Brief Instructions

ENG

Panel Mount Control Units PM*.*.*

Pepperl+Fuchs GmbH
Lilienthalstrasse 200
68307 Mannheim, Germany
Tel. +49 621 776-0
Fax +49 621 776-1000

Document No.: DOCT-5421b
Edition: 03/2017

www.pepperl-fuchs.com

PEPPERL+FUCHS

Validity

Specific processes and instructions in this instruction manual require special provisions to guarantee the safety of the operating personnel.

Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the device. The trained and qualified personnel must have read and understood the instruction manual.

Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use and the operating location. Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, manuals, declarations of conformity, EC-type-examination certificates, certificates, and control drawings if applicable (see datasheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

Intended Use

Panel Mount Control Units are completely assembled devices including a protective cover for the termination. They are fully certified and therefore can be installed directly inside a hazardous area.

Variants of Panel Mount Control Units without the protective cover are component certified and therefore require installation in an individually fully certified enclosure solution.

Mounting and Installation

Observe the installation instructions according to IEC/EN 60079-14.

If you intend to install the device or enclosure in areas that may be exposed to aggressive substances, ensure that the stated surface materials are compatible with these substances. If required, contact Pepperl+Fuchs for further information.

Dismount the protective cover (2) by opening the Philips head screw.

Detach the actuator head (8) from the fully assembled control unit by turning the bayonet catch (4) 45° clockwise.

Remove the locknut (5). Make sure the flat washer (7) remains on the actuator head (8).

Push the actuator head (8) from the front side of the switch panel or enclosure (6) into the thru-hole (diameter 30.6 mm). Take care the key of the actuator head fits into the groove of the thru-hole. The maximum wall thickness of switch panel or enclosure is 6 mm.

Fix the actuator head (8) by means of locknut (5).

Reconnect the contact module (3) to the actuator head (8) by pushing it onto the actuator head. Turn the bayonet catch (4) 45° counter-clockwise.

Prepare the installation cable for termination.

Open the cap nut of the cable gland (1) and push the prepared cable through the cable gland into the protective cover (2).

Connect the conductors to the terminals of the contact module (3). Take care the conductor insulation reaches close to the terminal.

Reconnect the protective cover (2) with the fixing screw.

Tighten the cap nut of the cable gland (1) with the appropriate torque.

For disassembly proceed in the reverse order.

Operation, Maintenance, Repair

Observe IEC/EN 60079-17 for maintenance and inspection.

The device must be disconnected from the power supply prior to installation and maintenance. The power supply may be activated only after all the circuits required for operation have been fully assembled and connected.

If there is a defect, always replace the device with an original device.

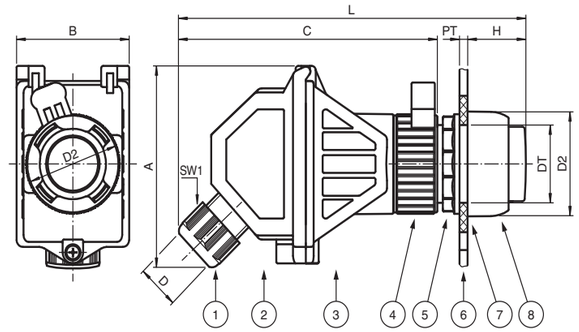
Safety-relevant markings are found on the nameplate supplied. Ensure that the nameplate is present and legible. Take the ambient conditions into account.

Do not modify or manipulate the device.

Delivery, Transport, Disposal

Disposing of device, packaging, and possibly contained batteries must be in compliance with the applicable laws and guidelines of the respective country

Dimensions



Legend	
1	Cable gland
2	Protective cover
3	Contact module
4	Bayonet catch
5	Locknut
6	Panel / enclosure wall
7	Flat gasket
8	Actuator head
A	Height
B	Width
C	Depth
D	Clamping range, cable sheath diameter
DT	Diameter thru-hole
D2	Outer diameter actuator head
H	Length outside enclosure
L	Total length
PT	Panel / enclosure wall thickness

Measures see individual datasheets

Technical Specifications

General	
Types and variants	PM *.*.*, see type code table
Data for application in hazardous areas	
EC-Type Examination Certificate	CML 16ATEX3106X
Group, category, type of protection, temperature class	Ex II 2 GD Ex de IIC T6 Gb Ex tb IIIC T80 °C Db
Hazardous Area: Zones of Installation	1, 21 (Gas), 2, 22 (Dust)
CE Number	0102 (only for ATEX, see also type label)
International approvals	
IECEx approval	IECEx CML 16.0046X
Ambient conditions	
Ambient temperature	-40 ... 50 °C (-40 ... 122 °F)
Degree of Protection according to IEC/EN 60529	IP66
Electrical specifications	
Operating voltage	250 V max., see individual datasheets
Operating current	16 A max., see individual datasheets
Terminal capacity	2x 2.5 mm^2
Terminal torque	1.1 Nm / 0.8 Nm, see individual datasheets
PMP*/PMS* usage category	AC12 - 12 ... 250 V AC - 16 A AC15 - 12 ... 250 V AC - 10 A DC13 - 12 ... 24 V DC - 1 A DC13 - 12 ... 110 V DC - 1 A
PMI* usage category	AC15 - 12 ... 250 V AC - 10 A DC13 - 12 ... 24 V DC - 1 A
PML* operating voltage	12 ... 250 V AC/DC 200 ... 400 V AC/DC
PML* power consumption	Pmax <= 1 W
PML* LED lifetime	100,000 hours
PMR* operating voltage	12 ... 250 V AC/DC
PMR* power consumption	Pmax <= 0.1 W
Mechanical specifications	
General	
Dimensions	depending on variant, see individual datasheets
Mass	150 g max.
PM* mechanical lifetime	1,000,000 times
PMI* mechanical lifetime	300,000 times
Cable connection	
Cable type	non-armored cables
Clamping range	5.5 ... 13 mm (D)
Cable entry	1x M20 cable gland in protective cover
Tightening torque	2 Nm
Material	
Housing	Polyamide (PA)
Finish	inherent color black
Seal	silicone
Washer gasket	silicone
Standards	
Conformity	IEC/EN 60079-0: 2012 IEC/EN 60079-1: 2007 IEC/EN 60079-7: 2007 IEC/EN 60079-31: 2009

Type Code

Type			
PM*	Panel Mount Control Units, for details please see indivual datasheets		
	Actuator heads		
	P.P*		Pushbuttons with inserts, various colors and labelings
	P.D*		Double pushbuttons with inserts, various colors and labelings
	P.H*		Key pushbuttons
	P.M*		Mushroom buttons, various colors
	P.J*		Mushroom buttons, key release
	P.E*		Mushroom buttons, red, pull or twist to release, various sizes and labelings
	I.I*		Illuminated pushbuttons, various colors
	S.N*		Small switch actuators, various positions and labelings
	S.S*		Large switch actuators, various positions and labelings
	S.K*		Key-operated switch actuators, various positions and labelings
	L.L*		Indicator lens covers, various colors
	R.R*		Potentiometer actuators, various variants
		Contact blocks and modules	
		C*	Contact blocks for pusbuttons and control switches, various contact configurations
		I*	LED contact modules for illuminated pushbuttons, various variants and contact configurations
		L*	LED modules for indicators, various variants
		P*	Potentiometer blocks, various ranges

Panel wall thru-holes dimensions