +75 °C		

Dimensions

TAIS-EX Series

Sockets



Mounting plates

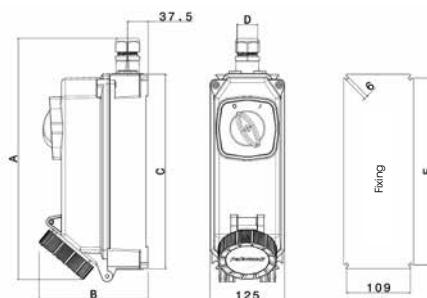


Rated current (A)	Poles	Ø entry cable (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
16	2P+÷	12÷18	380	159	335	M25	319
	3P+÷			164			
	3P+N+÷			175			
20 / 32	2P+÷	16÷25	380	177	335	M32	319
	3P+÷			185			
	3P+N+÷						
40 / 63	2P+÷	16÷25	423	203	370	M32 / M40	354
	3P+÷						
	3P+N+÷						

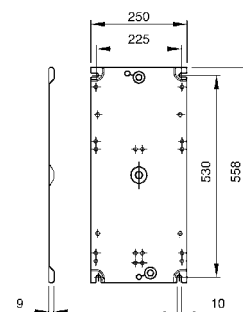
Code	A (mm)	B (mm)	C (mm)	D (mm)
532800	125	110	609	630
532802	250	215		
532804	380	345		

ALUPRES-EX Series

Sockets



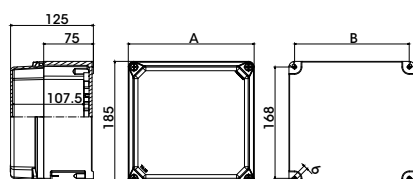
Mounting plates



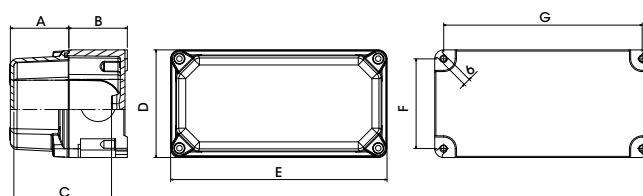
Rated current (A)	Poles	Ø entry cable (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
16	2P++	12÷18	350	150	315	M25	300
	3P++			155			
	3P+N++			160			
25 / 32	2P++	16÷25	390	168	315	M32	300
	3P++			170			
	3P+N++						
40 / 63	2P++	16÷25	430	188	355	M32	340
	3P++						
	3P+N++						

TAIS-EX Series

Boxes



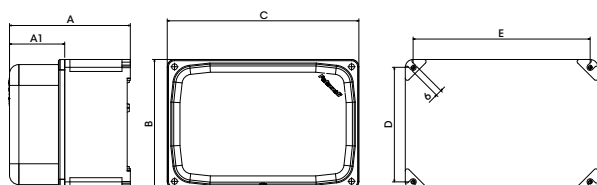
Code	A (mm)	B (mm)
532200EX - 532240EX	125	108
532201EX	190	173
532202EX - 532242EX	250	233
532203EX	290	273
532204EX - 532244EX	380	363



Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
532035EX	18	50	51	92	92	78	78
532045EX	18	50	51	92	125	78	111
532055EX	18	50	51	92	185	78	171
532116EX	18	75	75	125	125	111	111
532117EX	18	75	75	125	185	111	171
532118EX	18	75	75	125	250	111	238
532005EX	50	50	83	92	92	78	78
532006EX	50	50	83	92	125	78	111
532015EX	50	50	83	92	185	78	171
532016EX	50	75	100	125	125	111	111
532017EX	50	75	100	125	185	111	171
532018EX	50	75	100	125	250	111	238

ALUPRES-EX Series

Boxes



Code	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)
150021EX	73	10	155	155	141	141
511910EX	77	35	92	92	78	78
511911EX	92	50	92	125	78	111
511912EX	92	50	92	185	78	171
511913EX	113	50	125	125	111	111
511917EX	113	50	125	252	111	238
511920EX	145	50	185	185	171	171
511921EX	145	57	185	252	169	236
511922EX	108	13	220	220	192	205
511923EX	197	57	252	252	224	237



Palazzoli

Palazzoli range for ATEX zones

		GAS		DUST	
		ZONE 1	ZONE 2	ZONE 21	ZONE 22
POWER SUPPLY	Industrial plugs in antistatic material				
	Interlocked sockets in antistatic thermosetting (GRP)				
	Interlocked sockets in aluminium alloy				
JUNCTION	Boxes in antistatic thermosetting (GRP)				
	Boxes in aluminium alloy				
	Cable glands and adaptors				
CONTROL - SIGNALLING	Rotary control devices in antistatic thermosetting (GRP)				
	Rotary control devices in aluminium alloy				
	Sirens and bells in aluminium alloy				
	Small control devices in antistatic thermosetting (GRP) and in aluminium alloy				
LIGHTING	High-bay led lighting fixtures in aluminium alloy				
	Lighting fixtures in stainless steel				
	Oval and round bulkhead lamps in aluminium alloy				