




Mining And Surface Certification (Pty) Ltd

2015/021934/07

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

IA CERTIFICATE	MASC MS/17-0861X	Issue	2
Issue Date	5 August 2021	Expiry Date	23 July 2024
*Based on Certificate No	IECEX BAS 04.0014X	Issue / Variations / Amendment	7
Requested by	Pepperl+Fuchs (Pty) Ltd, 1st fl Zerwick Forum, 8 Glen Eagle Office Park, Cnr Monument Rd and Braambos St, Glen Erasmia, Kempton Park 1619, South Africa		
Manufacturer	Pepperl+Fuchs SE Lilienthalstrasse 200, 68307 Mannheim Germany		
Description	<p>The Type KFD2-SCD2-Ex*.LK Transformer Isolated Driver is a two-channel safety device designed to provide a galvanically isolated interface to enable the connection of equipment located in a hazardous area with equipment located in a non-hazardous area by providing galvanic isolation and limiting the voltage and current into the hazardous area to intrinsically safe levels.</p> <p>The equipment comprises a number of electronics components, including transformers, fuses, resistors and zener diodes, all mounted on a single printed circuit board and housed within a plastic enclosure fitted with terminals for external connections.</p> <p>The following variants are covered by this certificate: KFD2-SCD2-Ex1.LK(-Y*) KFD2-SCD2-Ex2.LK(-Y*)</p> <p>The segregation of the hazardous area circuits meets the requirements for 250V</p>		
Equipment	Transformer Isolated Driver	Type	KFD2-SCD2-Ex*.LK
MARKING: Original marking as per certificate * remains applicable. IA number to be added.	Type Ex Marking IA Number Warnings	Transformer Isolated Driver, KFD2-SCD2-Ex*.LK [Ex ia Ga] IIC (-40°C ≤ Ta ≤ +60°C/+70°C) [Ex ia Da] IIIC (-40°C ≤ Ta ≤ +60°C/+70°C) [Ex ia Ma] I (-40°C ≤ Ta ≤ +60°C/+70°C) Ex ec IIC T4 Gc (-40°C ≤ Ta ≤ +60°C/+70°C) MASC MS/17-0861X See Base Certificate * and original marking	
Quality Assurance report (QAR) / Notification (QAN):	DE/PTB/QAR06.0008/16		
Quality Assurance report (QAR) / Notification (QAN) Expiry date:	23 July 2024		
Compliance:	The equipment as described above has been allocated the Explosion Protected per rating above utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> • SANS (IEC) 60079-0: 2019 Explosive atmospheres - Part 0: Equipment - General Requirements • SANS (IEC) 60079-7: 2019 Explosive atmospheres - Part 7: Equipment protection by increased safety "e" • SANS (IEC) 60079-11: 2012 Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i" 		
Special conditions of safe use "X":	<ul style="list-style-type: none"> • See "Annex A" below 		
Conditions of manufacture:	<ul style="list-style-type: none"> • See "Annex A" below 		
 N Viljoen TECHNICAL OFFICER	 D.P Visser TECHNICAL SPECIALIST		

This certificate covers all units sold as long as the QAR/QAN remains valid.
According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory).

Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:
SANS 10086 requirements;
Any conditions mentioned in the above report
Any restrictions and conditions enforced by the chief inspector of mines or chief inspector of factories
Any relevant requirements of the MHS Act.

/ I. ANNEX A...

This certificate may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing body

Mining And Surface Certification (Pty) Ltd
Unit 5 Lelyta Park, 45 Jurg Ave, Hennospark Ext 87
Centurion, 0157

IA CERTIFICATE: MASC MS/17-0861X

Equipment: Transformer Isolated Driver

ANNEX A

This document is based on and must be read in conjunction with certificate IECEx BAS 04.0014X.	
Description (According to Base Certificate *)	
"Refer to description in Base Certificate * (and any applicable schedules/issues/variatioins)."	
Issue	Issue 2: Supplemented for review as per ARP 0108
Standard compliance	See Base Certificate *
Special conditions of safe use ("X")	<ul style="list-style-type: none"> • The safety device must be installed in a controlled environment with a pollution level limited to pollution degree 2 (or better) and 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.
Conditions of manufacture	<ul style="list-style-type: none"> • None
Conditions of Certification	<ul style="list-style-type: none"> • This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate. • As per ARP 0108 a maximum three yearly review is required on this IA Certificate (expiry is determined as per the QAR/QAN/QMS expiry date). • The apparatus must be additionally marked with the MASC marking details above. • This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date. • The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by the certificate on which this IA Certificate is based and any other conditions in this IA Certificate. • The certification on which this IA Certificate is based must remain valid. • The extent of the requirements in the ARP 0108 (or regulations), SANS 10108 and any other applicable regulations on the certification of the equipment must remain unchanged. • The Ex quality assurance notification/report for the equipment must remain valid.
Conclusion:	<ul style="list-style-type: none"> • From the above and the selective examination of the documentation, nothing contrary to the requirements of the applicable standards was found, provided that the equipment / component is used as described in the above document / certificate and according to the MASC conditions below. A MASC IA certificate is issued based on the work done as per the Base Certificate *. • The routine tests for production units according to the Base Certificate * must be complied with (if applicable).

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practices