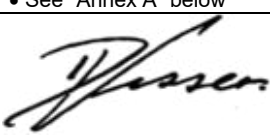





# Mining And Surface Certification (Pty) Ltd

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

<b>IA CERTIFICATE</b>	MASC S/19-6017X	<b>Issue</b>	1
<b>Issue Date</b>	11 August 2021	<b>Expiry Date</b>	23 July 2024
<b>*Based on Certificate No</b>	IECEX SIR 19.0012X	<b>Issue / Variations / Amendment</b>	2
<b>Requested by</b>	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		
<b>Manufacturer</b>	Pepperl+Fuchs SE Lilienthalstrasse 200, 68307 Mannheim Germany		
<b>Description</b>	The Tab-Ex 02 DZ1**** Flameproof Tablet Enclosure comprises a Samsung Galaxy Tab Active tablet, which is contained within a hardened plastic flameproof enclosure with front and rear toughened glass windows. The front window is provided for the main LCD display and front camera, the rear window is provided for the rear camera and integral LED. The flameproof enclosure incorporates three push rods in cylindrical flame paths to actuate the tablet side function keys and a M24 threaded plug which allows access to the tablet SIM card in the non-hazardous area. This flameproof enclosure is contained within an additional anti-static plastic enclosure, which houses function keys (Menu, Home and Back) identical to the ones on the Samsung tablet. These keys are connected to the tablet via intrinsically safe circuitry and perform the same function as the originals. The equipment incorporates the S-Pen stylus which, can be used to operate the tablet touch screen via an electromagnetic induction system. The equipment comprises a battery charging and data connection facility which is designed to be used in the non-hazardous area only with a dedicated charger/docking station. When not connected to the dedicated charger/docking station facility any voltage or withdrawal of current from the connection pins is not possible. Electrical connections to the equipment are not permitted in the hazardous area. Refer to the Annexe for Additional Information.		
<b>Equipment</b>	Flameproof Tablet Enclosure	<b>Type</b>	Tab-Ex 02 DZ1****
<b>MARKING:</b> Original marking as per certificate * remains applicable. IA number to be added.	<b>Type</b> <b>Ex Marking</b> <b>IA Number</b> <b>Warnings</b>	Tab-Ex 02 DZ1**** Flameproof Tablet Enclosure Ex db ia op is IIC T5 Gb Ex tb ia op is IIIC T100°C Db      Ta = -20°C to +50°C MASC S/19-6017X See Base Certificate * and original marking	
<b>Quality Assurance report (QAR) / Notification (QAN):</b>	DE/PTB/QAR06.0008/10		
<b>Compliance:</b>	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"> <li>• SANS (IEC) 60079-0: 2019 Explosive atmospheres - Part 0: Equipment - General requirements</li> <li>• SANS (IEC) 60079-1: 2015 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"</li> <li>• SANS (IEC) 60079-11: 2012 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"</li> <li>• SANS (IEC) 60079-28: 2016 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation</li> <li>• SANS (IEC) 60079-31: 2014 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"</li> </ul>		
<b>Special conditions of safe use "X":</b>	<ul style="list-style-type: none"> <li>• See "Annex A" below</li> </ul>		
<b>Conditions of manufacture:</b>	<ul style="list-style-type: none"> <li>• See "Annex A" below</li> </ul>		
 <b>D.P Visser</b> <b>TECHNICAL SPECIALIST</b>	 <b>N Viljoen</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 report

Any restrictions and conditions enforced by the chief inspector of mines or chief inspector of factories

Any relevant requirements of the MHS Act.

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

/ . ANNEX A...

# IA CERTIFICATE: MASC S/19-6017X

## Equipment: Flameproof Tablet Enclosure

### ANNEX A

This document is based on and must be read in conjunction with certificate IECEx SIR 19.0012X	
<b>Description (According to Base Certificate *)</b>	
"Refer to description in Base Certificate * (and any applicable schedules/issues/variatioins)."	
<b>Issue</b>	Issue 1: Supplemented for review as per ARP 0108.
<b>Standard compliance</b>	See Base Certificate *
<b>Special conditions of safe use ("X")</b>	<ul style="list-style-type: none"> <li>• The equipment shall only be used in areas with a low risk of mechanical impact.</li> <li>• Electrical connections to the equipment are not permitted in the hazardous area.</li> <li>• The model 'Tab-Ex 02 DZ1 WWAN' shall only be opened for SIM Card access in the non-hazardous area as per Pepperl+Fuchs guidance document DOCT - 6352. All other equipment models shall not be opened by the end user for any reason; if either of the equipment's enclosures are opened or damaged, the following conditions shall apply:               <ul style="list-style-type: none"> <li>- The equipment must be removed from the explosive atmosphere immediately and will not be suitable for re-use until it is repaired by the OEM.</li> <li>- If the outer enclosure is damaged precautions shall be taken to ensure the internal flameproof enclosure is not subject to static charging.</li> <li>- If the inner flameproof enclosure is opened, the equipment must never be used in an explosive atmosphere unless it has been repaired and re-sealed by the OEM.</li> </ul> </li> </ul>
<b>Conditions of manufacture</b>	<ul style="list-style-type: none"> <li>• Equipment, shall be subjected to a routine pressure test of 0.6 bar for at least 10 seconds, as required by clause 16.1 of IEC 60079-1:2014. There is no requirement for the SIM card plug to be routinely tested.</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



# 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)

Certificate No.: **IECEx SIR 19.0012X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2020-08-24\)](#)  
[Issue 0 \(2019-05-21\)](#)  
Date of Issue: 2021-01-12  
Applicant: **Pepperl+Fuchs SE**  
Lilienthalstrasse 200  
68307 Mannheim  
Germany  
Equipment: **Tab-Ex 02 DZ1\*\*\*\* Flameproof Tablet Enclosure**  
Optional accessory:  
Type of Protection: **Flameproof db, Intrinsically Safe ia, Optical Isolation op is and Dust Protection by Enclosure**  
Marking: Ex db ia op is IIC T5 Gb  
Ex tb ia op is IIIC T100°C Db  
Ta = -20°C to +50°C

Approved for issue on behalf of the IECEx  
Certification Body:

**N Jones**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

\_\_\_\_\_  
\_\_\_\_\_

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:

**SIRA Certification Service**  
**CSA Group**  
**Unit 6, Hawarden Industrial Park**  
**Hawarden, Deeside, CH5 3US**  
**United Kingdom**

**sira**  
CERTIFICATION





# IECEx Certificate of Conformity

Certificate No.: **IECEx SIR 19.0012X**

Page 2 of 4

Date of issue: 2021-01-12

Issue No: 2

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

Additional manufacturing locations: **ecom instruments GmbH**  
Industriestraße 2  
97959 Assamstadt  
Germany

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

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-28:2015** Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  
Edition:2

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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 Reports:

[GB/SIR/ExTR19.0139/00](#)  
[GB/SIR/ExTR20.0233/00](#)

[GB/SIR/ExTR19.0140/00](#)

[GB/SIR/ExTR20.0162/00](#)

Quality Assessment Report:

[DE/PTB/QAR06.0008/14](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx SIR 19.0012X**

Page 3 of 4

Date of issue: 2021-01-12

Issue No: 2

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Tab-Ex 02 DZ1\*\*\*\* Flameproof Tablet Enclosure comprises a Samsung Galaxy Tab Active tablet, which is contained within a hardened plastic flameproof enclosure with front and rear toughened glass windows. The front window is provided for the main LCD display and front camera, the rear window is provided for the rear camera and integral LED.

The flameproof enclosure incorporates three push rods in cylindrical flamepaths to actuate the tablet side function keys and a M24 threaded plug which allows access to the tablet SIM card in the non-hazardous area.

This flameproof enclosure is contained within an additional anti-static plastic enclosure, which houses function keys (Menu, Home and Back) identical to the ones on the Samsung tablet. These keys are connected to the tablet via intrinsically safe circuitry and perform the same function as the originals. The equipment incorporates the S-Pen stylus which, can be used to operate the tablet touch screen via an electromagnetic induction system.

The equipment comprises a battery charging and data connection facility which is designed to be used in the non-hazardous area only with a dedicated charger/docking station. When not connected to the dedicated charger/docking station facility any voltage or withdrawal of current from the connection pins is not possible. Electrical connections to the equipment are not permitted in the hazardous area.

Refer to the Annexe for Additional Information.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

Refer to the Annexe



# IECEx Certificate of Conformity

Certificate No.: **IECEx SIR 19.0012X**

Page 4 of 4

Date of issue: 2021-01-12

Issue No: 2

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

**This issue, Issue 2, recognises the following changes; refer to the certificate annex to view a comprehensive history:**

1. The QAR reference was updated.
2. The removal of some additional manufacturing locations.

**Annex:**

[IECEx SIR 19.0012X Issue 2 Annexe.pdf](#)

**Annexe to:** I ECEX SI R 19.0012X Issue 2  
**Applicant:** Pepperl+ Fuchs SE  
**Apparatus:** Tab-Ex 02 DZ1\*\*\*\* Flameproof Tablet Enclosure



There are two different variants of the equipment, which are based on the available types of Samsung Galaxy Tab Active 2 tablets. These types are:

Type Designation	Description
Tab-Ex 02 DZ1 WiFi	WiFi only version based on Samsung Galaxy Tab Active 2 SM-T390.
Tab-Ex 02 DZ1 WWAN	WiFi and WWAN version based on Samsung Galaxy Tab Active 2 SM-T395 or SM-T397.

The two models have the following features.

Features		Tab-Ex 02 DZ1 WiFi	Tab-Ex 02 DZ1 WWAN
8.0 inch display 1280 x 800 pixels			
Octa-Core Processor 1.6 GHz			
3 GB RAM / 16GB Storage/ micro SD			
Battery Capacity 4450mAh			
Micro USB 2.0			
SIM Card Holder			
WWAN	2G GSM – GSM850, GMS900, DCS1800, PCS1900		
	3G UMTS B1(2100), B2(1900), B4(AWS), B5(850), B8(900)		
	4G FDD LTE B1(2100), B2(1900), B3(1800), B4(AWS), B5(850), B7(2600), B8(900), B17(700), B20(800), B28(700)		
	4G TDD LTE B38(2600), B40(2300)		
Bluetooth v4.2 & Wi-Fi 802.11 a/b/g/n/ac 2.4 + 5GHz			
Accelerometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Hall Sensor, Proximity Sensor, RGB Light Sensor			
Rear camera 8.0 MP, autofocus			
Front camera 5.0 MP			
Multi-Touchscreen			
GPS, Glonass, Beidou and NFC			
Android OS			
User SIM Card Access			

**Annexe to:** I ECEX SI R 19.0012X Issue 2  
**Applicant:** Pepperl+Fuchs SE  
**Apparatus:** Tab-Ex 02 DZ1\*\*\*\* Flameproof Tablet Enclosure

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## Specific Conditions of Use

- i. The equipment shall only be used in areas with a low risk of mechanical impact.
- ii. Electrical connections to the equipment are not permitted in the hazardous area.
- iii. The model 'Tab-Ex 02 DZ1 WWAN' shall only be opened for SIM Card access in the non-hazardous area as per Pepperl+Fuchs guidance document DOCT - 6352. All other equipment models shall not be opened by the end user for any reason; if either of the equipment's enclosures are opened or damaged, the following conditions shall apply:
  - The equipment must be removed from the explosive atmosphere immediately and will not be suitable for re-use until it is repaired by the OEM.
  - If the outer enclosure is damaged precautions shall be taken to ensure the internal flameproof enclosure is not subject to static charging.
  - If the inner flameproof enclosure is opened, the equipment must never be used in an explosive atmosphere unless it has been repaired and re-sealed by the OEM.

## Conditions of Manufacture

- i. Equipment, shall be subjected to a routine pressure test of 0.6 bar for at least 10 seconds, as required by clause 16.1 of IEC 60079-1:2014. There is no requirement for the SIM card plug to be routinely tested.

## Full certificate change history

**Issue 1** – this Issue introduced the following changes:

- i. To record a change in the applicant's name from "Pepperl+Fuchs GmbH" to "Pepperl+Fuchs SE".
- ii. To record the addition of alternative manufacturing plant as follows:  
Pepperl+Fuchs Inc. and Pepperl+Fuchs Manufacturing Inc.  
502 Cane Island Parkway  
Katy, TX 77494  
United States of America
- iii. To update the title and sheet numbering of drawing 16-1447CS-09.

**Issue 2** – this Issue introduced the following changes:

- i. The QAR reference was updated
- ii. The removal of some additional manufacturing locations.