

Features

- Glass fiber reinforced polyester (GRP) enclosures
- Suitable for operation in Zones 1, 2, 21 and 22
- Certified Ex de and Ex tb
- Up to 4 operators per control unit, base-mounted contact blocks
- Wide choice of operators, including
 - Pushbuttons
 - LED indicators
 - Illuminated pushbuttons
 - Emergency stop buttons
 - Pushbuttons with key release
 - Control 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 units of the LCP series are available as standard off-the-shelf control units or can be flexibly equipped with a great variety of operators, labels, cable glands and accessories.

The comprehensive range of control functions allow the configuration of each control unit to exactly meet any application requirements and ensure optimal space efficiency.

The enclosures are manufactured from glass fiber reinforced polyester.

Durable materials and components of high quality allow the control units 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 socket cap head screws
Protection degree	IP66
Cable entry	cable glands as per specification, see also dimensions data table
Cable entry areas	face A and face B
Terminal capacity	2.5 mm ²

Material

Enclosure	carbon loaded, anti static glass fiber reinforced polyester (GRP)
Finish	moulded, self-colour black
Seal	one piece solid silicone rubber
Weight	see dimensions data table
Grounding	2.5 mm ² earth terminal

Ambient conditions

Ambient temperature	-40 ... 55 °C (-40 ... 131 °F) @ T4 -40 ... 40 °C (-40 ... 104 °F) @ T6 -50 °C on request
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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 T6 Gb, Ex tb IIIC T80°C Db Ex de IIC T4 Gb, Ex tb IIIC T130°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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Standard Control Units

Type	Functions	Contact configuration	D*	Labeling
LCP1.PRMX.B	Pushbutton, red	1x NO / 1x NC		0
LCP1.PGMX.B	Pushbutton, green	1x NO / 1x NC		I
LCP1.ERMX.B	Emergency stop mushroom button, red	1x NO / 1x NC		Not Aus / Emergency Stop
LCP1.ERMA.B	Emergency stop mushroom button, red, with protective shroud, plastic	1x NO / 1x NC		Not Aus / Emergency Stop
LCP1.ERMP.B	Emergency stop mushroom button, red, with protective shroud, plastic, padlockable	1x NO / 1x NC		Not Aus / Emergency Stop
LCP1.JRMX.B	Key-release emergency mushroom button, red	1x NO / 1x NC		
LCP1.DMMX.B	Double pushbutton, red/green	1x NO / 1x NC		0 - I
LCP1.N1OX.B	Small control switch, 2 position with left OFF	2x NO	1	0 - I
LCP1.N2MX.B	Small control switch, 2 position	1x NO / 1x NC	2	I - II
LCP1.N3OX.B	Small control switch, 3 position with center OFF	2x NO	4	I - 0 - II
LCP1.S1OX.B	Large control switch, 2 position with left OFF	2x NO	1	0 - I
LCP1.S2MX.B	Large control switch, 2 position	1x NO / 1x NC	2	I - II
LCP1.S3OX.B	Large control switch, 3 position with center OFF	2x NO	4	I - 0 - II
LCP1.K1OX.B	Key switch, 2 position with left OFF	2x NO	1	0 - I
LCP1.K3OX.B	Key switch, 3 position with center OFF	2x NO	4	I - 0 - II
LCP1.LRLX.B	LED indicator, red			
LCP1.LGLX.B	LED indicator, green			
LCP2.PGMX.PRMX.B	Pushbutton, green Pushbutton, red	1x NO / 1x NC 1x NO / 1x NC		I 0
LCP2.PGMX.ERMX.B	Pushbutton, green Emergency stop mushroom button, red	1x NO / 1x NC 1x NO / 1x NC		I Not Aus / Emergency Stop
LCP2.PGMX.JRMX.B	Pushbutton, green Key-release emergency mushroom button, red	1x NO / 1x NC 1x NO / 1x NC		I none
LCP2.AAAX.B	Ammeter 1A			Scale 0 – 1 – 5 A

* see switching diagrams at operator overview tables overleaf

Table continues overleaf.

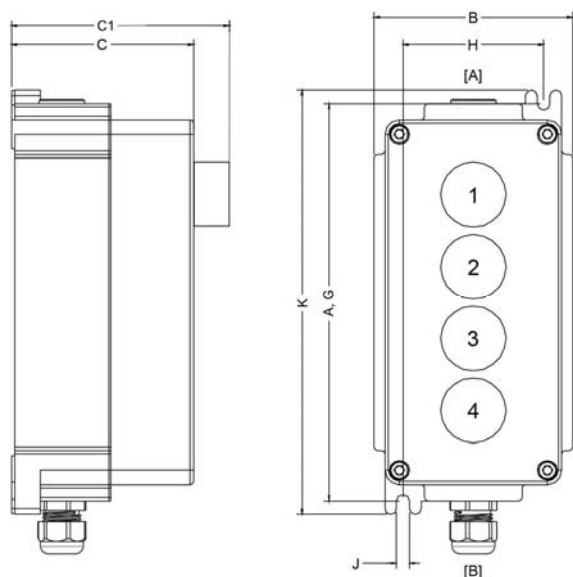
Standard Control Units continued

Type	Functions	Contact configuration	D*	Labeling
LCP3.PGMX.PRMX.ERMX.B	Pushbutton, green Pushbutton, red Emergency stop mushroom button, red	1x NO / 1x NC 1x NO / 1x NC 1x NO / 1x NC	I 0	Not Aus / Emergency Stop
LCP3.LGLX.PGMX.PRMX.B	LED indicator, green Pushbutton, green Pushbutton, red	1x NO / 1x NC 1x NO / 1x NC	I 0	RUNNING
LCP3.LRLX.PGMX.PRMX.B	LED indicator, red Pushbutton, green Pushbutton, red	1x NO / 1x NC 1x NO / 1x NC	I 0	TRIPPED
LCP3.LRLX.LYLX.LGLX.B	LED indicator, red LED indicator, yellow LED indicator, green			
LCP3.LRLX.DMMX.JRMX.B	LED indicator, red Double pushbutton, red/green Key-release emergency mushroom button, red	1x NO / 1x NC 1x NO / 1x NC		TRIPPED 0 - I none
LCP3.AAAX.N5OX.B	Ammeter 1A Small control switch, 3 position with left OFF	2x NO	3	Scale 0 - 1 - 5 A 0 - I - II
LCP3.AAAX.PGMX.PRMX.B	Ammeter 1A Pushbutton, green Pushbutton, red	1x NO / 1x NC 1x NO / 1x NC	I 0	Scale 0 - 1 - 5 A
LCP4.LRLX.PGMX.PRMX.ERMX.B	LED indicator, red Pushbutton, green Pushbutton, red Emergency stop mushroom button, red	1x NO / 1x NC 1x NO / 1x NC 1x NO / 1x NC	I 0	Not Aus / Emergency Stop

* see switching diagrams at operator overview tables overleaf

For further configurations please contact Pepperl+Fuchs.

Dimensions



Legend

- A – Maximum external dimension
- B – Maximum external dimension
- C – Maximum external dimension
- C1 – Maximum external dimension with operator
- 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

For details see Dimensions Data Table

Dimensions

Type	Dimensions [mm]					Fixation [mm]			Weight [kg]
	A	B	C	C1	K	G	H	Diam. J	
LCP1.*	110	110	101	148	125	110	78	7	0.9
LCP2.*	220	110	101	148	235	220	78	7	2
LCP3.*	220	110	101	148	235	220	78	7	2
LCP4.*	220	110	101	148	235	220	78	7	2

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

Dimension C1 is maximum, it will differ according to operator elements.

Standard cable entries:

Face A: 1 x M20 polyamide stopping plug

Face B: 1 x M20 polyamide cable gland

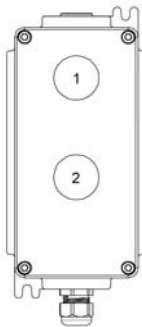
For further entry configurations please contact Pepperl+Fuchs.

Enclosure type LCP1 configuration: max. 1 function – operator types see overleaf

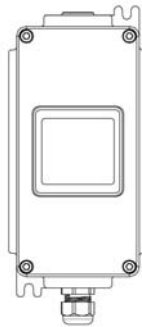


Placement of small operators

Enclosure type LCP2 configuration: max. 2 functions – operator types see overleaf

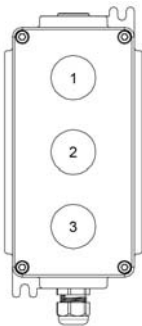


Placement of small operators

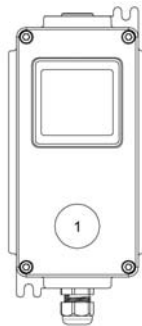


Placement of large* operators

Enclosure type LCP3 configuration: max. 3 functions – operator types see overleaf

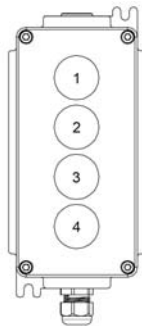


Placement of small operators

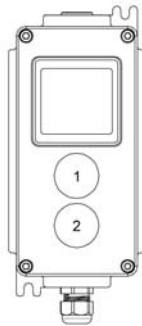


Placement of large* operators

Enclosure type LCP4 configuration: max. 4 functions – operator types see overleaf



Placement of small operators



Placement of large* operators

* Large operators include: Ammeters, large switching actuators, operators with large labels or protective shrouds

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Type code / model number

Series

LC Control Unit

: **Material**

: **P** GRP glass fiber reinforced polyester

: **Enclosure type / quantity of operators**

: **1 ... 4** see dimensions data table

: **Function 1**

: **xxxx** see operator type codes

: **Function 2**

: **xxxx** see operator type codes

: **Function 3**

: **xxxx** see operator type codes

: **Function 4**

: **xxxx** see operator type codes

: **Entry configuration / cable glands**

: **x**

LC	P	n	.xxxx	.xxxx	.xxxx	.xxxx	.x

Optional Enclosure Accessories

Engraved traffolyte tag label

Engraved AISI 316L stainless steel tag label

Color in-fill stainless steel tag label

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
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 blank insert labeled "O"	PL
Black pushbutton with blank insert labeled "I"	PN
Black pushbutton with blank insert labeled "II"	PP
Black pushbutton with blank insert labeled "III"	PQ
Black pushbutton with blank insert labeled "IV"	PT



Blue Pushbutton Actuator



Emergency Stop Actuator

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

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

Contact Blocks	Type Code
Base-mounted contact block with 1x NO / 1x NC contacts	M
Base-mounted contact block with 2x NC contacts	C
Base-mounted contact block with 2x NO contacts	O
Base-mounted double contact block with 2x NO / 2x NC contacts	X
Base-mounted double contact block with 4x NC contacts	Y
Base-mounted double contact block with 4x NO contacts	Z



Base-mounted Contact Block

Technical Data Contact Blocks				
Rating	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	0,5 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
Yellow illuminated pushbutton	IY
White illuminated pushbutton	IW
Blue illuminated pushbutton	IB



Blue Illuminated Pushbutton Actuator

LED Contact Modules	Type Code
Base-mounted 24 - 250 V AC LED module with 1x NO contact	I
Base-mounted 24 - 250 V AC LED module with 1x NC contact	J



Base-mounted LED Module

Technical Data LED Contact Modules		
Rating	AC15	DC13
Rated operating voltage	250 V	24 V
Rated operating current	6 A	1 A
Terminals, max. core cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²
Power consumption	≤1W	≤1W

Ex de Control Switches - 2 Pole Contact Blocks

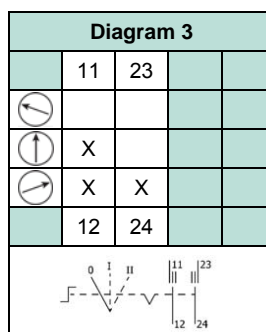
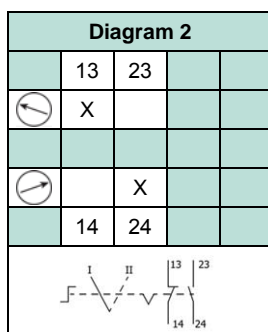
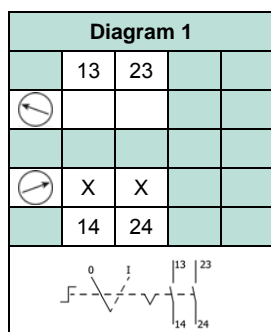
Switching Actuators For Use With 2 Pole Contact Blocks	Switching Diagram	Contact Block *	Action	Marking			Type Code
Small actuator, 2 position with left OFF	1	O	Engage - Engage	0		I	N1
Small actuator, 2 position	2	M	Engage - Engage	I		II	N2
Small actuator, 3 position with center OFF	4	O	Engage - Engage - Engage	I	0	II	N3
Small actuator, 3 position with left OFF	3	O	Engage - Engage - Engage	0	I	II	N5
Large actuator, 2 position with left OFF, padlockable in "0" position	1	O	Engage - Engage	0		I	S1
Large actuator, 2 position	2	M	Engage - Engage	I		II	S2
Large actuator, 3 position with center OFF, padlockable in "0" position	4	O	Engage - Engage - Engage	I	0	II	S3
Large actuator, 3 position with left OFF, padlockable in "0" position	3	O	Engage - Engage - Engage	0	I	II	S5
Key switch actuator, 2 position with left OFF	1	O	Engage - Engage	0		I	K1
Key switch actuator, 3 position with center OFF	4	O	Engage - Engage - Engage	I	0	II	K3

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

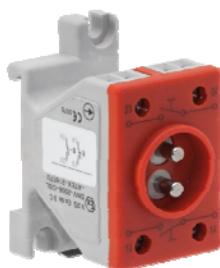
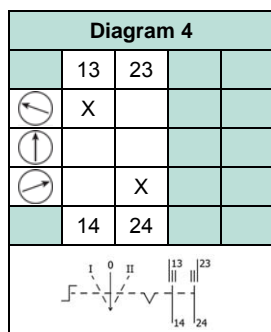
* when used with

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

Switching Diagrams 2 Pole Contact Blocks



Small Actuator



Base-mounted Contact Block



Large Actuator with Shroud

Technical Data Contact Blocks				
Rating	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	0,5 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

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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	Z	Engage - Engage	0		I	S1
Large actuator, 2 position	6	X	Engage - Engage	I		II	S2
Large actuator, 3 position with center OFF, padlockable in "0"	7	Z	Engage - Engage - Engage	I	0	II	S3

Note: all switching actuators are black and shrouded.

* when used with

Contact Blocks 4 Pole	Type Code
Base-mounted contact block with 2x NO / 2x NC contacts	X
Base-mounted contact block with 4x NC contacts	Y
Base-mounted contact block with 4x NO contacts	Z

Switching Diagrams 4 Pole Contact Blocks

Diagram 5					Diagram 6					Diagram 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
	2	4	6	8		2	4	6	8		2	4	6	8



Large Actuator with Shroud

Technical Data Contact Blocks				
Rating	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	0.5 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

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Ex de Control Switches - 4 Pole Rotary Switching Blocks

Large Control Switches	4 Pole Rotary Switching Block			Rotary Switching Actuator				
	Type Code	Switching diagram	Action	Marking				Type Code
				↻	↻	↻	↻	
Switch 2 position with left OFF	E	5	Engage - Engage	0			I	T1
Switch 2 position	F	6	Engage - Engage	I			II	T2
Switch 3 position with center OFF	G	7	Engage - Engage - Engage	I	0		II	T3
Switch 3 position with center OFF, spring return	H	8	Spring - Engage - Spring	I	0		II	T3
Switch 3 position, right with spring return	K	10	Engage - Engage - Spring	0	I		II	T5
Switch 4 position	J	11	Engage - Engage - Engage - Engage	I	II		III IV	T4

Note: all switching actuators are black, shrouded and padlockable in "0" position. Switching blocks are base-mounted.
Always indicate type codes for both rotary operator and switching block.

Switching Diagrams 4 Pole Rotary Switching Blocks

Diagram 5					Diagram 6					Diagram 7					Diagram 8				
	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
	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	↻				X
	2	4	6	8		2	4	6	8



Control Switch 4 Pole

Technical Data Switching Blocks				
Rating	AC12	AC15	DC13	DC13
Rated operating voltage	250 V	250 V	110 V	24 V
Rated operating current	16 A	10 A	0.5 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

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Ex de LED Indicators and Potentiometers

Ex de LED Indicators

Lens for LED	Type Code
Red indicator lens cover	LR
Green indicator lens cover	LG
Yellow indicator lens cover	LY
White indicator lens cover	LW
Blue indicator lens cover	LB



Red LED Indicator

LED Module	Type Code
Base-mounted 24 - 250 V AC LED Module	L



Base-mounted LED Module

Technical Data LED Modules

Rated operating voltage	20 ... 250 V AC	20 ... 250 V DC
Terminals, max. core cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²
Power consumption	≤1W	≤1W

Ex de Potentiometer

Potentiometer Actuator	Type Code
Black potentiometer actuator labeled "0 - 10"	R1

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



Potentiometer Actuator

Technical Data Potentiometer

Rated operating voltage	12 ... 250 V AC	12 ... 250 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

Ex e Ammeters and Operator Accessories

Ex e Ammeters

Ammeter Window	Type Code
Ammeter window including mounting kit	A

Ammeter Units	Type Code
Ammeter 1 A, scales see below	A
Ammeter 5 A, scales see below	B

Ammeter Scales	Type Code
Ammeter scale 0 ... 1 / 5 A	A
Ammeter scale 0 ... 5 / 25 A	C
Ammeter scale 0 ... 15 / 75 A	E
Ammeter scale 0 ... 25 / 125 A	F
Ammeter scale 0 ... 50 / 250 A	J
Ammeter scale 0 ... 75 / 375 A	L
Ammeter scale 0 ... 100 / 500 A	M
Ammeter scale 0 ... 150 / 750 A	N
Ammeter scale 0 ... 200 / 1000 A	P
Ammeter scale 0 ... 250 / 1250 A	Q
Ammeter scale 0 ... 500 / 2500 A	T



Ammeter

Technical Data Ammeter	
Rated operating voltage	690 V AC
Rated operating current	1 A / 5 A
Terminals, max. core cross-section	2 x 2.5 mm ²
Accuracy class	1.5

Operator Accessories

Accessory	Type Code
Blanking plug	BK
Small label holder	S
Large label holder	L
EMERGENCY STOP label	E
Protective shroud, plastic	A
Protective shroud, plastic, padlockable	P
Protective shroud, stainless steel	C
Protective shroud, stainless steel, padlockable	D



Small label holder