





Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC MS/21-8048X	Issue	1
Issue Date	27 March 2024	Expiry Date	27 March 2026
** Based on Certificate No	IECEx CML 17.0016X	Issue / Variations / Amendment	4
Requested by	Pepperl+Fuchs (Pty) Ltd 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	The Smart Transmitter Isolator Type KFD2-STC(V)5-Ex1.2O... and KFD2-STC(V)5-Ex2... are Intrinsically Safe Associated Apparatus / Associated Apparatus Transmitter Power Supplies that transfer monitoring signals from a hazardous area to a safe area and communication signals in both directions. The Safe Area connections are the Power Supply and Outputs. The Hazardous Area Connections (Input Circuits) are for Sink Input, Source Input or Three Wire Input dependant on the model type.		
Equipment	Smart Transmitter Isolator	Type	KFD2-STC(V)5-Ex1.2O... and KFD2-STC(V)5-Ex2...
MARKING: Original marking as per certificate ** remains applicable. IA number must be added.	Type:	Smart Transmitter Isolator Type KFD2-STC(V)5-Ex1.2O... and KFD2-STC(V)5-Ex2...	
	Ex Marking:	[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I Ex ec IIC T4 Gc Tamb: -20 °C to +70 °C Note: An upper ambient temperature within the range +40 °C to +70 °C may be marked.	
	IA Number:	MASC MS/21-8048X (To be additionally marked on equipment)	
	Warnings:	See Base Certificate ** (original marking must be applied)	
Quality Assurance report (QAR) / Notification (QAN):		DE/PTB/QAR06.0008/20	
Compliance: The equipment as described above has been allocated the rating <u>Explosion Protected 'as above'</u> utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> • SANS (IEC) 60079-0: 2019 Equipment - General requirements • SANS (IEC) 60079-7: 2019 Equipment protection by increased safety "e" • SANS (IEC) 60079-11: 2012 Equipment protection by intrinsic safety "i" <i>Note: This certificate covers only the listed standards and does not imply compliance to any other standard, related or inferred. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application.</i>			
Special conditions of safe use "X": <ul style="list-style-type: none"> • Refer to Annex A below for more details. 			
Conditions of manufacture: <ul style="list-style-type: none"> • Refer to Annex A below for more details. 			
 C. WELTHAGEN TECHNICAL SPECIALIST		 N. VILOJEN TECHNICAL OFFICER	
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 certificate;
- Any relevant requirements of the MHS Act;

Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).

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The certificate is not transferable and remains the property of the issuing body.

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Equipment: Smart Transmitter Isolator

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ANNEX A

This document is based on and must be read in conjunction with certificate IECEx CML 17.0016X	
Description (According to Base Certificate) **	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variations)."	
Issue	Issue 1: Supplemented for review as per ARP 0108.
Standard compliance	See Base Certificate **
Special conditions of safe use ("X")	<p><u>Non incendive</u></p> <ul style="list-style-type: none">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). 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. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.When the device is mounted in a zoned area, connection and disconnection whilst live is only permitted if the potentially explosive atmosphere is shown to be absent. <u>Intrinsically Safe</u>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). 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. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.
Conditions of manufacture	<p><u>Non-incendive</u></p> <ul style="list-style-type: none">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. <u>Intrinsically Safe</u>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.All transformers shall be subjected to IEC 60079-11 CL 11.2 Routine Tests for Infallible Transformers with an applied voltage of 1 500 V applied between the input and output windings. The test voltage shall be applied for a period of at least 60 s. Alternatively, the test may be carried out at 1,2 times the test voltage, but with reduced duration of at least 1 s. The applied voltage shall remain constant during the test. The current flowing during the test shall not increase above that which is expected from the design of the circuit and shall not exceed 5 mA r.m.s. at any time. During these tests, there shall be no breakdown of the insulation between windings or between any winding and the core.
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.

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This certificate is not transferable and remains the property of the issuing body.

This document will not be supported by MASC for certification purposes outside the borders of South Africa.

Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
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IA CERTIFICATE: MASC MS/21-8048X
Equipment: Smart Transmitter Isolator
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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.

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