Features

- Glass fiber reinforced polyester (GRP) enclosures
- Suitable for installation in Zones 1, 2, 21 and 22
- Certified Ex de, Ex ib and Ex tb
- Five enclosure size options
- Up to 35 operators per control station, base-mounted contact blocks
- Wide choice of operators, including
  - Pushbuttons
  - LED indicators
  - LED indicators for Ex ia circuits
  - Illuminated pushbuttons
  - Emergency stop buttons
  - Pushbuttons with key release
  - Control switches
  - Potentiometers
  - Ammeters/Voltmeters
- Customizable configuration of operators and cable gland types as per specification
- Wide range of labels and accessories available

Assembly

Function

The versatile control stations of the GLCS series can be equipped flexibly with operator elements and LED indicators. A comprehensive range of control functions, contact blocks, cable glands and further accessories allow the configuration of each control station to exactly meet any application requirements and ensure optimal space efficency.

Enclosures are manufactured from carbon loaded glass fiber reinforced polyester with stainless steel lid fixing bolts. This GRP material is anti-static and UV stabilized, the smooth surface is corrosion resistant and allows easy and fast cleaning.

Durable materials and components of high quality allow the control stations to be used in ambient temperatures between -40 °C and +55 °C.

Configuration Examples

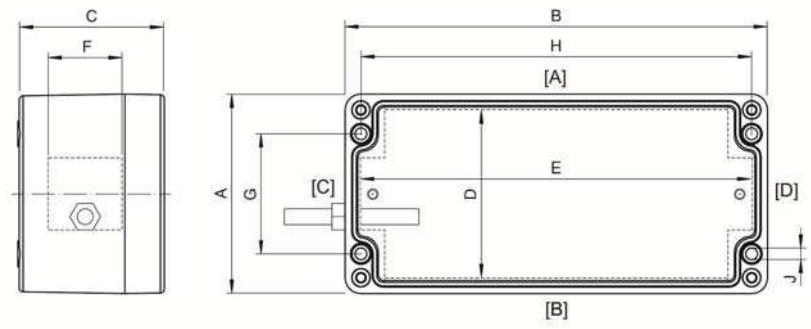
Release date 2015-06-11 T170321

Technical Data

Electrical specifications	
Operating voltage	250 V AC max.
Operating current	16 A max.
Mechanical Specification	
Cover fixing	M6 stainless steel combination pan head screws
Protection degree	IP66
Cable entry	cable glands as per specification
Cable entry areas	see cable entries table
Material	
Enclosure	carbon loaded, anti-static glass fiber reinforced polyester (GRP)
Finish	moulded, self-colour black
Seal	silicone cord
Mass	see dimensions data table
Grounding	none as standard optional M6 internal / external stud as required optional earth continuity plate, brass, 2 mm thick
Ambient conditions	
Ambient temperature	-40 °C ... 55 °C (-40 … 131 °F)
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	SIRA 13ATEX3059X
Group, category, type of protection, temperature class	Ex II 2 GD Ex de IIC T6, T5, T4 Gb Ex ib IIC T6, T5, T4 Gb Ex de ib IIC T6, T5, T4 Gb Ex tb IIIC T80 °C, T95 °C, T130 °C Db
International approvals	
IECEx approval	IECEx SIR 13.0021
Customs Union TR	RU C-DE B.00567
Conformity	
Protection degree	EN 60529
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.
Accessories	
Optional accessories	see accessories table

Release date 2015-06-11 T170321

Dimensions



Legend

A – Maximum external dimension
B – Maximum external dimension
C – Maximum external dimension
D – Internal dimension
E – Internal dimension
F – Internal depth
G – Fixing holes center
H – Fixing holes center
J – Fixing holes diameter
[A] – Entry face
[B] – Entry face
[C] – Entry face
[D] – Entry face

For details see Dimensions Data Table

Dimensions Data Table

Type	Dimensions [mm]			Dimensions internal [mm]			Fixation [mm]			Weight approx.	Cover fixing screws
	A	B	C	D	E	F	G	H	Diam. J	[kg]	Stainless steel
GL8**	160	260	91	149	249	56	110	240	6.5	1.7	M6
GL9**	160	360	91	149	349	56	110	340	6.5	2	M6
GL11**	250	255	120	239	244	82	200	235	6.5	2.7	M6
GL12**	250	400	120	239	389	82	200	380	6.5	3.4	M6
GL13**	405	400	120	394	389	82	355	380	6.5	5.1	M6

Weight shows empty enclosure; it will increase according to operators and installations.

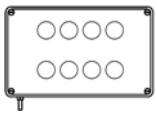
Cable Entries - maximum quantity per size

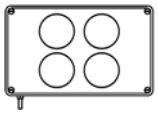
Type	Cable entry area at faces		Cable gland quantity face A/B							Cable gland quantity face C/D						
	A & B [mm]	C & D [mm]	M12	M16	M20	M25	M32	M40	M50	M12	M16	M20	M25	M32	M40	M50
GL8**	64 x 210	59 x 80	24	18	12	7	5	3	3	9	6	4	2	2	1	1
GL9**	64 x 310	59 x 80	34	26	20	11	7	5	4	9	6	4	2	2	1	1
GL11**	82 x 204	82 x 170	55	40	24	18	12	8	6	45	30	20	15	9	6	4
GL12**	89 x 349	84 x 169	63	45	32	20	14	8	5	28	18	14	8	6	3	2
GL13**	89 x 349	84 x 324	63	45	32	20	14	8	5	54	39	27	18	13	6	5

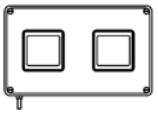
Max. gland quantity per size. For combination of different sizes please contact Pepperl+Fuchs.

Release date 2015-06-11 T170321

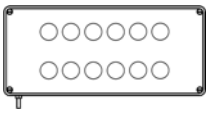
Enclosure size GL8 configuration: max. 8 functions – operator types see overleaf

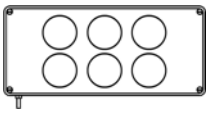

Maximum configuration (1)

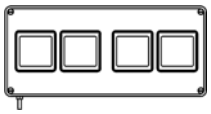

Large operator configuration (2)


Windows and large labels (3)

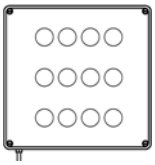
Enclosure size GL9 configuration: max. 12 functions – operator types see overleaf

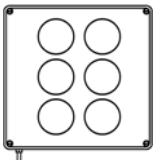

Maximum configuration (1)

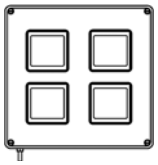

Large operator configuration (2)


Windows and large labels (3)

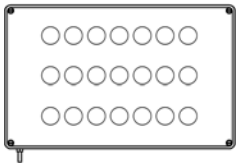
Enclosure size GL11 configuration: max. 12 functions – operator types see overleaf

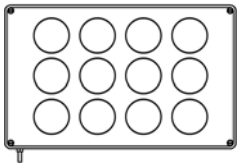

Maximum configuration (1)

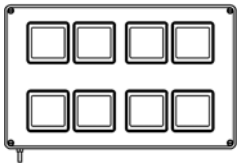

Large operator configuration (2)


Windows and large labels (3)

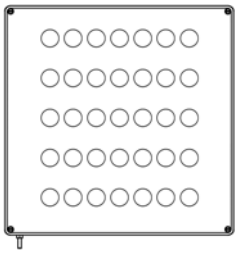
Enclosure size GL12 configuration: max. 21 functions – operator types see overleaf

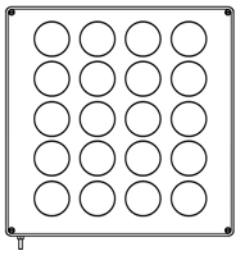

Maximum configuration (1)

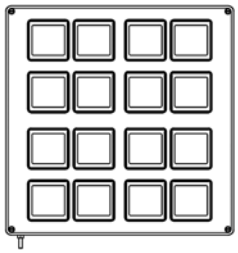

Large operator configuration (2)


Windows and large labels (3)

Enclosure size GL13 configuration: max. 35 functions – operator types see overleaf


Maximum configuration (1)


Large operator configuration (2)


Windows and large labels (3)

(1) Small operators with small label holders and 2 pole contact blocks
Small operators include all pushbuttons, small switching actuators, LED indicators and potentiometers, see overleaf
(2) Large switching actuators and all operators fitted with 4 pole contact blocks, protective lid or padlockable shroud
(3) Viewing windows with ammeter or voltmeter and operators with large label holders

For further configurations please contact Pepperl+Fuchs.
Note: position of grounding stud can vary depending on configuration.

Release date 2015-06-11 T170321

Type code / model number

Enclosure type

GL	glass fiber reinforced polyester GRP					
:	**Enclosure size**					
:	**8, 9, 11, 12, 13**	see dimensions data table				
:	:	**Earth continuity plate**				
:	:	**0** none				
:	:	**2** brass				
:	:	:	**Type of explosion protection**			
:	:	:	**1** Ex de, Ex tb			
:	:	:	**3** Ex ib, Ex tb			
:	:	:	**5** Ex de ib, Ex tb			
:	:	:	:	**Enclosure depth**		
:	:	:	:	standard depth, see dimensions data table		
:	:	:	:	**D** increased depth		
:	:	:	:	:	**Type of solution**	
:	:	:	:	:	**CS**	control station
:	:	:	:	:	:	**Item number**
:	:	:	:	:	:	Yxxxxxx

GL					.CS	-Yxxxxxx

Optional Enclosure Accessories

M6 brass grounding stud assembly

M6 stainless steel grounding stud assembly

Engraved traffolyte tag label

Engraved stainless steel tag label

Color in-fill stainless steel tag label

Release date 2015-06-11 T170321

Ex de Pushbuttons and Emergency Stops

Pushbutton Actuators	Type Code
Red pushbutton with blank insert	PA
Red pushbutton with insert labeled "O"	PR
Red pushbutton with insert labeled "STOP"	PC
Red pushbutton with insert labeled "OFF"	PD
Green pushbutton with blank insert	PE
Green pushbutton with insert labeled "I"	PG
Green pushbutton with insert labeled "START"	PF
Green pushbutton with insert labeled "ON"	PH
Yellow pushbutton with blank insert	PY
Amber pushbutton with blank insert	PM
White pushbutton with blank insert	PW
Blue pushbutton with blank insert	PB
Blue pushbutton with insert labeled "RESET"	PJ
Black pushbutton with blank insert	PK
Black pushbutton with insert labeled "0"	PL
Black pushbutton with insert labeled "I"	PN
Black pushbutton with insert labeled "II"	PP
Black pushbutton with insert labeled "III"	PQ
Black pushbutton with insert labeled "IV"	PT
Black pushbutton with insert labeled "↑"	PU
Black pushbutton with insert labeled "↓"	PV

Blue Pushbutton Actuator

Emergency Stop Actuators	Type Code
Pull-to-release mushroom button, red, labeled "EMERGENCY STOP"	ER
Key-release mushroom button, red	JR

Emergency Stop Actuator

Other Pushbutton Actuators	Type Code
Double pushbutton red/green labeled "0 - I"	DM
Mushroom pushbutton, black	MK (*)
Key pushbutton, latching two position, black/silver	HS

(*) change from 'MB'

Key Pushbutton

Mushroom Pushbutton

Key-release Mushroom Button

Contact Blocks, base-mounted	Type Code
Contact block with 1x NO / 1x NC contacts	M
Contact block with 2x NC contacts	C
Contact block with 2x NO contacts	O
Contact block with 2x NO / 2x NC contacts	01
Contact block with 4x NC contacts	02
Contact block with 4x NO contacts	03
Contact block with 1x NO / 3x NC contacts	04
Contact block with 3x NO / 1x NC contacts	05

Base-mounted Contact Block

Technical Data Contact Blocks				
Utilization category	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	1 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2

Ex de Illuminated Pushbuttons

Illuminated Pushbutton Actuators	Type Code
Red illuminated pushbutton	IR
Green illuminated pushbutton	IG
Amber illuminated pushbutton (*)	IY
White illuminated pushbutton	IW
Blue illuminated pushbutton	IB

(*) change from yellow

Blue Pushbutton Actuator

LED Contact Modules, base-mounted	Type Code
LED module 12 - 250 V AC/DC with 1x NO contact	I
LED module 12 - 250 V AC/DC with 1x NC contact	J

Base-mounted LED Module

Technical Data LED Contact Modules		
Utilization category	AC15	DC13
Rated operating voltage	12 ... 250 V	12 ... 24 V
Rated operating current	10 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm^2	2 x 2.5 mm^2
Power consumption	≤ 1 W	≤ 1 W

Release date 2015-06-11 T170321

Ex de Control Switches, 2 Pole Contact Blocks

Switching Actuators For Use With 2 Pole Contact Blocks	Switching Diagram	Contact Block *	Action	Marking			Type Code
				↖	↑	↗	
Small actuator, 2 position with left OFF	1	O	latching - latching	0		I	N6
Small actuator, 2 position	2	M	latching - latching	I		II	N7
Small actuator, 3 position with center OFF	4	O	latching - latching - latching	I	0	II	N8
Small actuator, 3 position with left OFF	3	M	latching - latching - latching	0	I	II	N9
Large actuator, 2 position with left OFF, padlockable in "0"	1	O	latching - latching	0		I	S6
Large actuator, 2 position	2	M	latching - latching	I		II	S7
Large actuator, 3 position with center OFF, padlockable in "0"	4	O	latching - latching - latching	I	0	II	S8
Large actuator, 3 position with left OFF	3	M	latching - latching - latching	0	I	II	S9
Key switch actuator, 2 position with left OFF	1	O	latching - latching	0		I	KA
Key switch actuator, 3 position with center OFF	4	O	latching - latching - latching	I	0	II	KC

Note: all switching actuators are black, the large ones are shrouded

(*) Switching diagram shows combination of contact block with actuator

Contact Blocks 2 Pole, base-mounted	Type Code
Contact block with 1x NO / 1x NC contacts	M
Contact block with 2x NC contacts	C
Contact block with 2x NO contacts	O

Switching Diagrams 2 Pole Contact Blocks

Note: diagram 3 has changed

Diagram 1

	13	23		
↖				
↗	X	X		
	14	24		

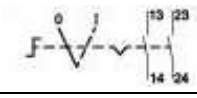


Diagram 2

	11	23		
↖	X			
↗		X		
	12	24		

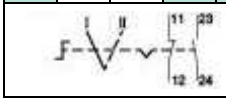
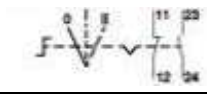


Diagram 3

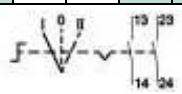
	11	23		
↖				
↑	X			
↗		X		
	12	24		



Small Actuator

Diagram 4

	13	23		
↖	X			
↑				
↗		X		
	14	24		



Base-mounted Contact Block

Large Actuator with Shroud

Technical Data Contact Blocks				
Utilization category	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	1 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm²	2 x 2.5 mm²	2 x 2.5 mm²	2 x 2.5 mm²

Release date 2015-06-11 T170321

Ex de Control Switches, 4 Pole Contact Blocks

Switching Actuators For Use With 4 Pole Contact Blocks	Switching Diagram	Contact Block *	Action	Marking			Type Code
				⊖	↑	⊕	
Large actuator, 2 position with left OFF, padlockable in "0"	5	03	latching - latching	0		I	S6
Large actuator, 2 position	6	01	latching - latching	I		II	S7
Large actuator, 3 position with center OFF, padlockable in "0"	7	03	latching - latching - latching	I	0	II	S8

Note: all switching actuators are black and shrouded

(*) Switching diagram shows combination of contact block with actuator

Contact Blocks 4 Pole, base-mounted	Type Code
Contact block with 2x NO / 2x NC contacts	01
Contact block with 4x NC contacts	02
Contact block with 4x NO contacts	03
Contact block with 1x NO / 3x NC contacts	04
Contact block with 3x NO / 1x NC contacts	05

Switching Diagrams 4 Pole Contact Blocks

Diagram 5

	13	23	33	43
⊖				
⊕	X	X	X	X
	14	24	34	44

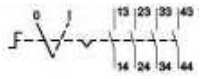


Diagram 6

	11	21	33	43
⊖			X	X
⊕	X	X		
	12	22	34	44

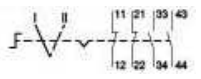
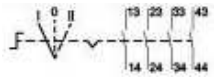


Diagram 7

	13	23	33	43
⊖	X	X		
↑				
⊕			X	X
	14	24	34	44



Base-mounted Contact Block 4 Pole

Technical Data Contact Blocks				
Utilization category	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	1 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2

Release date 2015-06-11 T170321

Ex de Control Switches, 4 Pole Rotary Switching Blocks

Large Control Switches, 4 Pole	4 Pole Rotary Switching Block, base-mounted			Rotary Switching Actuator					
	Type Code	Switching Diagram	Action	Marking					Type Code
Switch 2 position with left OFF (*)	10	5	latching - latching	0				I	T6
Switch 2 position	11	6	latching - latching	I				II	T7
Switch 3 position with center OFF (*)	12	7	latching - latching - latching	I		0		II	T8
Switch 3 position with center OFF (*)	13	8	spring - latching - spring	I		0		II	T8
Switch 3 position, right with spring return	16	10	latching - latching - spring	0		I		II	T0
Switch 4 position	15	11	latching - latching - latching - latching	I	II		III	IV	T9

Note: all switching actuators are black and shrouded. (*) = padlockable in "0" position

Always indicate type codes for both rotary actuator and switching block

Switching Diagrams 4 Pole Rotary Switching Blocks

Diagram 5

	13	23	33	43
X	X	X	X	
14	24	34	44z	

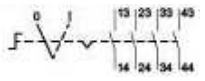


Diagram 6

	11	21	33	43
			X	X
X	X			
12	22	34	44	

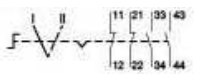


Diagram 7

	13	23	33	43
X	X			
		X	X	
14	24	34	44	

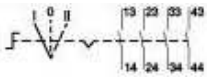


Diagram 8

	13	23	33	43
X	X			
			X	X
14	24	34	44	

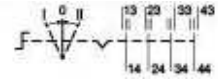


Diagram 10

	11	23	33	43
X				
	X			
			X	X
12	24	34	44	

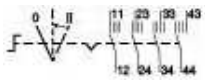
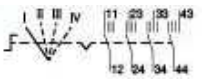


Diagram 11

	11	23	33	43
X				
	X			
		X		
				X
12	24	34	44	



Control Switch 4 Pole

Technical Data Switching Blocks				
Utilization category	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	1 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2

Release date 2015-06-11 T170321

Ex de / Ex ia LED Indicators

Lens for LED	Type Code
Red indicator lens cover	LR
Green indicator lens cover	LG
Amber indicator lens cover (*)	LY
White indicator lens cover	LW
Blue indicator lens cover	LB

(*) change from yellow

Red LED Indicator

LED Modules, base-mounted	Type Code
10 - 28 V AC/DC LED Module, certified Ex de / Ex ia	N
20 - 250 V AC/DC LED Module, certified Ex de	L
250 - 400 V AC/DC LED Module, certified Ex de	P

Base-mounted LED Module

Technical Data LED Modules	
Rated operating voltage (type N)	10 ... 28 V AC/DC
Rated operating voltage (type L)	20 ... 250 V AC/DC
Rated operating voltage (type P)	250 ... 400 V AC
Terminals, max. core cross-section	2 x 2.5 mm^2
Power consumption	≤ 2 W
Ex i data for application in connection with Ex-areas (type N)	
EC-Type Examination Certificate	SIRA 14ATEX1293U
Group, category, type of protection	II 1G Ex ia IIC Ga
IECEx approval	IECEx SIR 14.0075U
Voltage Ui	28 V
Power Pi	0.651 W
Internal capacitance Ci	0
Internal inductance Li	0

Release date 2015-06-11 T170321

Ex e Ammeters

Ammeter/Voltmeter Window with Mounting Kit	Type Code
Window including base mounting kit	WB

Ammeter

Ammeter Units	Type Code
Ammeter 0 - 1 A, scales see below	AA (*)
Ammeter 0 - 5 A, scales see below	AB (*)
Ammeter 4 - 20 mA, scale included	AC
Ammeter 0 - 20 mA, scale included	AD

(*) change from 'A' resp. 'B'

Ammeter Scales	Type Code 0 ...1 A	Type Code 0 ... 5 A
Ammeter scale 0 ... 1 / 5 A	1A	5A
Ammeter scale 0 ... 2.5 / 12.5 A	1B	5B
Ammeter scale 0 ... 5 / 25 A	1C	5C
Ammeter scale 0 ... 10 / 50 A	1D	5D
Ammeter scale 0 ... 15 / 75 A	1E	5E
Ammeter scale 0 ... 25 / 125 A	1F	5F
Ammeter scale 0 ... 30 / 150 A	1G	5G
Ammeter scale 0 ... 40 / 200 A	1H	5H
Ammeter scale 0 ... 50 / 250 A	1I	5I
Ammeter scale 0 ... 60 / 300 A	1J	5J
Ammeter scale 0 ... 75 / 375 A	1K	5K
Ammeter scale 0 ... 100 / 500 A	1L	5L
Ammeter scale 0 ... 150 / 750 A	1M	5M
Ammeter scale 0 ... 200 / 1000 A	1N	5N
Ammeter scale 0 ... 250 / 1250 A	1O	5O
Ammeter scale 0 ... 300 / 1500 A	1P	5P
Ammeter scale 0 ... 400 / 2000 A	1Q	5Q
Ammeter scale 0 ... 500 / 2500 A	1R	5R
Ammeter scale 0 ... 600 / 3000 A	1S	5S
Blank plastic ammeter scale	X	X

Please note: Type Codes have changed

Technical Data Ammeter	
Rated operating voltage	500 V AC
Rated operating current	20 mA / 1 A / 5 A
Terminals, max. core cross-section	2 x 2.5 mm^2
Accuracy class	1.5

Release date 2015-06-11 T170321

Ex e Voltmeters

Voltmeter Units	Type Code
Voltmeter 0 - 25 V, scale included	V1
Voltmeter 0 - 40 V, scale included	V2
Voltmeter 0 - 150 V, scale included	V3
Voltmeter 0 - 250 V, scale included	V4
Voltmeter 0 - 500 V, scale included	V5

Mounting kit see ammeters

Voltmeter

Technical Data Voltmeter	
Rated operating voltage	500 V AC
Terminals, max. core cross-section	2 x 2,5 mm^2

Ex de Potentiometer

Potentiometer Actuator	Type Code
Potentiometer actuator, black, labeled "0 - 10"	R2

Potentiometer Blocks, base-mounted	Type Code
1000 Ω potentiometer	1
2000 Ω potentiometer	2
5000 Ω potentiometer	5
10000 Ω potentiometer	0

Potentiometer Actuator

Base-mounted Potentiometer Block

Technical Data Potentiometer		
Rated operating voltage	max. 200 V AC	max. 200 V DC
Terminals, max. core cross-section	2 x 2.5 mm^2	2 x 2.5 mm^2
Power consumption	≤ 0.1 W	≤ 0.1 W

Release date 2015-06-11 T170321

Operator Accessories

Accessory	Type Code
Blanking plug	BK
Small label holder with printed label as per specification	ZS
Large label holder with printed label as per specification	ZL
Emergency Stop label, yellow, round, adhesive	ZE
Emergency Stop label, yellow, rectangular, adhesive	ZF
Protective lid, plastic	ZA
Emergency stop shroud, plastic, padlockable	ZP
Protective shroud, stainless steel	ZC
Protective shroud, stainless steel, padlockable	ZD
Locknut spanner, plastic	TP
Locknut spanner for key switches, plastic	TB

Please note: Type Codes have changed

Small Label Holder

Blanking Plug

Protective Lid, Plastic

Protective Shroud, Stainless Steel

Emergency Stop Shroud