

UK Type Examination Certificate CML 21UKEX3896X Issue 1

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 **GR Terminal Box**
- 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 42 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 IEC 60079-7:2015+A1:2017 EN 60079-11:2012
EN 60079-28:2015 IEC 60079-31:2022

- 10 The equipment shall be marked with the following:



II 2 G D

Ex eb IIC T* Gb	Ex eb op pr IIC T* Gb
Ex ia IIC T* Gb	Ex ia op pr IIC T* Gb
Ex op pr IIC T6 Gb	Ex eb ia op pr IIC T* Gb
Ex eb ia IIC T* Gb	Ex tb IIIC T**°C Db

Ta=-#°C to +40/55/65°C

Lower ambient is dependent upon components fitted but shall be no less than -60°C

* Refer to description for T classes





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11 Description

The GR Terminal Box is a range of increased safety, black, anti-static, glass-fibre reinforced polyester enclosures with a base and screw-down cover (with optional hinges in addition to the fixing screws). The range utilises the Ex Component certified Pepperl+Fuchs GR enclosures covered under certificate numbers IECEx CML 17.0039U and CML 17ATEX3084U.

The terminal boxes are populated with DIN rail mounted, increased safety Ex Component certified terminals.

For cable entry, the terminal boxes may be provided with clearance holes, as required, machined into the top, bottom, left and right faces.

An internal/external earth stud may be provided.

The enclosures may be flanged to each other to create one larger enclosure with an allowed dissipation corresponding to the new larger dimensions and they may be flanged to separately certified Ex d enclosures. A method for calculating the required reduction in allowed dissipated power to account for any heating from the neighbouring Ex d enclosures is described in this certificate.

The enclosures are available in a range of standard sizes as shown in the table below, other sizes allowed by the enclosure component approvals are also allowed and their maximum power dissipation may be calculated according to the rules in the schedule drawings.

Enclosure type	MDP	Height	Width	Depth
GR.*.10.10.07*	3.2 W	100 mm	100 mm	65 mm
GR.*.13.13.09*	6.7 W	130 mm	130 mm	85 mm
GR.*.13.18.09*	11 W	130 mm	180 mm	91.5 mm
GR.*.18.18.10*	14 W	180 mm	180 mm	104 mm
GR.*.18.24.10*	17 W	180 mm	240 mm	104 mm
GR.*.18.36.10*	22 W	180 mm	360 mm	104 mm
GR.*.18.36.17*	27 W	180 mm	360 mm	166.5 mm
GR.*.36.36.10*	33 W	360 mm	360 mm	104 mm
GR.*.36.36.17*	39 W	360 mm	360 mm	166.5 mm
GR.*.36.36.24*	44 W	360 mm	360 mm	241.5 mm
GR.*.48.60.24*	72 W	480 mm	600 mm	241.5 mm
GR.*.36.72.17*	104 W	360 mm	720 mm	166.5 mm
GR.*.36.72.24*	104 W	360 mm	720 mm	241.5 mm

The maximum dissipated power (MDP) in the table above was derived with the terminals used at 60% of their rated current value.



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The MDP is valid for the following ambient temperatures and temperature classes:

Ta 40°C T6 T80°C
Ta 55°C T5 T95°C
Ta 65°C T4 T130°C

Variation 1

This variation introduced the following changes:

- i. To assess the thermal effects of various mounting configurations
- ii. To update to the latest version of standard: IEC 60079-31:2022 Ed 3.0

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	05 Oct 2021	R14112AO/00	Prime Certificate issued.
1	03 Nov 2023	R16151A/00	Introduction of Variation 1

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

13 Conditions of Manufacture

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

- i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.
- ii. When terminals are supplied with the enclosure they shall be ATEX/IECEx approved components as specified in the scheduled drawings and having a maximum insulation temperature as below. All terminals shall be installed in accordance with their Conditions of Safe Use/Schedule of Limitations/Conditions of Certification and the relevant codes of practice/wiring regulations, specifically to the minimum creepage and clearance requirements and to any limitations to ratings that may be observed due to method of installation.

Terminals shall have a minimum insulation temperature as per the table below

Ta = +40°C	Ta = +55°C	Ta = + 65°C
≥80°C	≥95°C	≥105°C

All terminals fitted shall be suitable for the lower operating temperature marked on the certification label.

- iii. The lower ambient temperature shall be de-rated according to the minimum temperature limitations of the components fitted to the enclosure.
- iv. Where multiple enclosures are mounted together, instructions described in the manufacturer's drawings shall be followed.



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14 Specific Conditions of Use

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

- i. When fitted with the fibre optic splice tray, the fibre cables shall be sufficiently supported so as to prevent strain and their minimum bend radius shall be observed and all fibre connectors shall have dust covers fitted if not used.

Certificate Annex

Certificate Number CML 21UKEX3896X
Equipment GR Terminal Box
Manufacturer Pepperl+Fuchs SE



The following documents describe the equipment defined in this certificate:

Issue 0

For drawings describing the equipment, refer to attached certificate CML 17ATEX3255X. In addition to the drawings listed on CML 17ATEX3255X, 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	05 Oct 2021	Additional Marking Requirements for UKCA

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Drawing No	Sheets	Rev	Approved date	Title
16-1649CM-00	1 of 3	00	31 Oct 2023	Ex d/e flanged panel thermal calculation
16-1649CM-00	2 of 3	00	31 Oct 2023	Ex e flanged panel area calculation
16-1649CM-00	3 of 3	00	31 Oct 2023	Ex d/e flanged panel thermal calculation.