

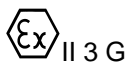


Type Examination Certificate CML 19ATEX4410X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Isolated Switch Amplifier Type KCD2-ST/SOT/SON-Ex**
- 3 Manufacturer **Pepperl+Fuchs AG**
- 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 CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, 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 Annex II of Directive 2014/34/EU.

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 conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Annex VIII apply to the manufacture of the equipment or component and are separately certified.
- 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+A1:2018
- 10 The equipment shall be marked with the following:



Ex ec IIC T4 Gc

Ta=-20 °C to +70 °C

Note: An upper ambient temperature within the range +40 °C to +70 °C may be marked



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11 Description

The Isolated Switch Amplifier Type KCD2-ST/SOT/SON-Ex are Associated Apparatus that transfer signals between a hazardous area and safe area.

The input circuit is galvanically isolated from the output circuit by transformers. The voltage and current limitation for the circuit is achieved with Zener diodes and current limiting resistors. The circuits are located on a single printed circuit board (PCB).

The polymeric enclosure is suitable for mounting on a DIN rail. It provides an environmental rating of IP 20 and is required to be installed in an enclosure or area with a control of pollution access. When installed in a Zone 2 area the Isolated Switch Amplifier Type KCD2-ST/SOT/SON-Ex must also be installed in a suitably certified enclosure providing an ingress protection of IP54 minimum. Field wiring connections to the device are by colour coded pluggable connectors.

Intrinsically safe connections are provided for current or voltage signals and these are covered by a separate certificate.

Type	Rated voltage Ur	Power dissipation
KCD2-ST-Ex1*	19 ... 30 VDC	≤ 700 mW
KCD2-ST-Ex2*		≤ 800 mW
KCD2-SOT-Ex1*		≤ 700 mW
KCD2-SOT-Ex2*		≤ 800 mW
KCD2-SON-Ex1*		≤ 500 mW
KCD2-SON-Ex2*		≤ 750 mW

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	04 Nov 2019	R12689A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component 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 shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The Isolated Switch Amplifier Type KCD2-ST/SOT/SON-Ex is to be designed in accordance with general electrical safety standards e.g. IEC 60950 or IEC 61010-1



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14 Specific Conditions of Use (Special Conditions)

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

- i. The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance requirements of IEC 60079-0 unless the equipment is intended to be afforded an equivalent degree of protection by location. In addition, the pollution level shall be limited to pollution degree 2 or better as defined in IEC 60664-1 (Pollution degree 2 can be achieved when the installation is in a controlled environment with suitably controlled condensation or airborne pollution).
- ii. For some types of enclosure, additional certification will be required to permit the installation of the module within the enclosure. Reference should be made to the enclosure certificate.
- iii. When the device is mounted in an explosive atmosphere, connection and disconnection whilst live is only permitted if the explosive atmosphere is shown to be absent.
- iv. When the device is mounted in an explosive atmosphere, actuation of switches whilst live is only permitted if the explosive atmosphere is shown to be absent.
- v. When installed in an explosive atmosphere, the equipment must be installed in a suitable enclosure that requires the service temperature inside the enclosure to be evaluated at the location of the equipment. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.

Certificate Annex

Certificate Number CML 19ATEX4410X
Equipment Isolated Switch Amplifier Type KCD2-ST/SOT/SON-Ex
Manufacturer Pepperl+Fuchs AG



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
16-0957BS-01	1 to 4	-	04 Nov 2019	Schematics
16-1006CM-02	1 to 23	-	04 Nov 2019	List of Components
16-0957BS-03	1 to 4	A	04 Nov 2019	Component Set-Ups
16-0957BS-04	1 to 2	-	04 Nov 2019	Mechanical Parts
16-0957BS-05	1 to 8	A	04 Nov 2019	Layouts, Multilayer
16-1006CM-09	1 to 2	-	04 Nov 2019	Instructions
16-1006CM-10	1 to 2	-	04 Nov 2019	Type Label