

# Control Stations Ex e, Stainless Steel FXLS\*.CS

- Stainless Steel enclosure
- Installation in Zone 1, Zone 2, Zone 21 and Zone 22
- Ex de, Ex ib and Ex tb certified
- Up to 81 operators per control station
- 6 enclosure size options
- Customizable configuration of operators, cable entry quantities and cable gland types as per specification
- Wide range of labels and accessories available

### Control Stations Ex e, Stainless Steel









### **Function**

The versatile control stations of the FXLS.CS 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 AISI 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 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 harsh ambient conditions.

### **Technical Data**

**Electrical specifications** 

Lieuticai specifications	
Operating voltage	250 V AC max.
Operating current	16 A max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
Mechanical specifications	
Enclosure cover	fully detachable, concealed hinges
Cover fixing	M6 stainless steel hexagon head screws, optional quarter-turn key locks
Cover seal	one piece closed cell silicone
Degree of protection	IP66
Cable entry	cable glands as per specification
Gland plate on face(s)	see data table
Defined entry area	see data table
Material	
Enclosure	1.5 mm AISI 316L, (1.4404) stainless steel
Gland plate	3 mm AISI 316L, (1.4404) stainless steel
Finish	electropolished
Mass	see data table
Dimensions	see data table
Mounting	see data table
Grounding	M10 internal/external brass grounding bolt through enclosure body
Ambient conditions	
Ambient temperature	-40 55 °C (-40 131 °F) -50 °C (-58 °F) on request
Data for application in connection with hazard	lous areas
EU-type examination certificate	CML 16 ATEX 3009X

## **Technical Data**

Marking	
Maximum power dissipation	see data table
International approvals	
IECEx approval	IECEx CML 16.0008X
IA approval	MASC S/18-0003X
CCC approval	2020322304002545
Conformity	
Degree of protection	EN60529
CE marking	0102
General information	
Ordering information	This device will be delivered completely configured and assembled ready for use. For configuration details please contact Customer Service.
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	Mounting plate M10 internal/external stainless steel grounding bolt M6 internal stainless steel grounding bolt welded to lid M6 internal stainless steel grounding bolt welded to bottom gland plate quarter-turn key locks engraved traffolyte tag label engraved AISI 316L stainless steel tag label color in-fill stainless steel tag label
Indicators/operating means	
Control elements	small footprint max. 81 see data table all NC contacts have a direct opening action for emergency stop functions

# Type Code

1	2	3	4	5	6	7		8	9
FXL	**	*	*	*	*	**	-	*	****
FXL	S	3	1	1		CS	-	Y	0001

Example: FXLS311.CS-Y0001
Control Station increased safety, material stainless steel, size 3, surface B and flange plate at bottom, customer specific engineered solution

FXL	metal enclosure with return flange
2	Material Material
S	stainless steel
2	Enclosure size
3	
n	see dimensions data table
4	Type of explosion protection
1	Ex db eb mb, Ex tb
3	Ex ib, Ex tb
5	Ex db eb ib mb, Ex tb
E	Cland plate at feed(a)
5	Gland plate at face(s)
<b>5</b>	none
	none face B
	none
0 1 3	none face B faces B, C, D
0	none face B faces B, C, D  Enclosure depth
0 1 3	none face B faces B, C, D  Enclosure depth standard depth, see dimensions data table
0 1 3	none face B faces B, C, D  Enclosure depth
0 1 3	none face B faces B, C, D  Enclosure depth standard depth, see dimensions data table increased depth
0 1 3 6 D	none face B faces B, C, D  Enclosure depth standard depth, see dimensions data table increased depth  Type of solution
0 1 3	none face B faces B, C, D  Enclosure depth standard depth, see dimensions data table increased depth

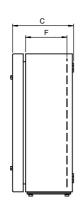
Enclosure type

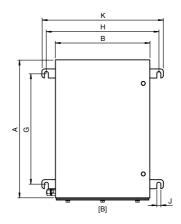
engineered variants

# Type Code 8 C Y configured variants

9	Variant number
XXXX	consecutive item number

## **Dimensions and Enclosure Details**





Time		External dimensions [mm]			Mounting [mm]		Mass approx.	Cover screws			Max. power dissipation	
Туре	А	В	С	К	G	н	J	[kg]	Mx	qty.	Torque [Nm]	[W]
FXLS2*.CS	260	260	165	335	185	310	11	5.8	M6	2	2	15
FXLS3*.CS	306	306	165	381	231	356	11	8	M6	2	2	21
FXLS5*.CS	458	382	165	457	383	432	11	12	M6	2	2	29
FXLS6*.CS	480	480	165	555	405	530	11	14	M6	2	2	30
FXLS8*.CS	620	450	165	525	545	500	11	16	M6	3	2	30
FXLS9*.CS	762	508	165	583	687	558	11	20	M6	3	2	41.7

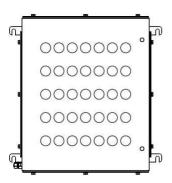
Mass is valid for empty enclosure, it will increase according to integrated components and cable glands

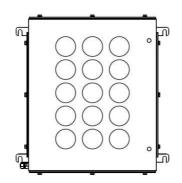
# **Control Elements max. Quantity per Enclosure Type**

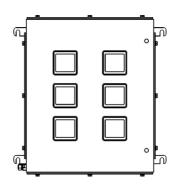
	Control elements quantity max.									
Туре	small footprint				large footprint		viewing windows			
	vertical	horizontal	total	vertical	horizontal	total	vertical	horizontal	total	
FXLS2*.CS	2	4	8	1	2	2	1	2	2	
FXLS3*.CS	3	5	15	3	2	6	2	2	4	
FXLS5*.CS	5	7	35	5	3	15	3	2	6	
FXLS6*.CS	5	9	45	5	4	20	4	3	12	
FXLS8*.CS	7	8	56	7	4	28	5	3	15	
FXLS9*.CS	9	9	81	9	4	36	5	4	20	

Quantities are based on horizontal DIN mounting rails, they may vary with vertical DIN mounting rails

# Release date: 2022-05-10 Date of issue: 2022-05-10 Filename: t170322\_eng.pdf







Example based on FXLS5\*.CS

### Left (small footprint):

Small operating elements with small label holder and 2 pole contact blocks Small operating elements include all pushbuttons, small switching actuators, LED indicators and potentiometers

### Middle (large footprint):

Large switching actuators and all operating elements fitted with 4 pole contact modules, protective lid or padlockable shroud

Viewing windows with ammeter or voltmeter as well as operating elements with large label holders

### Notes:

The use of label holders depends on operating elements configuration The position of the grounding bolt can vary depending on configuration All NC contacts have a direct opening action for emergency stop functions

For further configurations please contact Pepperl+Fuchs

# Release date: 2022-05-10 Date of issue: 2022-05-10 Filename: t170322\_eng.pdf

# **Pushbuttons and Emergency Stops**

Pushbutte	ons Actuator Heads	<b>3</b>	
Туре	Color	Labeling	Image
CFP.PA	red	none	
CFP.PR	red	0	
CFP.PC	red	STOP	(FTD)
CFP.PD	red	OFF	OFF
CFP.PE	green	none	
CFP.PG	green	I	
CFP.PI	green	II	
CFP.PF	green	START	
CFP.PH	green	ON	ON
CFP.PY	yellow	none	
CFP.PO	amber	none	
CFP.PW	white	none	0
CFP.PB	blue	none	
CFP.PJ	blue	RESET	
CFP.PK	black	none	
CFP.PL	black	0	0
CFP.PN	black	I	
CFP.PP	black	II	
CFP.PQ	black	III	
CFP.PT	black	IV	IV
CFP.PU	black	arrow up	
CFP.PV	black	arrow down	
CFP.PZ*	see individual		

Actuator Heads - Techni	cal Data
Mechanical specification	
Dimensions	see data table
Mounting	use with base-mounted and lid-mounted contact modules
Degree of protection	IP66
Mass	see data table
Material	
Housing	Polyamide (PA)
Finish	inherent color black
Washer gasket	silicone
Ambient conditions	
Ambient temperature	-40 55 °C (-40 131 °F)
Service temperature	-40 65 °C (-40 149 °F)
Data for application in co	onnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex e IIC Gb Ex tb IIIC Db
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.
Enclosure type	LC*, LRS* FXL*.CS, SR.CS* GR.CS*

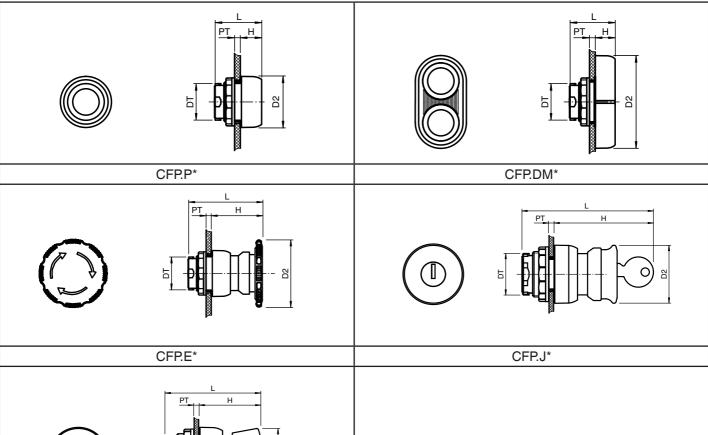
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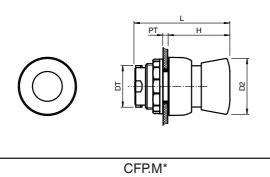
Emergency Stops Actuator Heads									
Туре	Function	Color	Labeling	Operator action	Actuator head diameter	Switching diagram	Image		
CFP.E4	mushroom button	red	none	latching, twist to release	40 mm	₫			
CFP.E5	mushroom button	red	none	latching, twist to release	55 mm	<b>(</b>	(		
CFP.JR	mushroom button	red	none	latching, key release	39 mm	<b>(</b>			

Other Pushbuttons Actuator Heads										
Туре	Function	Color	Labeling	Operator action	Actuator head diameter	Switching diagram	Image			
CFP.DM	pushbutton	red / green	0 - I	spring return	70 mm x 39 mm	E	0			
CFP.MK	mushroom button	black	none	spring return	39 mm	<b>(</b>				
CFP.MR	mushroom button	red	none	spring return	39 mm	<b>(</b>				
CFP.MG	mushroom button	green	none	spring return	39 mm	<b>(</b>				

# **Pushbuttons and Emergency Stops**

Pushbuttons and Emergency Stops - Dimensions									
Туре	Function	Actuator head diameter [mm]	Panel wall thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Mass [g]		
		D2	PT	DT	н	L			
CFP.P*	pushbutton	39	1 6	30.6	15.5	35.4	25		
CFP.DM*	double pushbutton	70 x 39	1 6	30.6	15.5	35.4	38		
CFP.E4	emergency stop	40	1 6	30.6	41.8	62.1	52		
CFP.E5	emergency stop	55	1 6	30.6	41.8	62.1	58		
CFP.JR	key release mushroom button	39	1 6	30.6	49.5	70	65		
CFP.M*	mushroom button	37	1 6	30.6	41.2	60.7	46		





Contact Block	<b>(S</b>				
Туре	Mounting	Number of poles	Contact configuration	Switching diagram see overview	Image
CFP.A	cover-mounted	2	1x NO / 1x NC	11 23	
CFP.B	cover-mounted	2	2x NC	11 21       	
CFP.D	cover-mounted	2	2x NO	13 23       	

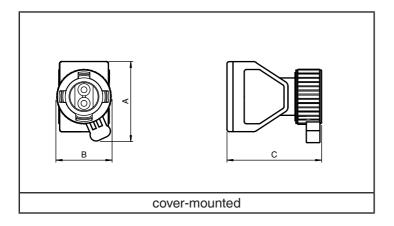
Contact Blocks - Technic	cal Data
<b>Electrical specifications</b>	
Operating voltage	250 V max.
Operating current	16 A max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
Usage category	AC12: 12 250 V AC - 16 A AC15: 12 250 V AC - 10 A DC13: 12 110 V DC - 1 A DC13: 12 24 V DC - 1 A
<b>Mechanical specification</b>	s
Mechanical life	1000000 switching operations
Degree of protection	IP20
Material	
Housing	Polyamide (PA)
<b>Ambient conditions</b>	
Service temperature	-40 90 °C (-40 194 °F)
Data for application in co with hazardous areas	onnection
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex de IIC Gb

Contact Blocks - Technical Data continued							
International approvals							
IECEx approval	IECEx CML 16.0114U						
Conformity							
Degree of protection	EN 60529						
Usage category	IEC / EN 60947						
CE marking	0102						
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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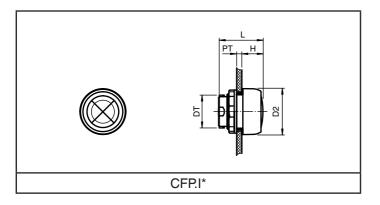
# **Pushbuttons and Emergency Stops**

Contact Blocks - Dimensions										
Mounting	Exterr	nal dime [mm]	ension	Mounting holes [mm]		Mounting brackets [mm]	DIN mounting rail receptacle [mm]	Mass [g]	Enclosure type	
	A	В	С	G	н	Diam. J	N	G3		
cover-mounted	54	37	63	-	-	-	-	-	79	FXL*.CS SR.CS*



## **Illuminated Pushbuttons**

Illuminated Pushbuttons Actuator Heads								
Туре	Lens color	Operator action	Switching diagram	Image				
CFP.IR	red	spring return	E					
CFP.IG	green	spring return	E					
CFP.IO	amber	spring return	E					
CFP.IW	white	spring return	E					
CFP.IB	blue	spring return	E					



Actuator Heads - Technical Data							
Mechanical specifications							
Degree of protection	IP66						
Material							
Housing	Polyamide (PA)						
Finish	inherent color black						
Washer gasket	silicone						
Ambient conditions							
Ambient temperature	-40 55 °C (-40 131 °F)						
Service temperature	-40 65 °C (-40 149 °F)						
Data for application in co with hazardous areas	onnection						
EU-Type Examination Certificate	CML 16 ATEX 3339U						
Marking	Ex e IIC Gb Ex tb IIIC Db						
International approvals							
IECEx approval	IECEx CML 16.0114U						
Conformity							
Degree of protection	EN 60529						
CE marking	0102						
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.						

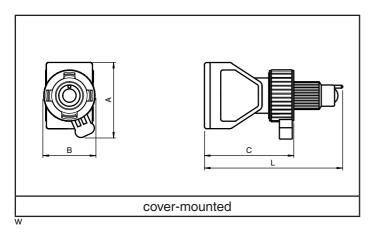
Illuminated Pushbuttons Actuator Heads - Dimensions								
Actuator head diameter [mm]	Panel wall thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Mass [g]	Mounting	Enclosure type	
D2	PT	DT	н	L				
39	1 6	30.6	17.5	36.8	21	use with base-mounted and cover-mounted contact modules	LC*, LR* FXL*.CS GR.CS*	

## **Illuminated Pushbuttons**

LED Conta	ct Modules					
Туре	Mounting	Operating voltage [V]	Number of poles	Contact configuration	Switching diagram	Image
CFP.KL	cover-mounted	10 28 V AC/DC	1	1x NO		
CFP.K	cover-mounted	30 250 V AC	1	1x NO	3 X1       \	
CFP.KI	cover-mounted	10 28 V AC/DC Ex ia	1	1x NO	7	
CFP.HL	cover-mounted	10 28 V AC/DC	1	1x NC		
CFP.H	cover-mounted	30 250 V AC	1	1x NC	1 X1 	
CFP.HI	cover-mounted	10 28 V AC/DC Ex ia	1	1x NC	2 X2	

## **Illuminated Pushbuttons**

LED Contact Modules - Dimensions											
Mounting	Exte	ernal c [m	limens m]	sion	Mounting holes [mm]		Mounting brackets [mm]	DIN rail receptacle [mm]	Mass	Enclosure	
	A	В	С	L	G	н	Diam. J	N	G3	[g]	type
cover-mounted	54	37	63	88	-	-	-	-	-	82	FXL*.CS SR.CS*



LED Modules - Technica	I Data
Electrical specifications	
Operating voltage	250 V max.
Operating current	10 A max.
Power consumption	1 W max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
Usage category	AC15: 10 250 V AC - 10 A DC13: 10 24 V DC - 1 A
Mechanical specificatior	ıs
Mechanical life	1000000 switching operations
Degree of protection	IP20
Material	
Housing	Polyamide (PA)
Ambient conditions	
Service temperature	-55 90 °C (-67 194 °F)
Data for application in co hazardous areas	onnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex de IIC Gb
Intrinsically safe varian	ts
Marking	<ul><li>II 1 G</li><li>Ex ia IIC Ga</li></ul>
Voltage U <sub>i</sub>	28 V
Current I	93 mA
Power P	0.651 W
Internal capacitance C	0 μF
Internal inductance L	0 mH
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
Usage category	IEC / EN 60947-3
CE marking	0102

LED Modules - Technical Data						
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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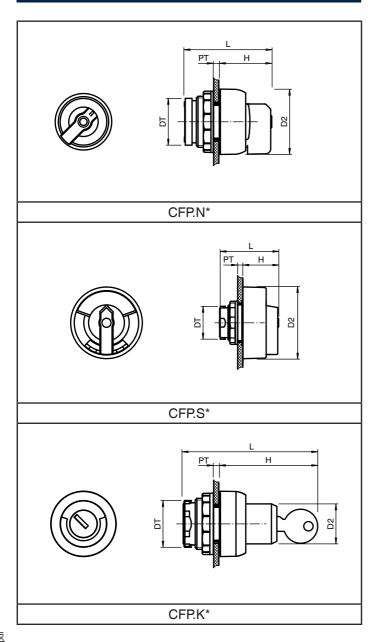
# Control Switches Actuator Heads, for use with SR.CS\* and FXLS\*.CS

Control Sw	vitch Actuator H	leads						
Туре	Function	Dia- meter [mm]	Switching configuration	Switching diagram	Opera- tor action	Labeling	Lock- able	lmage
CFP.N6	rotary actuator	39	2 position changeover with left OFF	· · · · · · · · · · · · · · · · · · ·	L-L	0 - 1	-	
CFP.N7	rotary actuator	39	2 position changeover	F\-\-\-\-\-\-\-\	L-L	I - II	-	
CFP.N8	rotary actuator	39	3 position changeover with center OFF	F\/\	L-L-L	I - 0 - II	-	
CFP.N8S	rotary actuator	39	3 position changeover with center OFF	F\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-	S-L-S	I - O - II	-	
CFP.N9	rotary actuator	39	3 position changeover with left OFF	F\\ \frac{1}{1} ii	L-L-L	0 - I - II	-	
CFP.S6	rotary actuator	60	2 position changeover with left OFF	J\-/\	L-L	0 - 1	yes	
CFP.S7	rotary actuator	60	2 position changeover	J\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	L-L	I - II	-	
CFP.S8	rotary actuator	60	3 position changeover with center OFF	Ŀ <u>···</u> //^	L-L-L	I - O - II	yes	
CFP.S8S	rotary actuator	60	3 position changeover with center OFF	FV	S-L-S	I - 0 - II	yes	
CFP.S9	rotary actuator	60	3 position changeover with left OFF	F\\/\	L-L-L	0 - I - II	yes	
CFP.K6	key switch rotary actuator	39	2 position changeover with left OFF	F\/\	L-L	0 - 1	yes	
CFP.K6S	key switch rotary actuator	39	2 position changeover with left OFF	J\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	L-S	0 - 1	yes	
CFP.K8	key switch rotary actuator	39	3 position changeover with center OFF	Ŀ <del>/</del> /^	L-L-L	I - 0 - II	yes	
CFP.K8S	key switch rotary actuator	39	3 position changeover with center OFF	F√	S-L-S	I - O - II	yes	

Operator action: L = latching, S = spring return

## **Control Switches Actuator Heads**

## **Actuator Heads - Dimensions**



Actuator Heads - Techni	cal Data
<b>Mechanical specification</b>	ns
Dimensions	see data table
Mounting	use with base-mounted and lid-mounted contact modules
Degree of protection	IP66
Mass	see data table
Material	
Housing	Polyamide (PA)
Finish	inherent color black
Washer gasket	silicone
Ambient conditions	
Ambient temperature	-40 55 °C (-40 131 °F)
Service temperature	-40 65 °C (-40 149 °F)
Data for application in co	onnection with
hazardous areas	
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex e IIC Gb Ex tb IIIC Db
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.

Туре	Actuator head diameter [mm]	thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Mass [g]	Image example
	D2	PT	DT	н	L		
CFP.N*	39	1 6	30.6	30.5	50.5	30	
CFP.S*	60	1 6	30.6	30.5	50.5	46	
CFP.K*	39	1 6	30.6	49.5	70	46	

# Control Switches, 2 Pole Contact Blocks, for use with SR.CS\* and FXL\*.CS

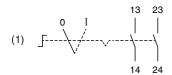
Combination	of 2 Pole	Contact Blocks and A	ctuator h	leads					
Actuator head function	Actuator head diameter [mm]	Switching configuration	Contact block	Contacts	Switching diagram see overview	Opera- tor action	Label- ing	Lock- able	Actu- ator type
rotary actuator	39	2 position changeover with left OFF	D	2x NO	(1)	L-L	0 - 1	-	N6
rotary actuator	39	2 position changeover	Α	1x NO / 1x NC	(2)	L-L	1 - 11	-	N7
rotary actuator	39	3 position changeover with center OFF	D	2x NO	(4)	L - L - L	I - 0 - II	-	N8
rotary actuator	39	3 position changeover with center OFF	D	2x NO	(4)	S-L-S	I - 0 - II	-	N8S
rotary actuator	39	3 position changeover with left OFF	А	1x NO / 1x NC	(3)	L-L-L	0 - I - II	-	N9
rotary actuator	60	2 position changeover with left OFF	D	2x NO	(1)	L-L	0 - 1	yes	S6
rotary actuator	60	2 position changeover	А	1x NO / 1x NC	(2)	L-L	1 - 11	-	S7
rotary actuator	60	3 position changeover with center OFF	D	2x NO	(4)	L-L-L	I - 0 - II	yes	S8
rotary actuator	60	3 position changeover with center OFF	D	2x NO	(4)	S-L-S	I - 0 - II	yes	S8S
rotary actuator	60	3 position changeover with left OFF	А	1x NO / 1x NC	(3)	L-L-L	0 - I - II	yes	S9
key switch rotary actuator	39	2 position changeover with left OFF	D	2x NO	(1)	L-L	0 - 1	yes	K6
key switch rotary actuator	39	2 position changeover with left OFF	D	2x NO	(1)	L-S	0 - 1	yes	K6S
key switch rotary actuator	39	3 position changeover with center OFF	D	2x NO	(4)	L-L-L	I - 0 - II	yes	K8
key switch rotary actuator	39	3 position changeover with center OFF	D	2x NO	(4)	S-L-S	I - 0 - II	yes	K8S

Operator action: L = latching, S = spring return

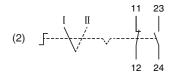
Contact Blocks									
Туре	Mounting	Number of poles	Contact configuration	Switching diagram	lmage				
CFP.A	cover-mounted	2	1x NO / 1x NC	11 23					
CFP.B	cover-mounted	2	2x NC	11 21       					
CFP.D	cover-mounted	2	2x NO	13 23       					

# Control Switches, 2 Pole Contact Blocks, for use with SR.CS\* and FXL\*.CS

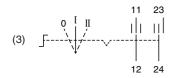
## **Switching Diagrams**

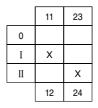


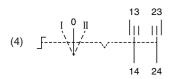
	13	23
0		
I	Х	Х
	14	24

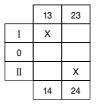


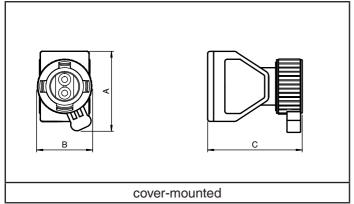












<b>Contact Blocks - Techn</b>	ical Data
Electrical specifications	
Operating voltage	250 V max.
Operating current	16 A max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
Usage category	AC12: 12 250 V AC - 16 A AC15: 12 250 V AC - 10 A DC13: 12 110 V DC - 1 A DC13: 12 24 V DC - 1 A
<b>Mechanical specificatio</b>	ns
Mechanical life	1000000 switching operations
Degree of protection	IP20
Material	
Housing	Polyamide (PA)
Ambient conditions	
Service temperature	-40 90 °C (-40 194 °F)
Data for application in o with hazardous areas	connection
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex de IIC Gb
International approvals	
IECEx approval	IECEx CML 16.0114U

EN 60529 IEC / EN 6094

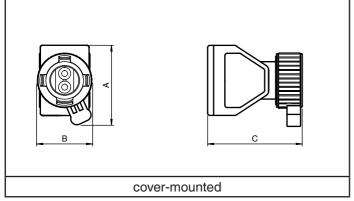
**EC-Type Examination** Certificate, Statement of Conformity, Declaration of

Conformity, Attestation of

Conformity and instructions have to be observed where

applicable. For information see www.pepperl-fuchs.com.

0102



Contact Blocks - Dimensions										
Mounting	Exterr	nal dime [mm]	ension	М	ounting [mn	g holes n]	Mounting brackets [mm]	DIN mounting rail receptacle [mm]	Mass [g]	Enclosure type
	A	В	С	G	Н	Diam. J	N	G3		
cover-mounted	54	37	63	-	-	-	-	-	79	FXL*.CS SR.CS*

Conformity

Degree of protection

Usage category CE marking

Supplementary

information

**General information** 

# Control Switches, 4 Pole Contact Blocks, for use with SR.CS\* and FXL\*.CS

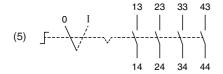
Combination	Combination of 4 Pole Contact Blocks and Actuator Heads								
Actuator head function	Actuator head diameter [mm]	Switching configuration	Contact block	Contacts	Switching diagram see overview	Opera- tor action	Label- ing	Lock- able	Actu- ator type
rotary actuator	60	2 position changeover with left OFF	52	4x NO	(5)	L-L	0 - 1	yes	S6
rotary actuator	60	2 position changeover	50	2x NO / 2x NC	(6)	L-L	1 - 11	-	S7
rotary actuator	60	3 position changeover with center OFF	52	4x NO	(7)	L-L-L	I - 0 - II	yes	S8
rotary actuator	60	3 position changeover with center OFF	52	4x NO	(7)	S-L-S	I - 0 - II	yes	S8S

Operator action: L = latching, S = spring return

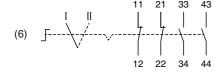
Contact Block	(S				
Туре	Mounting	Number of poles	Contact configuration	Switching diagram	Image
CFP.50	cover-mounted	4	2x NO / 2x NC	11 21 33 43	
CFP.51	cover-mounted	4	4x NC	11 21 31 41	
CFP.52	cover-mounted	4	4x NO	13 23 33 43 	PAGE 1
CFP.53	cover-mounted	4	1x NO / 3x NC	11 23 33 43 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
CFP.54	cover-mounted	4	3x NO / 1x NC	11 23 33 43	

# Control Switches, 4 Pole Contact Blocks, for use with SR.CS\* and FXL\*.CS

## **Switching Diagrams**



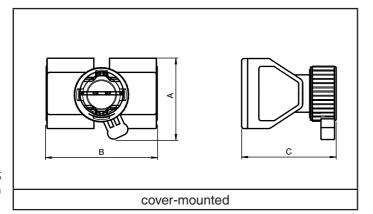
		13	23	33	43
	0				
ſ	I	Х	Х	Х	х
		14	24	34	44



	11	21	33	43
I	Х	х		
II			Х	х
	12	22	34	44



	13	23	33	43
I	Х	Х		
0				
II			Х	Х
	14	24	34	44



Contact Blocks - Techni	cal Data			
<b>Electrical specifications</b>				
Operating voltage	250 V max.			
Operating current	16 A max.			
Terminal capacity	2.5 mm <sup>2</sup>			
Terminal torque	0.8 Nm			
Usage category	AC12: 12 250 V AC - 16 A AC15: 12 250 V AC - 10 A DC13: 12 110 V DC - 1 A DC13: 12 24 V DC - 1 A			
Mechanical specification	าร			
Mechanical life	1000000 switching operations			
Degree of protection	IP20			
Material				
Housing	Polyamide (PA)			
Ambient conditions				
Service temperature	-40 90 °C (-40 194 °F)			
Data for application in co with hazardous areas	onnection			
EU-Type Examination Certificate	CML 16 ATEX 3339U			
Marking	Ex de IIC Gb			
International approvals				
IECEx approval	IECEx CML 16.0114U			
Conformity				
Degree of protection	EN 60529			
Usage category	IEC / EN 60947			
CE marking	0102			
General information				

Contact Blocks - Dimensions										
Mounting	Extern	al dime [mm]	ension	M	ounting [mn		Mounting brackets [mm]	DIN mounting rail receptacle [mm]	Mass [g]	Enclosure type
	A	В	С	G	н	Diam. J	N	G3		
cover-mounted	57	73.4	65.7	-	-	-	-	-	168	FXL*.CS SR.CS*

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.

# Control Switches, 4 Pole Rotary Switching Blocks, for use with SR.CS\* and FXL\*.CS

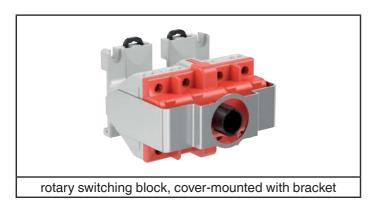
Combination of 4 Pole Rotary Switching Blocks and Actuator Heads								
Switching configuration	Swit- ching block	Contacts	Switching diagram see overview	Operator action	Labeling	Lock- able	Actu- ator type	
2 position changeover, left OFF	60	4x NO	(10)	L-L	0 - 1	yes	Т6	
2 position changeover	61	2x NO / 2x NC	(11)	L-L	I <b>-</b> II	-	T7	
2 position changeover	67	3x NO / 1x NC	(17)	L-L	1 - 11	-	T7	
2 position changeover	68	1x NO / 3x NC	(18)	L-L	1 - 11	-	T7	
3 position changeover, center OFF	62	4x NO	(12)	L-L-L	I - 0 - II	yes	Т8	
3 position changeover, center OFF	64	4x NO	(14)	L-L-L	I - 0 - II	yes	Т8	
3 position changeover, center OFF, both sides spring return	63	4x NO	(13)	S-L-S	I - 0 - II	yes	Т8	
3 position changeover	72	4x NO	(22)	L-L-L	I - 0 - II	-	Т8	
3 position changeover	73	4x NO	(23)	L-L-L	0 - I - II	-	ТО	
3 position changeover, right spring return	69	2x NO / 2x NC	(19)	L-L-S	0 - I - II	-	ТО	
3 position changeover, right spring return	66	3x NO / 1x NC	(16)	L-L-S	0 - I - II	-	ТО	
4 position changeover	65	3x NO / 1x NC	(15)	L-L-L-L	I - II - III - IV	-	Т9	
4 position changeover, right spring return	70	4x NO	(20)	L-L-L-S	I - II - III - IV	-	Т9	
4 position changeover	71	4x NO	(21)	L-L-L-L	I - II - III - IV	-	Т9	

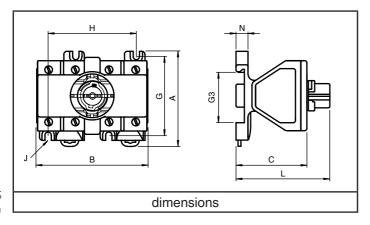
Operator action: L = latching, S = spring return

# Control Switches, 4 Pole Rotary Switching Blocks, for use with SR.CS\* and FXL\*.CS

### **Dimensions**



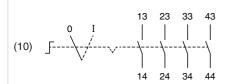




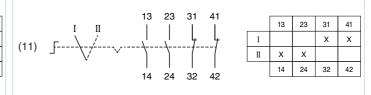
Cuitabian Blacks Task	vicel Date		
Switching Blocks - Tech	nicai Data		
Electrical specifications	050.17		
Operating voltage	250 V max.		
Operating current	16 A max.		
Terminal capacity	2.5 mm <sup>2</sup>		
Terminal torque	0.8 Nm		
Usage category	AC12: 12 250 V AC - 16 A AC15: 12 250 V AC - 10 A DC13: 12 110 V DC - 1 A DC13: 12 24 V DC - 1 A		
<b>Mechanical specification</b>	s		
Mechanical life	1000000 switching operations		
Degree of protection	IP20		
Material			
Housing	Polyamide (PA)		
Ambient conditions			
Service temperature	-40 90 °C (-40 194 °F)		
Data for application in co with hazardous areas	onnection		
EU-Type Examination Certificate	CML 16 ATEX 3339U		
Marking	Ex de IIC Gb		
International approvals			
IECEx approval	IECEx CML 16.0114U		
Conformity			
Degree of protection	EN 60529		
Usage category	IEC / EN 60947		
CE marking	0102		
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.		

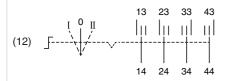
Switching Blocks - Dimensions										
Mounting	Extern	nal dime [mm]	ension	M	ountinç [mn	g holes n]	Mounting brackets [mm]	DIN mounting rail receptacle [mm]	Mass [g]	Enclosure type
	A	В	С	G	н	Diam. J	N	G3		
cover-mounted	63	74	72	-	-	-	-	-	235	FXL*.CS SR.CS*

# Control Switches, 4 Pole Rotary Switching Blocks, Switching diagrams



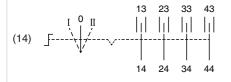
	13	23	33	43
0				
I	х	Х	х	х
	14	24	34	44



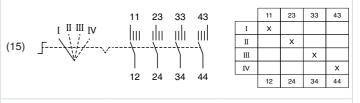


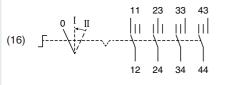
	13	23	33	43
I	Х	Х		
0				
II			Х	х
	14	24	34	44

		13	23	33	43		13	23	33	43
	ĭ 0 II	Тш	Τп	ш	ш	I	Х	Х		
(13)	J <del>\</del> \ <del>//\/</del>		·			0				
	Ψ					II			Х	Х
		14	24	34	44		14	24	34	44

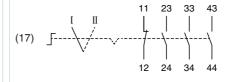


	13	23	33	43
I	Х	Х	Х	х
0				
II	Х	Х	х	х
	14	24	34	44

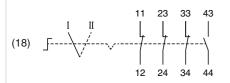




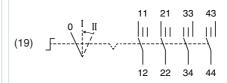




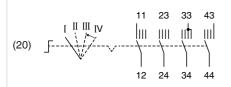
	11	23	33	43
I	х			
II		х	Х	х
	12	24	34	44



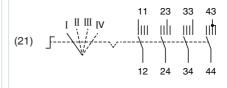
	11	23	33	43
I	х	Х	х	
II				х
	12	24	34	44



	11	21	33	43
0	х	х		
I				
II			Х	Х
	12	22	34	44



	11	23	33	43
I	Х			
II				
III			¥	
[V			¥	х
	12	24	34	44



	11	23	33	43
I	х			
II				
III		х		¥
IV			Х	¥
	12	24	34	44



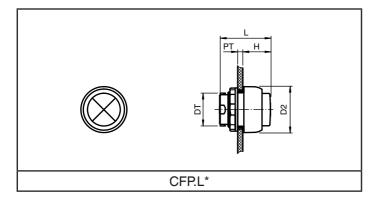
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	14	24	32	44

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	14	24	34	44

# **LED Indicators**

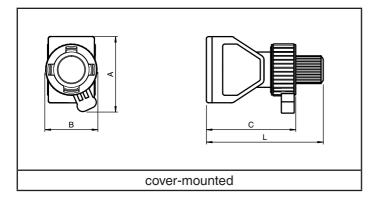
LED Indicators Lenses								
Туре	Lens color	Image						
CFP.LR	red							
CFP.LG	green							
CFP.LO	amber							
CFP.LW	white							
CFP.LB	blue							



<b>LED Heads - Technical</b>	Data
Mechanical specificatio	ns
Degree of protection	IP66
Material	
Housing	Polyamide (PA)
Finish	inherent color black
Washer gasket	silicone
Ambient conditions	
Ambient temperature	-40 55 °C (-40 131 °F)
Service temperature	-40 65 °C (-40 149 °F)
Data for application in chazardous areas	connection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex e IIC Gb Ex tb IIIC Db
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.

LED Heads - Dimensions											
Diameter [mm]	Panel wall thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Mass [g]	Mounting	Enclosure type				
D2	PT	DT	Н	L							
39	1 6	30.6	23.6	43	20	use with base-mounted and cover-mounted LED modules	LC* FXL*.CS GR.CS*				

LED Modules								
Туре	ype Mounting Rated operating voltage [V AC/DC]							
CFP.GI	cover- mounted	10 28, Ex ia						
CFP.GE	cover- mounted	10 28						
CFP.R	cover- mounted	30 250						

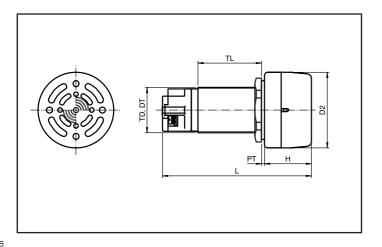


LED Modules - Technical	Data		
<b>Electrical specifications</b>			
Operating voltage	250 V max.		
Power consumption	2 W max.		
Terminal capacity	2.5 mm <sup>2</sup>		
Terminal torque	0.8 Nm		
<b>Mechanical specification</b>	s		
Degree of protection	IP20		
Material			
Housing	Polyamide (PA)		
Ambient conditions			
Service temperature	-40 90 °C (-40 194 °F)		
Data for application in co	nnection with		
EU-Type Examination Certificate	CML 16 ATEX 3339U		
Marking	II 2 G Ex de IIC Gb		
Intrinsically safe variant	s *.NI, *.GI		
Marking	😥 II 1 G Ex ia IIC Ga		
Voltage U	28 V		
Current I,	93 mA		
Power P	0.651 W		
Internal capacitance C	0 μF		
Internal inductance L	0 mH		
International approvals			
IECEx approval	IECEx CML 16.0114U		
Conformity			
Degree of protection	EN 60529		
CE marking	0102		
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.		

LED Modules - Dimensions											
Mounting	External dimension [mm]		Mounting holes [mm]		Mounting DIN rail brackets receptacle [mm] [mm]		Mass	Enclosure			
	A	В	С	L	G	н	Diam. J	N G3		[g]	type
cover-mounted	54	37	63	88	-	-	-	-	-	71	FXL*.CS SR.CS*

## **Buzzer**

Buzzer Modules						
Туре	Function	Color	Rated operating voltage [V AC/DC]	Image		
CFP. BUZRF1	flashing buzzer	red	10 28			
CFP. BUZRF2	flashing buzzer	red	30 250			
CFP. BUZKS1	buzzer	black	10 28			
CFP. BUZKS2	buzzer	black	30 250			



Buzzer - Technical Data	
<b>Electrical specifications</b>	
Operating voltage	250 V max.
Power consumption	1 W max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
Sound level	60 dB at 30 cm
<b>Mechanical specification</b>	s
Degree of protection	IP66
Material	
Housing	Polyamide (PA)
Ambient conditions	
Ambient temperature	-40 55 °C (-40 131 °F)
Service temperature	-40 90 °C (-40 194 °F)
Data for application in co	nnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex e ib mb IIC Gb Ex ib tb IIIC Db
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.

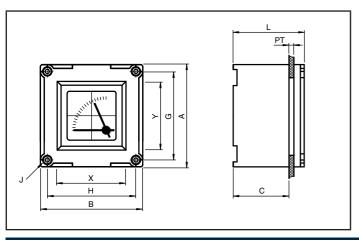
Buzzer - Dimensions									
Actuator head diameter [mm]	Panel wall thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Thread size	Thread length [mm]	Mass [g]	Mounting	Enclosure type
D2	PT	DT	н	L	TD	TL			
50	1 35	30.6	31	98.5	M30 x 1.5	42	125	cover- mounted	LC*, LR* GR.CS* SR.CS* FXL*.CS

## **Ammeters**

Ammeter Modules						
Туре	Rated operating current	Scales see table	Image			
CFP.AA	0 1 A	scale per specification				
CFP.AB	0 5 A	scale per specification				
CFP.AC	4 20 mA	scale 4 20 / 40 mA				
CFP.AD	0 20 mA	scale 0 20 / 40 mA				

Ammeter Scales						
Scales	Type Code					
0 1 / 5 A	SA					
0 2.5 / 12.5 A	SB					
0 5 / 25 A	SC					
0 10 / 50 A	SD					
0 15 / 75 A	SE					
0 20 / 100 A	SU					
0 25 / 125 A	SF					
0 30 / 150 A	SG					
0 40 / 200 A	SH					
0 50 / 250 A	SI					
0 60 / 300 A	SJ					
0 75 / 375 A	SK					
0 100 / 500 A	SL					

Scales	Type Code
0 150 / 750 A	SM
0 200 / 1000 A	SN
0 250 / 1250 A	SO
0 300 / 1500 A	SP
0 400 / 2000 A	SQ
0 500 / 2500 A	SR
0 600 / 3000 A	SS
0 1000 / 5000 A	ST
Scale as per specification	SZ



Ammeter Modules - Tech	nical Data
<b>Electrical specifications</b>	
Operating voltage	500 V AC
Operating current	5 A max.
Accuracy class	1.5
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
<b>Mechanical specification</b>	s
Degree of protection	IP66
Mounting	Meter window mounting kit
Material	
Housing	Polyamide (PA)
Ambient conditions	
Service temperature	-40 95 °C (-40 203 °F)
Data for application in co	nnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex e IIC Gb
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.

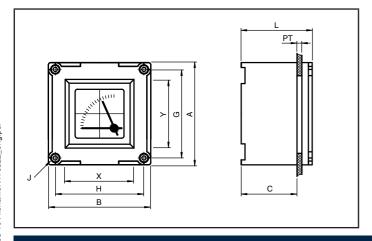
Meter Window Mounting Kits						
Туре	Window including	Enclosure type				
CFP.WB	base mounting kit	L*, GR.CS*				
CFP.WL	cover mounting kit	FXL*.CS, SR.CS*				

Amm	Ammeter Modules - Dimensions										
Exte	ernal c [m		sion	Viewing window [mm]		Panel wall thickness [mm]	Mounting holes [mm]		Mass	Enclosure type	
A	В	С	L	x	Υ	PT	G	н	Diam. J	[g]	Lifelosule type
70	70	59	75	54	50	1 6	63	63	3.5	186	LC*, LR* FXL*.CS, SR.CS* GR.CS

# **Voltmeters**

Voltmeter Modules						
Туре	Rated operating voltage	Image				
CFP.V6	0 10 V					
CFP.V1	0 25 V					
CFP.V2	0 40 V					
CFP.V7	0 50 V					
CFP.V8	0 100 V	-				
CFP.V9	0 120 V					
CFP.V3	0 150 V					
CFP.V4	0 250 V					
CFP.V5	0 500 V					

Voltmeter Scales	
į	included in module



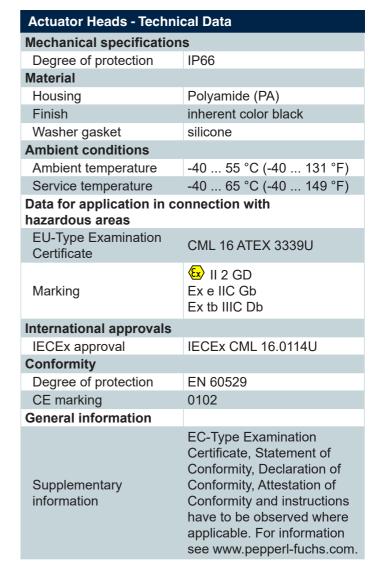
<b>Voltmeter Modules - Tec</b>	hnical Data
Electrical specifications	
Operating voltage	500 V AC
Accuracy class	1.5
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
<b>Mechanical specification</b>	าร
Degree of protection	IP66
Mounting	Meter window mounting kit
Material	
Housing	Polyamide (PA)
Ambient conditions	
Service temperature	-40 95 °C (-40 203 °F)
Data for application in cohazardous areas	onnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	€ II 2 G Ex e IIC Gb
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0102
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.

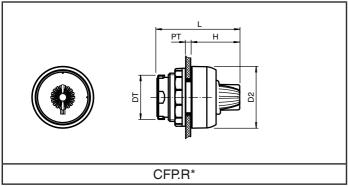
Meter Window Mounting Kits						
Туре	Window including	Enclosure type				
CFP.WB	base mounting kit	L*, GR.CS*				
CFP.WL	cover mounting kit	FXL*.CS, SR. CS*				

Voltr	Voltmeter Modules - Dimensions										
External dimension [mm]			Viewing window [mm]		Panel wall thickness [mm]	Мо	Mounting holes [mm]		Mass	Enclosure type	
A	В	С	L	x	Y	PT	G	н	Diam. J	[g]	Enclosure type
70	70	59	75	54	50	1 6	63	63	3.5	186	LC*, LR* FXL*.CS, SR.CS* GR.CS*

## **Potentiometers**

Potentiometer Actuator Heads							
Туре	Enclosure type	Labeling	Image				
CFP.R2	FXL*.CS SR.CS*	0 10					

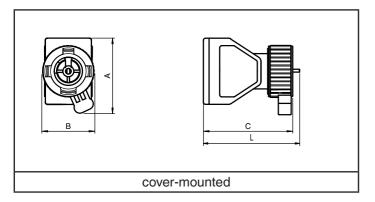




Potentiometer Actuator Heads - Dimensions									
Actuator head diameter [mm]	Panel wall thickness [mm]	Diameter thru-hole [mm]	Length outside enclosure [mm]	Total length [mm]	Mass [g]	Mounting			
D2	PT	DT	Н	L					
39	1 6	30.6	30.5	50.5	27	use with base-mounted and cover-mounted potentiometer modules			

## **Potentiometers**

Potentiometer Modules								
Туре	Mounting	Range [kΩ]	Image					
CFP.4	cover-mounted	0 0.5						
CFP.6	cover-mounted	0 1						
CFP.7	cover-mounted	0 2	(8)					
CFP.8	cover-mounted	0 5						
CFP.9	cover-mounted	0 10						



Data di ancata di Madala a	Table in I Date
Potentiometer Modules -	· lechnical Data
Electrical specifications	
Operating voltage	200 V max.
Power consumption	0.1 W max.
Terminal capacity	2.5 mm <sup>2</sup>
Terminal torque	0.8 Nm
<b>Mechanical specification</b>	s
Degree of protection	IP20
Material	
Housing	Polyamide (PA)
Ambient conditions	
Service temperature	-55 90 °C (-67 194 °F)
Data for application in co	nnection with
EU-Type Examination Certificate	CML 16 ATEX 3339U
Marking	Ex de IIC Gb
International approvals	
IECEx approval	IECEx CML 16.0114U
Conformity	
Degree of protection	EN 60529
CE marking	0575
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

Potentiometer Modules - Dimensions											
Mounting	External dimension [mm]			Mounting holes [mm]		Mounting brackets [mm]	DIN rail receptacle [mm]	Mass	Enclosure		
	A	В	С	L	G	н	Diam. J	N	G3	G3 [g]	type
cover-mounted	54	37	63	65	-	-	-	-	-	78	FXL*.CS SR.CS*

see www.pepperl-fuchs.com.

# Release date: 2022-05-10 Date of issue: 2022-05-10 Filename: t170322\_eng.pdf

# **Operating Elements Accessories**

Accessory								
Туре	Description	Image						
CFP.BK	Blanking plug	EX						
CFP.ZT	Extra small label holder with printed label as per specification							
CFP.ZS	Small label holder with printed label as per specification							
CFP.ZL	Large label holder with printed label as per specification	0						
CFP.ZEB	Emergency stop label, yellow, round	0						
CFP. ZEB.V2	Emergency stop label, yellow, round, engraved NOT HALT EMERGENCY STOP	THE PRENCY SO						
CFP.TP	Locknut spanner, plastic							

Accessory	,	
Туре	Description	Image
CFP.ZB CFP.ZBR (1) (8)	Protective flap for small actuators, plastic, padlockable	
CFP.ZJ CFP.ZJR (1) (8)	Protective pushbutton flap with continuous operation, plastic, padlockable	
CFP.ZH (3)	Protective flap for double pushbutton, stainless steel, padlockable	
CFP.ZA CFP.ZAR (4) (8) (9)	Protective flap, plastic	
CFP.ZP CFP.ZPR (5) (8)	Emergency stop shroud, plastic, padlockable, supplied with padlock and 2 keys	
CFP.ZDT (6) (9)	Protective flap, stainless steel	
CFP.ZCT (7)	Protective flap, stainless steel, padlockable	

- (1) CFP.ZB\* are designed for use with CFP.P\* pushbuttons, CFP.I\* illuminated pushbuttons, CFP.N\* small switches, CFP.R\* potentiometer actuators
- (2) CFP.ZJ\* are designed for use with CFP.P\* pushbuttons
- (3) CFP.ZH is designed for use with CFP.D\* double pushbuttons
- (4) CFP.ZA\* are designed for use with CFP.S\* large switches, CFP.E\* emergency stops
- (5) CFP.ZP\* are designed for use with CFP.E4 emergency stop buttons, the shroud can either be used without the bar to avoid accidental operation or with the bar to padlock in the operated position
- (6) CFP.ZDT is designed for use with both CFP.E4 and CFP.E5 emergency stop buttons
- (7) CFP.ZCT is designed for use with both CFP.E4 and CFP.E5 emergency stop buttons. The shroud is used to padlock the emergency stop in the operated position and when not in use, the flap should be left open
- (8) Accessories that have two options, use a R at the end of the typecode for use with rail mounted contact blocks and those without R are used for cover mounted contact blocks only
- (9) Shrouds and flaps potentially prevent free and unimpaired access to an emergency stop button. These products may therefore only be used in applications where their use has been assessed and not found to cause unacceptable risk to health and safety of persons or damage to the protected machinery.