ANZEx

Australian/New Zealand Certification Scheme
for Explosion Protected Equipment

Certificate of Conformity

Ex EQUIPMENT

Certificate No.:	**ANZEx 22.3001**	*Current Issue:* 1	*Date of Issue:* 2025-04-04

Applicant: **Pepperl+Fuchs SE**
Lilienthalstrasse 200
68307 Mannheim
Germany

Equipment: **Isolated Switch Amplifier type: KFD2-ST3/SOT3-Ex***

Type of Explosion Protection: Intrinsic safety “[ia]”

Explosion Protection Marking: [Ex ia Ma] I
-20°C ≤ Ta ≤ +60°C

This certificate is granted subject to the requirements as set out in
Joint Accreditation System of Australia and New Zealand Publications
ANZEx System Rules 2020 & ANZEx Certified Equipment Scheme Rules 2021

Signed for and on behalf of issuing body

Name & Position Ujen Singh – Quality & Certification Manager

This certificate is not transferable and remains the property of the issuing body.
The status of this certificate can be confirmed through the database located at www.anzex.com.au

Certificate issued by:

TestSafe Australia
919 Londonderry Road, Londonderry NSW 2753 Australia

JAS-ANZ
WWW.JAS-ANZ.ORG/REGISTER

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NSW GOVERNMENT SafeWork NSW Test Safe AUSTRALIA

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Manufacturer :
Pepperl+Fuchs SE
Lilienthalstrasse 200
68307 Mannheim
Germany

Manufacturing Location(s):
Pepperl+Fuchs Asia Pte. Ltd.
18 Ayer Rajah Crescent
Singapore 139942
Singapore

Pepperl+Fuchs Co. Ltd.
Lot S 12-16a, Street 20 Tan Thuan EPZ
Ward Tan Thuan Dong, District 7
Ho Chi Minh City
Vietnam

STANDARDS:

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0-2011 Ed 6	Explosive Atmospheres – Part 0: General Requirement
IEC 60079-11-2011 Ed 6	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety “I”

This Certificate does not indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

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Schedule

Equipment Description:

The isolated switch amplifier KFD2-ST3/SOT3-Ex* is an associated apparatus.

It transfers digital signals from the hazardous area to the safe area. Via switches the mode of operation can be reversed, and the line fault detection can be switched off.

The switching amplifier is suitable for mounting on a 35mm DIN mounting rail. The power supply is provided via a power rail or using removable terminals on the narrow side of the barrier. The area of application for the amplifier is limited to closed (locked) electrical locations.

Ambient temperature: Tamb = -20°C to +60°C

Type designation:

KFD2-ST3-Ex * * *

- * Property, that doesn't influence intrinsic safety, e.g., Y1
- * Property, that doesn't influence intrinsic safety, e.g., LB
- * Number of channels 1 or 2

KFD2-SOT3-Ex * * * *

- * Property, that doesn't influence intrinsic safety, e.g., Y1
- * Property, that doesn't influence intrinsic safety, e.g., IO
- * Property, that doesn't influence intrinsic safety, e.g., LB
- * Number of channels 1 or 2

The positions under asterisk "*" may be separated with symbols "." resp. "-" or written together.

Electrical Ratings/Parameters
Non-intrinsically safe circuits:

Maximum Voltage Um: 253V AC
Power supply (terminals 14+,15- or PR1[+], PR2[-]):
Rated Voltage Un: 19…30V DC

Fault Signal (fault bus) (PR4):

Rated Voltage Un: 30V DC

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Transistor Outputs (terminals 7, 8, 9 and 10, 11, 12):

Rated voltage: 30 V DC

Rated current: 100 mA

Intrinsically safe circuits (terminals 1+, 2+, 3- and 4+, 5+, 6-):

Uo = 10.5 V

Io = 17.1 mA

Po = 45 mW (linear characteristic)

Ci = negligible

Li = negligible

The capacitance and either the inductance of the load connected to the intrinsically safe input terminals must not exceed the following values:

Group	**I**
Capacitance (Co), [µF]	95
Inductance (Lo), [mH]	1000
Lo/Ro [mH/ Ω]	10.39

The above parameters for capacitance and inductance apply when one of the two conditions below is met:

- The total Li of the external circuit (excluding the cable) is < 1% of the Lo value or
- The total Ci of the external circuit (excluding the cable) is < 1% of the Co value.

The above parameters for capacitance and inductance are reduced to 50% when both of the two conditions below are met:
- the total Li of the external circuit (excluding the cable) > 1% of the Lo value and
- the total Ci of the external circuit (excluding the cable) > 1% of the Co value.

Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1 µF for Group I.

Specific Conditions of Use: None

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Manufacturer's Documents/Drawings associated with this issue:

Document/Drawing Title	Document/Drawing Number	Pages / Sheets	Revision	Date
KFD2-ST3/SOT3-Ex* (Document list)	16-1225EX	1	-	2015-10-01
Description calculations	16-1225EX-00	9	-	2015-10-01
Schematic	16-1225EX-01	2	-	2015-10-01
Safety relevant components	16-1225EX-02	8	-	2015-10-01
Component set-up	16-1225EX-03	2	-	2015-10-01
Assembly of KFD2 device	16-1224EX-04	2	-	2015-09-28
PCB Layouts, Multilayer	16-1225EX-05	4	-	2015-10-01
Transformer T1 resp. T2 Assembly	16-1224EX-06	2	-	2015-09-28
Instructions KFD2-ST3/SOT3-Ex*	16-1225TE-09	2	-	2022-05-20
Type label KFD2-ST3/SOT3-Ex*	16-1225TE-10	1	-	2022-05-20

Note: An * is included before the title of documents that are new or revised.

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NSW GOVERNMENT SafeWork NSW Test Safe AUSTRALIA
EPF019_26 – Proforma issued 26/06/2024

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Register of Issues and Variations
includes the current issue

Issue 0 dated 2022-06-24

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs:	HR/EXA/ExTR16.0008/00 Fiditas
QAR No. & Issuing CB:	DE/PTB/QAR06.0008/17, PTB
File Reference:	2022/003759

Issue 1 dated 2025-04-04

Variations included in this Issue

1. New Manufacturing Location is added:
   Pepperl+Fuchs Co. Ltd.
   Lot S 12-16a, Street 20 Tan Thuan EPZ
   Ward Tan Thuan Dong, District 7
   Ho Chi Minh City
   Vietnam

2. Applicants Name and address has changed from

   Pepperl+Fuchs (Aust) Pty Ltd

   131-149 Link Drive

   Campbellfield

   Melbourne VIC 3061

   Australia

   To

   Pepperl+Fuchs SE

   Lilienthalstrasse 200

   68307 Mannheim

   Germany

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Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs:	All Test Reports relevant to Issue 0 are valid, No new TR issued
QAR No. & Issuing CB:	DE/PTB/QAR06.0008/21 by PTB
File Reference:	2025/003582

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