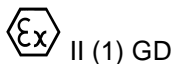


UK Type Examination Certificate CML 21UKEX2937 Issue 0**United Kingdom Conformity Assessment**

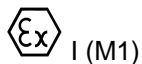
- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **Galvanically Isolated Barrier Type KFD2-UT2-Ex Universal Temperature Module**
- 3 Manufacturer **Pepperl+Fuchs SE**
- 4 Address **Lilienthalstrasse 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



CML 21UKEX2894X
Issue 0

11 Description

The galvanically isolated barriers type KFD2-UT2-Ex is an associated apparatus suitable to interface intrinsic safety apparatus measuring temperature as mV/TC or RTD (2, 3 or 4 wires) or potentiometers, placed in hazardous area, providing isolated analogue, voltage or current, signal at the output. The module is housed in a plastic case suitable for DIN rail mounting, complete with terminal blocks to allow the connection of external circuits.

The constructive modifications introduced by this extension are the utilization, as an alternative to optocouplers OPI-100LE and TOC2, a new optocoupler called TOC4.

Different versions of the barriers KFD2-UT2-Ex are identified as follows:

KFD2-UT2-Ex-*-**

* = No. of channels - 1: one

2: two

** = Output type - 1:Current

2:Voltage

Not intrinsically safe circuits

Um = 250Vac / 375Vdc

Power dissipation = 0.6W

Absorbed current = 30mA

Rated voltage Un = 20 - 30 Vdc

Tamb. = from -20 up to +60°C

Intrinsically safe circuits

<u>Models</u>	<u>Terminals</u>	<u>Uo</u>	<u>Io</u>	<u>Po</u>	<u>Gas Groups</u>	<u>Co (µF)</u>	<u>Lo (mH)</u>	<u>Lo/Ro (µH/Ω)</u>
KFD2-UT2.Ex1-	1-2-3-4	9V	22mA	50mW	I	226	964	9125
					IIA	500	550	5561
					IIB	40	275	2780
					IIC	4.9	68	695
KFD2-UT2.Ex2,.	1-2-3-4-5-6	9V	22mA	50mW	I	226	964	9125
					IIA	500	550	5561
					IIB	40	275	2780
					IIC	4.9	68	695



**CML 21UKEX2894X
Issue 0**

The capacitance C_o and either the inductance L_o or the inductance to resistance ratio (L_o/R_o) of circuits connected to the output terminals of the apparatus must not exceed the above values

Note: circuits with both inductance and capacitance

The above maximum C_o and L_o parameters apply where:

- the total inductance or capacitance of external circuit (combined with C and L respectively) is less than 1% of the above values (cable excluded);

or the inductance and capacitance are distributed as in the cable.

In all other situations e.g. the external circuit contain combined inductance and capacitance, where both are greater than 1 % of the allowed value (excluding the cable), allow up to 50% of each of the L and C values as applicable.

The reduced capacitance of the external circuit (including cable) shall not be greater than $1\mu F$ for I, IIA, 11B and $600nF$ for IIC.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	20 Aug 2021	R14112AV/00	Prime Certificate issued.

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

13 Conditions of Manufacture

- The Manufacturer shall carry out the routine tests prescribed at clause 27 of EN 60079-0, clause 11 of EN 60079-11 and clause 24 of EN 61241-0 standards.

14 Specific Conditions of Use

None

Certificate Annex

Certificate Number CML 21UKEX2894X
Equipment Galvanically Isolated Barrier Type KFD2-UT2-Ex
Universal Temperature Module
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 CESI 04ATEX143 Issue 4. In addition to the drawings listed on CESI 04ATEX143 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	20 Aug 2021	Additional Marking Requirements for UKCA