





# 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

<b>IA CERTIFICATE</b>	MASC S/18-1359U	<b>Issue</b>	2
<b>Issue Date</b>	30 April 2024	<b>Expiry Date</b>	30 April 2027
<b>** Based on Certificate No</b>	IECEx CML 17.0039U	<b>Issue / Variations / Amendment</b>	4
<b>Requested by</b>	<b>Pepperl+Fuchs (Pty) Ltd</b> Zerwick Forum, 8 Glen Eagle Office Park Cnr Monument Rd and Braambos St, Glen Erasmia, Kempton Park 1619, South Africa		
<b>Manufacturer</b>	<b>Pepperl+Fuchs SE</b> Lilienthalstrasse 200, 68307 Mannheim, Germany		
<b>Description</b>	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. The GR Ex e enclosures may be joined using a connecting flange, or to an Ex d enclosure that provides a suitable sealing surface for the connecting flange.		
<b>Equipment</b>	GR Ex e enclosure		
<b>MARKING:</b> Original marking as per certificate ** remains applicable. <b>IA number must be added.</b>	<b>Type:</b>	GR Ex e enclosure	
	<b>Ex Marking:</b>	Ex eb IIC Gb Ex tb IIIC Db IP66 Ts: -60°C to +85°C	
	<b>IA Number:</b>	MASC S/18-1359U (To be additionally marked on equipment)	
	<b>Warnings:</b>	See Base Certificate ** (original marking must be applied)	
<b>Quality Assurance report (QAR) / Notification (QAN):</b>	DE/PTB/QAR06.0015/21 FR/INE/QAR12.0003/11		
<b>Compliance:</b>	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"> <li>SANS (IEC) 60079-0: 2019 Equipment - General requirements</li> <li>SANS (IEC) 60079-7: 2019 Equipment protection by increased safety "e"</li> <li>SANS (IEC) 60079-31: 2023 Equipment dust ignition protection by enclosure "t"</li> </ul> <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>		
<b>Special conditions of safe use "X":</b>	<ul style="list-style-type: none"> <li>Refer to Annex A below for more details.</li> </ul>		
<b>Conditions of manufacture:</b>	<ul style="list-style-type: none"> <li>Refer to Annex A below for more details.</li> </ul>		
 <b>C. WELTHAGEN</b> <b>TECHNICAL SPECIALIST</b>		 <b>N. VILOJEN</b> <b>TECHNICAL OFFICER</b>	
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).

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

# IA CERTIFICATE: MASC S/18-1359U

**Equipment: GR Ex e enclosure**  
**(Expiry date: 30 April 2027)**

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## ANNEX A

This document is based on and must be read in conjunction with certificate IECEx CML 17.0039U.	
<b>Description (According to Base Certificate) **</b>	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variatio ns)."	
<b>Issue</b>	Issue 1: Supplemented for review as per ARP 0108. Issue 2: Supplemented for review as per ARP 0108.
<b>Standard compliance</b>	See Base Certificate **
<b>Schedule of limitations ("U")</b>	<ul style="list-style-type: none"><li>The service temperature range of the enclosure and all gasket materials is -60°C to 85°C.</li></ul>
<b>Conditions of manufacture</b>	<ul style="list-style-type: none"><li>None.</li></ul>
<b>Conditions of Certification</b>	<ul style="list-style-type: none"><li>This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate.</li><li>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).</li><li>The apparatus must be additionally marked with the MASC marking details above.</li><li>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.</li><li>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.</li><li>The certification on which this IA Certificate is based must remain valid.</li><li>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.</li><li>The Ex-quality assurance notification/report for the equipment must remain valid.</li></ul>
<b>Conclusion:</b>	<ul style="list-style-type: none"><li>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 **.</li><li>The routine tests for production units according to the Base Certificate ** must be complied with (if applicable).</li></ul>

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.

This document may only be reproduced in full.

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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# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.:	<b>IECEX CML 17.0039U</b>	Page 1 of 5	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 4	Issue 3 (2022-11-30)
Date of Issue:	2023-08-15		Issue 2 (2021-09-09)
			Issue 1 (2021-01-05)
			Issue 0 (2017-07-18)
Applicant:	<b>Pepperl+Fuchs SE</b> Lilienthalstrasse 200 68307 Mannheim Germany		
Ex Component:	GR Ex e enclosure		

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Increased Safety "eb", Dust Ignition "tb"**

Marking: Ex eb IIC Gb  
Ex tb IIIC Db  
  
IP66  
  
Ts: -60°C to +85°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Ben Trafford**

Position:

**Certification Officer**

Signature:  
(for printed version)

Date:  
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Eurofins E&E CML Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 17.0039U**

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Date of issue: 2023-08-15

Issue No: 4

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

Manufacturing locations: **Pepperl+Fuchs (Shanghai)**  
**Automation Engineering Co. Ltd**  
Nr. 269, Yuanzhong Rd.  
Huinan Town  
Pudong District  
Shanghai, 201399  
China

**Pepperl+Fuchs SE**  
Bussmatten 10-12  
77815 Buehl/Baden  
Germany

**Pepperl+Fuchs (Shanghai)**  
**Automation Engineering Co. Ltd.**  
Nr. 269, Yuanzhong Rd., Huinan Town,  
Pudong District, Shanghai, 201399  
China

## See following pages for more locations

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 component 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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-31:2022** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:3.0

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

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 component listed has successfully met the examination and test requirements as recorded in:

#### Test Reports:

**GB/CML/ExTR17.0075/00**  
**GB/CML/ExTR22.0259/00**

**GB/CML/ExTR20.0239/00**  
**GB/CML/ExTR23.0193/00**

**GB/CML/ExTR21.0186/00**

#### Quality Assessment Reports:

**DE/PTB/QAR06.0015/19**

**FR/INE/QAR12.0003/11**



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 17.0039U**

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Date of issue: 2023-08-15

Issue No: 4

**Ex Component(s) covered by this certificate is described below:**

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.

**Refer to Annex for full description.**

**SCHEDULE OF LIMITATIONS:**

**Refer to Annex for Schedule of Limitations**



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 17.0039U**

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Date of issue: 2023-08-15

Issue No: 4

## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

1. To assess the alternative flange sealing arrangements
2. To update to the latest version of the standard: IEC 60079-31:2022 Ed 3.0



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 17.0039U**

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Date of issue: 2023-08-15

Issue No: 4

Additional manufacturing locations:

**Pepperl + Fuchs (Australia) Pty Ltd**  
131-149 Link Drive  
Campbellfield Vic 3061  
**Australia**

**Pepperl+Fuch srl**  
Via Galileo Galilei, 1B/B1  
I-20875 burago di Molgora (MB)  
**Italy**

**Annex:**

[Certificate Annex IECEx CML 17.0039U Issue 4 \(2\).pdf](#)

**Annexe to:** IECEx CML 17.0039U Issue 4  
**Applicant:** Pepperl+Fuchs SE  
**Apparatus:** GR Ex e Enclosures

### Description

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.

The GR Ex e enclosures may be joined using a connecting flange, or to an Ex d enclosure that provides a suitable sealing surface for the connecting flange.

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
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

### Conditions of Manufacture

None

### Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

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



Certificate Annex IECEx  
 Version: 9.0 Approval: Approved

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