

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres for rules and details of the IECEx Scheme visit www.iecex.com								
Certific	ate No.:	IECEx BAS 05.0004X	Page 1 of 4		Certificate history:			
Status:	:	Current	Issue No: 5		Issue 4 (2017-04-24) Issue 3 (2016-04-19) Issue 2 (2009-03-25)			
Date of	f Issue:	2018-06-26			Issue 1 (2006-11-24)			
Applica	ant:	Pepperl + Fuchs GmbH Lilienthalstrasse 200 68307 Mannheim Germany						
Equipm	nent:	Type KFD0-CS-Ex*.5* Transformer Isolated Loop Powered Current Separator						
Optiona	al accessory:							
Туре о	f Protection:	Intrinsic Safety						
Markin	g:	[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I (-20°C ≤ Ta ≤ +60°C / +70°C)						
Approv	ed for issue on ation Body:	behalf of the IECEx	R S Sinclair					
Positio	n:		Technical Manager					
Signature: (for printed version)								
Date:								
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Date of issue:	2018-06-26		Issue No: 5				
Manufacturer:	Pepperl + Fuchs GmbH Lilienthalstrasse 200 68307 Mannheim Germany						
Additional manufacturing locations:	Pepperl + Fuchs Asia Pte. Ltd. 18 Ayer Rajah Crescent Singapore 139942 Singapore						
This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended							
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 Edition:6.0	Explosive atmospheres - Part 0: General requ	irements					
IEC 60079-11:2011 Edition:6.0	EC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" Edition:6.0						
	This Certificate does not indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.						
TEST & ASSESSMENT REPORTS: A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:							
Test Report:							
Quality Assessment Report:							
IECEX ATR: GB/BAS/EXTR16.009 GB/BAS/EXTR17.000 GB/BAS/EXTR17.032	90/00 51/00 20/00	File reference 15/0684 17/0047 17/0684	:				



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Issue No: 5

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Type KFD0-CS-Ex*.5* Transformer Isolated Loop Powered Current Separator is designed to provide an interface between unspecified non-hazardous area equipment and intrinsically safe circuits in the hazardous area.

The equipment comprises a maximum of 2 identical channels; each channel contains a fuse, transformer, zener diodes and other electronic components mounted on a printed circuit board and housed within a plastic enclosure fitted with colour-coded plug-in terminals for external connections.

For models covered by the certificate and their parameters, see data in the Annexe.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The safety device must be installed in a controlled environment with a pollution level limited to pollution degree 2 (or better) or be installed within an enclosure providing a degree of protection of at least IP54 according to IEC 60529 & IEC 60079-0; provision shall be made to ensure that the non-hazardous area connections is limited to overvoltage category I / II as defined in IEC 60664-1.



Certificate No.: IECEx BAS 05.0004X Page 4 of 4 Date of issue: 2018-06-26 Issue No: 5 DETAILS OF CERTIFICATE CHANGES (for issues 1 and above) Variation 5.1 To permit minor drawing changes not affecting the original assessment. Variation 5.2 Group IIIC has been added alongside Group IIB to the parameter tables. Variation 5.3 The specific condition of use has been amended to make specific reference to pollution degree 2, IEC 60664-1 and overvoltage category I/ II. ExTR: GB/BAS/ExTR17.0320/00 File Reference: 17/0684

Annex:

IECEx BAS 05.0004X Annex Iss 2.pdf



ANNEX to IECEx BAS 05.0004X

Issue No. 2

Date: 2018/06/26

Input / Output Parameters

Terminals 8, 9, 10, 11 & 12

 $U_{\rm m}$ = 250V dc or rms

The equipment is designed to operate from a dc supply of up to 40V on terminals 9 & 10/8 and 11 & 12. The segregation of the hazardous area circuits meets the requirements for $375V_{pk}$.

Terminals 1 w.r.t. 2 and 4 w.r.t. 5

 $U_0 = 25.2V$ $I_0 = 93mA$ $P_0 = 585mW$ $C_1 = 0$ $L_1 = 0$

The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area load must not exceed the following values:

GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO (µH/ohm)
IIC	0.107	4.3		60
IIB / IIIC	0.820	18		243
IIA	2.900	33		486
I	4.800	51		797

The above parameters apply when one of the two conditions below is given:

- the total L_i of the external circuit (excluding the cable) is < 1% of the L_0 value or

- the total C_i of the external circuit (excluding the cable) is < 1% of the C_o value.

The above parameters are reduced to 50% when both of the two conditions below are given:

- the total L_i of the external circuit (excluding the cable) $\geq 1\%$ of the L_o value and

- the total C_i of the external circuit (excluding the cable) $\geq 1\%$ of the C_o value.

Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1μ F for Groups I, IIA & IIB / IIIC and 600nF for Group IIC.