

UK Type Examination Certificate CML 21UKEX2936 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 **Isolated amplifier type KFD2-SRA-Ex2/Ex4**
- 3 Manufacturer **Pepperl+Fuchs SE**
- 4 Address **Lilienthalstrasse 200
68307 Mannheim
Germany**

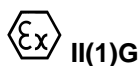
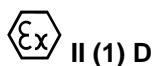
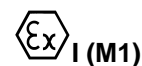
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective 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 60079-0:2018**EN 60079-11:2012****EN 50303:2000**

- 10 The equipment shall be marked with the following:

**[Ex ia Ga] IIC****[Ex ia Da] IIIC****[Ex ia Ma] I**



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11 Description

The isolation amplifier type KFD2-SRA-EX2/Ex4 is used for the transmission of electrical signals from the explosion hazardous area to the non-explosion hazardous area.

The maximum permissible ambient temperature is 60 °C.

Electrical Data

Supply circuit (terminals 14 and 15 resp. PR1 and PR2)	Direct voltage 20 V -- 30 V, about 1.26 W Um=40 V
Signal circuit error-output (PR4 and PR2)	Only for connection to a signal circuit with a safety-related maximum voltage Um = 40 V
Relay-output circuit (terminals 7 and 8, 9 and 8, 10 and 11 , 12 and 11)	Each 230 VAC + 10%,3 A, Smax = 100 VA, cos φ >0,7, resp. each 40 VDC, 2 A

Input circuits

Circuit no.	Connecting contact		Type of protection intrinsic safety Ex ia I Maximum value per circuit Uo = 10 V Io = 14 mA Po = 35 mW (linear characteristic)
	forward conductor(+)	return conductor(-)	
1	2	1	
2	2	3	
3	5	4	
4	5	6	
Or			
1	1	3	
2	4	6	



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The effective internal inductivity and capacity are negligibly small.

The maximum permissible values for the external capacity and inductivity are shown in the following table.

Ex	ia I
Co	83 μ F
Lo	1 H

The values of Co and Lo listed in the table above can be applied, if one of the following conditions is valid:

- Total Lo of the external circuit (without cable) is < 1% of value Lo or
- Total Co, of the external circuit (without cable) is < 1% of value Co.

The values of Co and Lo listed in the table above have to be reduced to 50 %, if both of the following conditions are valid:

- Total L, of the external circuit (without cable) is > 1% of value Lo and
- Total C, of the external circuit (without cable) is > 1% of value Co of the external circuit (without cable) is > 1% of value Co.

The input circuits are safely galvanically insulated from the contact circuit and the supply circuit up to a peak value of the nominal voltage of 375 V.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	19 Aug 2021	R14112AU/00	Prime Certificate issued.

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

13 Conditions of Manufacture

None.

14 Specific Conditions of Use

None

Certificate Annex

Certificate Number CML 21UKEX2936
Equipment Isolated amplifier type KFD2-SRA-Ex2/Ex4
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 ZELM 99ATEX0009 Issue 4 . In addition to the drawings listed on ZELM 99ATEX0009 Issue 4, 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	19 Aug 2021	Additional Marking Requirements for UKCA