

Features

- Stainless steel enclosures
- Suitable for operation in Zones 1, 2, 21 and 22
- Certified Ex de, Ex ib and Ex tb
- Five enclosure size options
- Up to 56 lid-mounted operators per control station
- Wide choice of operators, including
 - Pushbuttons
 - LED indicators
 - Illuminated pushbuttons
 - Emergency-stop buttons
 - Pushbuttons with key release
 - Selector switches
 - Potentiometers
 - Ammeters
- 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 FXLSCP 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 efficiency.

The enclosures are manufactured from electropolished 316L stainless steel to provide excellent tarnish and corrosion resistance. This surface finish is ideally suited to meet hygienic requirements valid in pharmaceutical and food processing plants.

All FXLS enclosures feature a return flange sealing method which prevents accumulated dirt, dust and moisture from entering the enclosure when the lid is opened. Concealed hinges facilitate opening the control stations.

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



Technical data**Electrical specifications**

Operating voltage	250 V AC max.
Operating current	16 A max.

Mechanical Specification

Cover fixing	M6 stainless steel hex head bolts, optional quarter-turn key locks
Protection degree	IP66
Cable entry	cable glands as per specification, through enclosure body or via gland plate
Cable entry areas	see cable entries table


Material

Enclosure	1.5 mm 316L, (1.4404) stainless steel
Finish	electropolished
Seal	one piece closed cell neoprene
Mass	see dimensions data table
Grounding	M10 brass internal/external earth stud through enclosure body

Ambient conditions

Ambient temperature	-40 ... 55 °C (-40 ... 131 °F)
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Data for application in connection with Ex-areas

EC-Type Examination Certificate	SIRA 13ATEX3059X
Group, category, type of protection, temperature class	 II 2 GD Ex de IIC T5, T4 Gb Ex ib IIC T5, T4 Gb Ex de ib IIC T5, T4 Gb Ex tb IIIC T135 °C, T95 °C Db

International approvals

IECEX approval	IECEX SIR 13.0021
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Conformity

Protection degree	EN 60529
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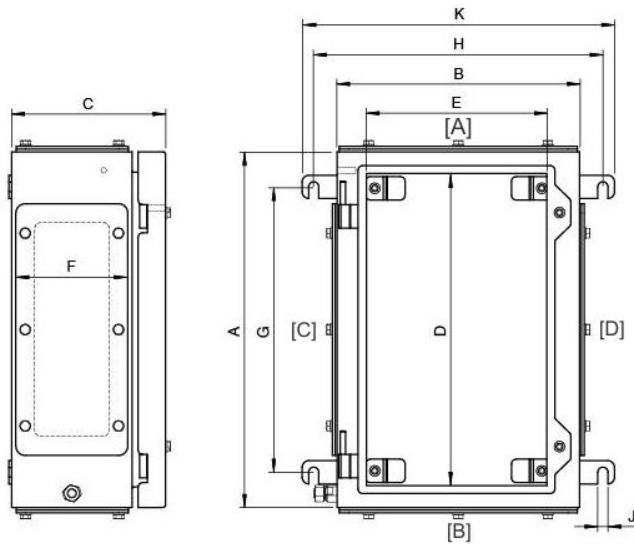
General information

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 .
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Accessories

Optional accessories	see accessories table
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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
- K – Maximum external dimension with mounting bracket
- [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. [kg]	Cover fixing screws Stainless steel
	A	B	C	K	D	E	F	G	H	Diam. J		
FXLS2**	260	260	165	335	213	193	129	185	310	11	3.8	M6
FXLS3**	306	306	165	381	259	239	129	231	356	11	5.7	M6
FXLS5**	458	382	165	457	411	315	129	383	432	11	8.7	M6
FXLS6**	480	480	165	555	433	413	129	405	530	11	11	M6
FXLS8**	620	450	165	525	573	383	129	545	500	11	12	M6

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

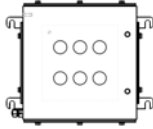
Cable Entries - maximum quantity per size

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
FXLS2**	80 x 215	80 x 146	33	23	14	10	4	3	3	21	15	8	6	3	2	2
FXLS3**	80 x 261	80 x 185	39	29	17	12	5	4	3	27	21	11	8	4	3	2
FXLS5**	80 x 337	80 x 337	51	38	21	16	7	5	4	51	39	21	16	7	5	4
FXLS6**	80 x 435	80 x 359	66	48	27	20	9	7	6	54	39	23	18	7	6	5
FXLS8**	80 x 407	80 x 464	63	45	26	20	8	7	5	69	51	30	22	10	8	6

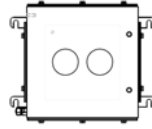
Max. gland quantity per gland size. For combination of different sizes please contact Pepperl+Fuchs.

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Enclosure size FXL2 configuration: max. 6 functions – operator types see overleaf

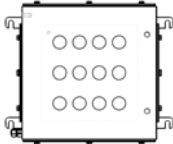


Placement of small operators

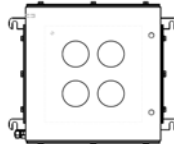


Placement of large operators

Enclosure size FXL3 configuration: max. 12 functions – operator types see overleaf

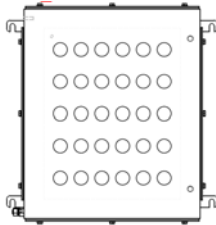


Placement of small operators

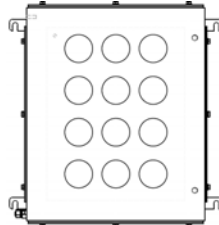


Placement of large operators

Enclosure size FXL5 configuration: max. 30 functions – operator types see overleaf

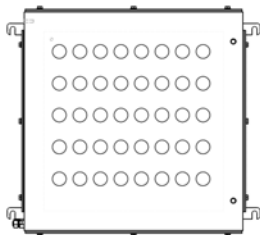


Placement of small operators

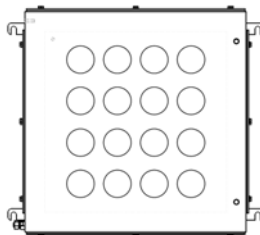


Placement of large operators

Enclosure size FXL6 configuration: max. 40 functions – operator types see overleaf

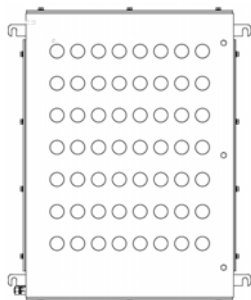


Placement of small operators

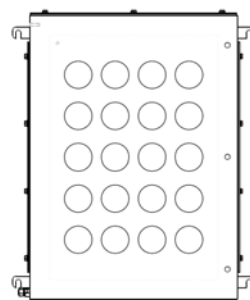


Placement of large operators

Enclosure size FXL8 configuration: max. 56 functions – operator types see overleaf



Placement of small operators



Placement of large operators

Large operators include: Ammeters, 4-pole switch with double contact block, operators with large labels

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

Type code / model number

Enclosure type

FXL metal enclosure with return flange

: **Material**

: **S** stainless steel

: **Enclosure size**

: **2, 3, 5, 6, 8** see dimensions data table

: **Type of explosion protection**

: **1** Ex de, Ex tb

: **3** Ex ib, Ex tb

: **5** Ex de ib, Ex tb

: **Gland plate at face(s)**

: **0** none

: **1** face B

: **2** faces A & B

: **3** faces B, C & D

: **4** faces A, B, C & D

: **Enclosure depth**

: standard depth, see dimensions data table

: **D** increased depth

: **Type of solution**

: **CP2** control station

: **Item number**

: Yxxxxxx

FXL	S					.CP2	-Yxxxxxx
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Optional accessories

M10 stainless steel grounding stud assembly

M6 stainless steel internal earth stud welded to enclosure lid

M6 stainless steel internal earth stud welded to bottom gland plate

1.5 mm thick stainless steel mounting plate

A5 polycarbonate document wallet

A4 polycarbonate document wallet

Engraved traffolyte tag label

Engraved stainless steel tag label

Color in-fill stainless steel tag label

Stainless steel rain canopy / sun shade

Quarter turn key locks

Release date 2014-01-27 T164484

Ex de Pushbuttons

Pushbutton Operators	Type Code	
Red pushbutton with blank insert	B	A
Red pushbutton with insert labeled "STOP"	B	B
Green pushbutton with blank insert	B	C
Green pushbutton with insert labeled "START"	B	D
Yellow pushbutton with blank insert	B	E
White pushbutton with blank insert	B	F
Blue pushbutton with blank insert	B	G
Black pushbutton with blank insert	B	H
Red/green double pushbutton labeled "0 - I"	B	J
Red pull-to-release mushroom pushbutton labeled "EMERGENCY STOP"	B	K
Black momentary mushroom pushbutton	B	L
Red latching key-release mushroom pushbutton	B	M
Black latching two position key pushbutton	B	N

Contact Configuration	Type Code	
Lid-mounted contact block with 1 x N/O & 1 x N/C contacts	B	08
Lid-mounted contact block with 2 x N/C contacts	B	18
Lid-mounted contact block with 2 x N/O contacts	B	28



Lid-mounted Contact Block



Lid-mounted Pull-to-release Emergency Button

Technical Data Pushbuttons B*				
Rating	AC12	AC15	DC13	DC13
Voltage	250 V	250 V	110 V	24 V
Current	16 A	10 A	0.5 A	1 A
Contact terminal capacity	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²

Ex de Illuminated Pushbuttons

Illuminated Pushbutton Operators	Type Code	
Red illuminated lens pushbutton	C	A
Green illuminated lens pushbutton	C	B
Yellow illuminated lens pushbutton	C	C
White illuminated lens pushbutton	C	D
Blue illuminated lens pushbutton	C	E



Lid-mounted Illuminated Contact Block

Contact Configuration	Type Code	
Red lid-mounted 24 - 250 V AC lamp module with 1 x N/C contact	C	08
Green lid-mounted 24 - 250 V AC lamp module with 1 x N/O contact	C	18
Yellow lid-mounted 24 - 250 V AC lamp module with 1 x N/O contact	C	28
White lid-mounted 24 - 250 V AC lamp module with 1 x N/O contact	C	38
Blue lid-mounted 24 - 250 V AC lamp module with 1 x N/O contact	C	48



Lid-mounted Illuminated Blue Pushbutton

Technical Data Illuminated Pushbuttons C*		
Rating	AC15	DC13
Voltage	250 V	24 V
Current	6 A	1 A
Contact terminal capacity	2 x 4 mm ²	2 x 4 mm ²
Power consumption	≤1W	≤1W

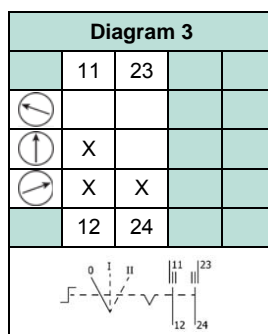
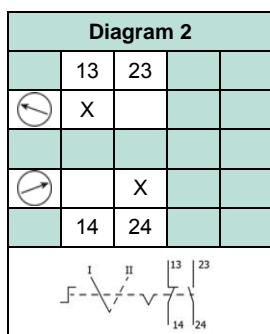
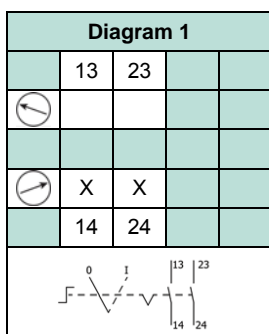
Ex de Rotary Switches - Single Contact Blocks

Ex de Rotary Control Functions

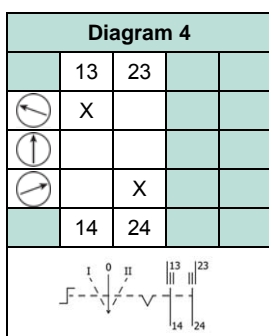
Switches For Use With Single Contact Blocks	Switching Diagram	Action	Marking			Type Code	
Black unshrouded two position selector switch with left off	1	Engage - Engage	0		I	S	A
Black unshrouded two position selector switch	2	Engage - Engage	I		II	S	B
Black unshrouded three position selector switch with left off	3	Engage - Engage - Engage	0	I	II	S	C
Black unshrouded three position selector switch with center off	4	Engage - Engage - Engage	I	0	II	S	D
Black shrouded two position selector switch with left off	1	Engage - Engage	0		I	S	E
Black shrouded two position selector switch	2	Engage - Engage	I		II	S	F
Black shrouded three position selector switch with left off	3	Engage - Engage - Engage	0	I	II	S	G
Black shrouded three position selector switch with center off	4	Engage - Engage - Engage	I	0	II	S	H

Contact Configuration	Type Code
Lid-mounted contact block with 2 x N/O contacts	B 28

Single Block Switching Diagrams



Lid-mounted Contact Block



Lid-mounted Unshrouded Switch

Technical Data Switches S*

Rating	AC12	AC15	DC13	DC13
Voltage	250 V	250 V	110 V	24 V
Current	16 A	10 A	0.5 A	1 A
Contact terminal capacity	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²



Lid-mounted Shrouded Switch

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Ex de Rotary Switches - Double Contact Blocks

Ex de Rotary Control Functions

Switches For Use With Double Contact Blocks	Switch Block			Rotary Operator							
	Type Code	Switching Diagram	Action	Marking					Type Code		
Lid-mounted four pole one-way switch	T	08	5	Engage - Engage	0				I	S	E
Lid-mounted double pole changeover switch	T	18	6	Engage - Engage	I				II	S	F
Lid-mounted double pole changeover with center off	T	38	7	Engage - Engage - Engage	I		0		II	S	H
Lid-mounted double pole changeover with center off	T	48	8	Spring - Engage - Spring	I		0		II	S	H
Lid-mounted four pole changeover with center off	T	58	9	Engage - Engage - Engage	I		0		II	T	M
Lid-mounted changeover with left off	T	28	10	Engage - Engage - Spring	0		I		II	T	L
Lid-mounted four position selector switch	T	68	11	Engage - Engage - Engage - Engage	I	II		III	IV	T	N

Note: all switches shrouded. Always indicate type codes for both rotary operator and switch block.

Double Block Switching Diagrams

Diagram 5					Diagram 6					Diagram 7					Diagram 8					Diagram 9									
	1	3	5	7		1	3	5	7		1	3	5	7		1	3	5	7		1	3	5	7					
								X	X		X	X				X	X				X	X				X	X	X	X
	X	X	X	X		X	X						X	X				X	X		X	X	X	X		X	X	X	X
	2	4	6	8		2	4	6	8		2	4	6	8		2	4	6	8		2	4	6	8		2	4	6	8

Diagram 10					Diagram 11				
	1	3	5	7		1	3	5	7
	X					X			
							X		
			X					X	
				X					X
	2	4	6	8		2	4	6	8



Double Contact Block with Shrouded Switch

Technical Data Switches S*, T*				
Rating	AC12	AC15	DC13	DC13
Voltage	250 V	250 V	110 V	24 V
Current	16 A	10 A	0.5 A	1 A
Contact terminal capacity	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²	2 x 4 mm ²

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Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

Ex de LED Indicators and Potentiometers

Ex de LED Indicators

LED Lens	Type Code	
Red indicator lens cover	D	A
Green indicator lens cover	D	B
Yellow indicator lens cover	D	C
White indicator lens cover	D	D
Blue indicator lens cover	D	E



Lid-mounted Green LED Module and Green Lens

LED Modules	Type Code	
Red lid-mounted 24 ... 240 V AC LED module	D	08
Green lid-mounted 24 ... 240 V AC LED module	D	18
Yellow lid-mounted 24 ... 240 V AC LED module	D	28
White lid-mounted 24 ... 240 V AC LED module	D	38
Blue lid-mounted 24 ... 240 V AC LED module	D	48



Lid-mounted Red LED Module and Red Lens

Technical Data LED Indicators D*		
Voltage	24 ... 240 V AC	24 ... 36 V DC
Contact terminal capacity	2 x 4 mm ²	2 x 4 mm ²
Power consumption	≤1W	≤1W

Ex de Potentiometer

Potentiometer Operator	Type Code	
Black multi-turn potentiometer handle labeled "0 - 10"	E	A

Potentiometer Lid-mounted Blocks	Type Code	
Lid-mounted 1000 Ω potentiometer	E	08
Lid-mounted 2000 Ω potentiometer	E	18
Lid-mounted 5000 Ω potentiometer	E	28
Lid-mounted 10000 Ω potentiometer	E	38



Lid-mounted Potentiometer

Technical Data Potentiometer E*		
Voltage	200 V DC	
Contact terminal capacity	2 x 4 mm ²	
Power consumption	1W	

Ex e Ammeters and Operator Accessories

Ex e Ammeters

Ammeter Units	Type Code	
Ammeter 1 A with mounting kit and window. Scales see below.	M	01
Ammeter 5 A with mounting kit and window. Scales see below.	M	05



Lid-mounted Ammeter

Ammeter Scales	Type Code	
Ammeter scale 0 ... 1 / 5 A	MS	05
Ammeter scale 0 ... 5 / 25 A	MS	15
Ammeter scale 0 ... 15 / 75 A	MS	20
Ammeter scale 0 ... 25 / 125 A	MS	25
Ammeter scale 0 ... 50 / 250 A	MS	35
Ammeter scale 0 ... 75 / 375 A	MS	45
Ammeter scale 0 ... 100 / 500 A	MS	50
Ammeter scale 0 ... 150 / 750 A	MS	55
Ammeter scale 0 ... 200 / 1000 A	MS	60
Ammeter scale 0 ... 250 / 1250 A	MS	65
Ammeter scale 0 ... 500 / 2500 A	MS	80

Technical Data Ammeter M*	
Voltage	690 V AC
Operating current	1 A & 5 A
Contact terminal capacity	2 x 4 mm ²
Accuracy class	1,5

Operator Accessories

Accessory	Type Code	
Front panel stopping plug	X	A
Small operator label holder - blank	X	B
18 mm x 37 mm white PVC legend	X	B1
Large operator label holder - blank	X	C
12 mm x 57 mm white PVC legend	X	C1
Emergency stop label	X	D
Accidental operation shroud	X	E
Padlockable accidental operation shroud	X	F
Stainless steel emergency stop flap for SS enclosure	X	G
Stainless steel emergency stop flap for GRP enclosure	X	H



Small Operator Label - Blank



Padlockable Accidental Operation Shroud