

## UK Type Examination Certificate CML 21UKEX41104X Issue 0

### United Kingdom Conformity Assessment

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **FXL/XL/SL Range of Terminal Enclosures**
- 3 Manufacturer **Pepperl+Fuchs SE**
- 4 Address **Lilienthalstrasse  
200  
68307 Mannheim  
Germany**

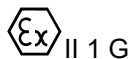
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

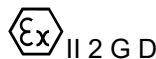
EN IEC 60079-0:2018	EN 60079-1:2014	EN 60079-7:2015+A1:2017
EN 60079-11:2012	EN 60079-31:2014	

- 10 The equipment shall be marked with the following:



Ex ia IIC T\* Ga

Ta= -40°C to +120°C

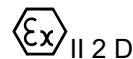


Ex eb IIC T\* Gb

Ex db eb T\* Gb

Ex tb IIIC T\*\*°C Db

Ta= -40°C to +120°C



Ex tb IIIC T80°C/T95°C Db

Ta= -5°C to +40°C/+50°C

\* T6, T5, T4 or T3

\*\* T80°C, T95°C, T130°C or T160°C

T-class and assigned maximum surface temperature are dependent on the enclosure, the equipment fitted and the power dissipation, as well as the upper ambient temperature assigned. Above stated ambient ranges are maximum values and individual models may be marked with a reduced range, depending on parts fitted and T-class.



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## **11 Description**

The FXL/XL/SL/FS/S are a range of increased safety terminal enclosures. They comprise a certified metallic enclosure component fitted with separately certified terminals, plug and socket connectors (DXN1, DXN3 or DXN6), earthing busbar assembly (SH2S) and isolation terminal (type MFT). A selection of Kraus & Naimer switches may be fitted in dust application only.

The FXL range and XL range are similar in design and utilise a hinged cover. The FXL and XL are available in stainless steel (FXLS and XLS) and mild steel (FXLM and XLM). The ranges are available in a selection of sizes as detailed in the table below. The enclosures may be drilled for entries by the manufacturer or in accordance to the manufacturer's instructions. The FS and S range are alternative sizes of FXL/XL type enclosures for special applications.

The SL range utilises a bolt on cover and is available in stainless steel (SLS) or mild steel (SLM).

All enclosures may be supplied with a flange adaptor as part of the enclosure component certification. When fitted with these adaptors all ranges may be close coupled to a separately certified increased safety or flameproof enclosure.

All enclosure types and sizes from the range may be fitted with DIN rail mounted separately certified terminals and/or earthing busbar assembly (SH2S).

Isolation terminal (type MFT) may be fitted in any size enclosure. They may be fitted alongside other components.

Enclosures sizes 306 mm x 306 mm x 150 mm and above from any enclosure type may be fitted with separately certified plug and socket connectors (DXN1, DXN3 or DXN6). These connectors may be installed to three of the four sides of the enclosure, with a maximum of two connectors per side.

A selection of Kraus & Naimer switches may be fitted to all enclosure types and sizes. When switches are fitted certification is limited to dust applications only. The switches may be mounted on DIN rails, backing plate or cover mounted (through enclosure cover). Switches may be mounted alongside other components but will limit all equipment to dust application only.

Only items from the Pepperl+Fuchs approved range may be fitted. Before they are installed the maximum power dissipation must be calculated in accordance with EN 60079-7, Annex E.2 and shall not exceed the values given in the table below:



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Enclosure			Maximum Power Dissipation (W) T6/T80°C (-40°C to +40°C) T5/T95°C (-40°C to +55°C) T4/T130°C (-40°C to +85°C) T3/T160°C (-40°C to +120°C)
Range	Type	Size (LxWxH)	
FXL Range & XL Range	FXL*1 & XL*1	229x152x145/130	15
	FXL*2 & XL*2	260x260x165/150	15
	FXL*2D & XL*2D	260x260x215/200	15
	FXL*3 & XL*3	306x306x165/150	21
	FXL*3D & XL*3D	306x306x215/200	21
	FXL*4 & XL*4	380x260x165/150	15
	FXL*4D & XL*4D	380x260x215/200	15
	FXL*5 & XL*5	458x382x165/150	29
	FXL*5D & XL*5D	458x382x215/200	29
	FXL*6 & XL*6	480x480x165/150	30
	FXL*6D & XL*6D	480x480x215/200	30
	FXL*7 & XL*7	500x350x165/150	21
	FXL*7D & XL*7D	500x350x215/200	21
	FXL*8 & XL*8	620x450x165/150	30
	FXL*8D & XL*8D	620x450x215/200	30
	FXL*9 & XL*9	762x508x165/150	41.7
	FXL*9D & XL*9D	762x508x215/200	41.7
	FXL*10 & XL*10	914x610x215/200	93.4
	FXL*10D & XL*10D	914x610x315/300	93.4
	FXL*11 & XL*11	1177x777x225/210	100
	FXL*11D & XL*11D	1177x777x315/300	100
	FS01B	230x200x145	15
	FS02B	250x270x165	15
	FS03B	250x310x165	15
	FS04B	300x340x165	15
	FS05B	350x430x215	21
	FS05C	550x430x215	29
	FS06B	400x515x315	29
	FS06C	730x515x315	30
	FS07A	260x555x225	15
	FS07B	400x555x225	29
	FS08B	450x660x315	30
	FS08C	750x660x315	41.7
FS09B	600x910x315	41.7	



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	S11	230x300x130	15
	S12	230x300x130	15
	S13	306x306x165	21
	S14	458x350x165	15
	S20	380x380x215	15
	S30	400x480x 215	29
	S35	350x700x225	21
	S40	400x600x225	29
	S60	600x600x225	29
	S80	800x800x315	41.8
	S100	1000x800x315	93.4
SL Range	SL*1	110x110x65	9
	SL*2	120x120x80	9
	SL*3	150x120x80	9
	SL*4	150x150x90	11
	SL*5	190x150x90	11
	SL*6	190x190x100	13

Enclosures may also be manufactured to sizes not specified in this table provided that any given dimension is not larger than the respective dimension of the largest enclosure or smaller than the respective dimension of the smallest enclosure. The power rating applied to an enclosure of intermediate size is that of the next smallest enclosure.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	20 Sept 2021	R14112BQ/00	Prime Certificate issued.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

## 13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The equipment covered by this certificate incorporates the use of previously certified components, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these components. The manufacturer shall notify CML of any modifications to the components that may impinge upon the explosion safety aspects of the FXL/XL/SL/FS/S Range of terminal enclosures.
- ii. If the enclosures are supplied with wiring, a dielectric strength test shall be carried out at 2U + 1000 V at a minimum of 1500 V for 60s in line with clause 7.1 of EN 60079-7:2015.
- iii. The power rating marking on the label shall be allocated in accordance with the table detailed in the description. The manufacturer shall take all reasonable steps to ensure that the power dissipated by the terminal/control box does not exceed the maximum value stipulated the



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table detailed in the description, and shall supply all the relevant information that will allow the installer/user to calculate the power dissipation (Watts) in accordance with EN 60079-7, Annex E, E.2 for each terminal box.

- iv. All cable glands and plugs/stoppers for unused entries shall be suitable for use with the equipment and shall be:
  - certified as group II category 2 G D
  - have a minimum ingress protection of IP 66
- v. When terminals are supplied with the enclosure they shall be appropriately ATEX approved components, chosen from the Pepperl+Fuchs approved range as stated in document 16-1242CM-04. They shall be installed in accordance with the certification documentation and the manufacturer's instructions. All Special Conditions of Certification/ Special Conditions for Safe Use/ Schedule of Limitations must be satisfied. They shall also have a minimum insulation temperature of:
  - $T_a+40^{\circ}\text{C} / T_6 = 80^{\circ}\text{C}$
  - $T_a+55^{\circ}\text{C} / T_5 = 95^{\circ}\text{C}$
  - $T_a+85^{\circ}\text{C} / T_4 = 125^{\circ}\text{C}$
  - $T_a+120^{\circ}\text{C} / T_3 = 160^{\circ}\text{C}$
- vi. The lower ambient of the equipment shall be limited by the components fitted.
- vii. For the enclosures specified, the silicone gasket option shall be used.
- viii. When enclosures are fitted with Kraus & Naimer switches (refer to 16-1242CM-04 sheet5) the equipment shall be limited to dust applications only with an ambient temperature range of  $-5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  (UK<sup>\*\*\*</sup>) and  $-5^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  (KG<sup>\*\*\*</sup> and C316).
- ix. When enclosures (306mm x 306mm x 150mm and above only) are fitted with Marechal plug/sockets (refer to 16-1242CML-04 sheet 4) application shall be limited to T6 & T5.
- x. Enclosure types FXL/XL\*11, FXL/XL\*11D or FXL/XL\*11S shall be limited to IP54 and not permitted for use in dust applications. The marking shall reflect this.
- xi. When enclosures are fitted flange adaptors as permitted by component certificates (CML 17ATEX3023U / IECEx CML 17.0013U) they shall be supplied with installation instructions DOCT-5152.
- xii. The warning label on drawing 16-1242CM-04 sheet 3 shall be installed when:
  - Enclosure is painted or has labels fitted that do meet the requirements of IEC 60079-0 CL 7.4.1.
  - Labels are fitted that do meet the requirements of IEC 60079-0 CL 7.4.1

#### **14 Specific Conditions of Use**

The following conditions relate to safe installation and/or use of the equipment.

- i. Enclosures that are fitted with the Marechal Type DXN1 socket (as stated in document 16-1242CM-04) shall be protected from impact greater than 4 Joules.
- ii. Equipment fitted with warning 'POTENTIAL ELECTROSTATIC CHARGING HAZARD' shall only be cleaned with a damp cloth to prevent the risk of electrostatic discharge.



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- iii. When equipment is fitted with a flange adaptor it shall be installed in line with manufacturer's instructions DOCT-5152.
- iv. KG / C type switches shall only be installed where protection from direct exposure to UV light is provided.

## Certificate Annex

**Certificate Number** CML 21UKEX41104X  
**Equipment** FXL/XL/SL Range of Terminal Enclosures  
**Manufacturer** Pepperl+Fuchs SE



The following documents describe the equipment defined in this certificate:

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For drawings describing the equipment, refer to attached certificate CML 16ATEX3008X Issue 3

. In addition to the drawings listed on CML 16ATEX3008X Issue 3, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
16-1555CM-10	1 to 2	0	20 Sept 2021	Additional Marking Requirements for UKCA