



Issue Date: 19 June 2018  
Expiry Date: 19 June 2021

IA Certificate Number: **MASC S/18-1359U**  
Our ref: 18-1359

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## IA – CERTIFICATE

(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)

### GR Ex e enclosure

This document is based on and must be read in conjunction with IECEX CML 17.0039U certificate.

Further to your request, we have evaluated the supplied documentation.

The following is applicable:

Description	Detail
Requested By :	Pepperl+Fuchs (Pty) Ltd 1st fl Zerwick Forum, Glen Eagle Office Park, Cnr Monument Rd & Braambos St, Glen Erasmia, Kempton Park 1619, South Africa
Equipment :	Enclosure
Manufacturer :	<b>Pepperl+Fuchs GmbH</b> Geschäftsbereich, Werk Bühl/Baden, Bußmatten 10-12, 77815 Bühl, Germany
Additional Manufacturing location:	<b>Pepperl+Fuchs (Shanghai) Automation Engineering Co. Ltd.</b> Nr. 269, Yuanzhong Rd., Huinan Town, Pudong District, Shanghai, 201399 China
	<b>Pepperl+Fuchs (India) Pvt.Ltd.</b> #546/1 7th Main, 4th Phase Peenya Industrial Estate, Bangalore-560058, India
	<b>Pepperl+Fuchs (Australia) Pty Ltd.</b> 131-149 Link Drive, Campbellfield, Victoria, 3061, Australia
	<b>Pepperl &amp; Fuchs Manufacturing (India) Pvt. Ltd.</b> Plot no. A-13 Sipcot Industrial Growth Centre Orgadam, Tamil Nadu, India, 602105 India
	<b>Pepperl+Fuchs Inc.</b> 4333 West Sam Houston Parkway, North Suite 150 Houston, TX 77043, USA
	<b>Pepperl+Fuchs srl</b> Via Galileo Galilei 1/B, 1-20875 Burago (MB), Italy
Model(s) / Type(s) :	GR Ex e
Rating :	Ex eb IIC Gb Ex tb IIIC Db
Certification body :	Certification Management Limited (CML)
Type Certificate No :	IECEX CML 17.0039U
Variations/Issue/Amendment :	0
Assessment Report No :	GB/CML/ExTR17.0075/00
Quality Assurance report (QAR) / Notification (QAN) :	DE/PTB/QAR06.0015/09 DE/PTB/QAR16.0002/00 FR/INE/QAR12.0003/05 US/UL/QAR07.0005/12

/ Standards...

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# IA CERTIFICATE NUMBER: MASC S/18-1359U

## GR Ex e enclosure

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Standards:	- IEC 60079-0 (2011)	“General requirements”
	- IEC 60079-31 (2013)	“Equipment dust ignition protection by enclosures ‘t’”
	- IEC 60079-7 (2015)	“Equipment protection by increased safety ‘e’”

The evaluation was conducted according to the requirements of:

- SANS (IEC) 60079-0 : 2012 “Explosive atmospheres – Part 0: Equipment — General requirements”
- SANS (IEC) 60079-31 : 2014 “Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosures ‘t’”
- SANS (IEC) 60079-7 : 2015 “Explosive atmospheres – Part 7: Equipment protection by increased safety ‘e’”

### COMPLIANCE:

The equipment as described below is hereby certified “Explosion Protected” “Ex eb IIC Gb , Ex tb IIIC Db and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS / IEC Standards:

Location	Zone 1, 2 Zone 20, 21, 22	Gas Surface Dust
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment	Group IIC Group IIIC	Propane to Hydrogen/Acetylene Conductive dust
Service/Ambient Temperature	(-60°C ≤ Ta ≤ +85°C)	

### DESCRIPTION OF EQUIPMENT (According to CML Certificate):

The GR Ex e enclosures are increased safety and dust protected component approved enclosures that are moulded in anti-static glass fibre reinforced polyester with a lid and base. The lid is held in place with stainless steel screws and has a rebate in which the gasket is held. The base has a lip that sits approximately central to the gasket and compresses it when the lid is fastened down. The enclosures may be mounted in any orientation. The enclosures are available in a range of standard sizes shown in the table below, intermediate sizes are also permitted. Hinges may be fitted as an option, as may an earth continuity plate and internal/external earth stud.

Type code	Length	Width	Depth
GR.10.10.07*	100 mm	100 mm	65 mm
GR.13.13.09*	130 mm	130 mm	85 mm
GR.13.18.09*	130 mm	180 mm	91.5 mm
GR.18.18.10*	180 mm	180 mm	104 mm
GR.18.24.10*	180 mm	240 mm	104 mm
GR.18.36.10*	180 mm	360 mm	104 mm
GR.18.36.17*	180 mm	360 mm	166.5 mm

Type code	Length	Width	Depth
GR.36.36.10*	360 mm	360 mm	104 mm
GR.36.36.17*	360 mm	360 mm	166.5 mm
GR.36.36.24*	360 mm	360 mm	241.5 mm
GR.48.60.24*	480 mm	600 mm	241.5 mm
GR.36.72.17*	360 mm	720 mm	166.5 mm
GR.36.72.24*	360 mm	720 mm	241.5 mm

### MARKING:

CML marking remains applicable and the marking for the relevant models will be as above. The following MASC Certificate number (IA number) must be additionally applied to the equipment.

IA No: MASC S/18-1359U

/I. CONDITIONS...

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**CONDITIONS OF MANUFACTURE:**

- None

**SCHEDULE OF LIMITATION "U":**

- The service temperature range of the enclosure and all gasket materials is -60°C to 85°C

**CONDITIONS OF CERTIFICATION:**

1. This IA Certificate covers all units sold from the date of this document to 19 June 2021.
2. As per ARP 0108 a three yearly review is required on this IA Certificate.
3. The apparatus must be additionally marked with the MASC marking details above.
4. 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.
5. The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by CML and in this approval.
6. The CML certification must remain valid.
7. The extent of the requirements in the ARP 0108 (or regulations) and SANS 10108 on the certification of the equipment must remain unchanged.
8. The Ex quality assurance notification/report for the equipment must remain valid.

***The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:***

- i. SANS 10086 requirements;
- ii. Any conditions mentioned in the above document;
- iii. Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv. Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v. Any relevant requirements of the MHS Act or the OHS Act.

**CONCLUSION:**

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 by CML.

The routine tests for production units according to the CML Certificate must be complied with (if applicable).

Yours faithfully



**A. Kgekemoer**  
**TECHNICAL SPECIALIST**

**Mining And Surface Certification**

*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 is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/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 issued pursuant to a test / assessment.*

*MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and routine tests have been successfully completed and the product 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 practises.*

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