



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx SIR 15.0075X

Issue No: 2

Certificate history:

Status: **Current**

Issue No. 2 (2017-06-13)

Issue No. 1 (2017-05-23)

Date of Issue: **2017-06-13**

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Issue No. 0 (2015-10-23)

Applicant: **ecom Instruments GmbH**  
Industriestrasse 2  
97959 Assamstadt  
Germany

Equipment: **Tab-Ex 01 DZ1 \***

Optional accessory:

Type of Protection: **Flameproof, Intrinsically Safe, Inherently safe Optical Isolation and Dust Protection by Enclosure**

Marking:

Ex db ia op is I Mb  
Ex tb IIIC T100°C Db or  
Ex db ia op is IIC T5 Gb  
Ex tb IIIC T100°C Db or  
Ex db ia op is IIB T5 Gb  
Ex tb IIIC T100°C Db  
Ta = -20°C to +50°C

Approved for issue on behalf of the IECEx  
Certification Body:

N Jones

Position:

PP *R. A. CRAIG*  
Certification Manager

Signature:  
(for printed version)

*[Handwritten Signature]*

Date:

2017-06-13

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 the [Official IECEx Website](http://www.iecex.com).

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

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Date of Issue: 2017-06-13 Page 2 of 4  
Manufacturer: **ecom Instruments GmbH**  
Industriestrasse 2  
97959 Assamstadt  
Germany

Additional Manufacturing location(s):

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 electrical apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-28 : 2015</b> Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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 Report:

[GB/SIR/ExTR15.0258/00](#)      [GB/SIR/ExTR15.0289/00](#)      [GB/SIR/ExTR17.0093/00](#)  
[GB/SIR/ExTR17.0123/00](#)

### Quality Assessment Report:

[DE/PTB/QAR07.0004/03](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Tab-Ex 01 DZ1 \* Flameproof Tablet Enclosure comprises a Samsung Galaxy Tab Active tablet, which is contained within a hardened plastic flameproof enclosure with a toughened glass window. The flameproof enclosure has the same number of side function keys as the original tablet, which are also located in the same position and use push rods in cylindrical flamepaths to actuate the tablet keys.

The flameproof enclosure is further encased in an anti-static plastic enclosure, which houses function keys identical to the ones on the top of the original tablet. These keys are connected to the tablet via an intrinsically safe connection and perform the same function as the originals.

The anti-static enclosure has an intrinsically safe battery charging and data connection facility at the bottom end of the enclosure, which is not to be used in a hazardous area.

There are three different models available, which are based on the available types of Samsung Galaxy TAB active tablets. The types are:

Type Designation	Description
Tab-Ex 01 DZ1 Wifi	Wifi only version based on the Samsung Galaxy Tab Active SM-T360
Tab-Ex 01 DZ1 WWAN	Wifi and WWAN version based on the Samsung Galaxy Tab Active SM-T365
Tab-Ex 01 DZ1 SIM	Wifi and WWAN version based on the Samsung Galaxy Tab Active SM-T365 This model has a SIM card access port.

Refer to the Annexe for additional information

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

1. The equipment shall only be used in areas with low risk of mechanical impact.
2. The model 'Tab-Ex 01 DZ1 SIM' shall only be opened for SIM Card access in the non-hazardous area as per the ecom guidance document 100016AL19A. 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 shall 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 that the internal flameproof enclosure is not subject to static charging.
  - If the inner flameproof enclosure is opened, the equipment shall never be used in an explosive atmosphere unless it has been repaired and re-sealed by the OEM.
3. Electrical connections to the equipment are not permitted in the hazardous area.
4. When the ambient temperature is greater than +45°C the integrated LED shall only be used (powered) for individual periods of up to 10 minutes, with a total of no more than 1 hours use per day.
5. Only equipment marked Ex db ia I Mb is suitable for use in Group I (Mining) environments, equipment not marked Ex db ia I Mb shall not be used in Group I applications.
6. This product shall not be used where chemical agents such as oil or grease are likely to come into contact with the equipment. This requirement shall be in accordance with IEC 60079-0:2011 Ed.6, Clause 26.11.



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## DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

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

1. The option to fit an alternative glass type for the front and rear windows was recognised.
2. A threaded, non-metallic plug was added to the rear of the flameproof enclosure, this allows the SIM card to be removed in service.
3. The relay board connector X5 was changed to an alternative type.
4. The Z1 Connection PCB was allowed to have an alternative layer stack up.
5. As a result of the above changes the Specific Conditions of Use were amended.

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

1. To allow an upgrade of the equipment from Group II (IIC) to Group I (M2) requirements, the marking was changed accordingly.
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-28:2007 Ed 1 was replaced by IEC 60079-28:2015 Ed 2.
3. The introduction of a Specific Condition of Use and a Condition of Manufacture.

## Annex:

[IECEX SIR 15.0075X Annexe Issue 2.pdf](#)

**Annexe to:** IECEx SIR 15.075X Issue 2  
**Applicant:** ecom Instruments GmbH  
**Apparatus:** Tab-Ex 01 DZ1 \* Flameproof Tablet Enclosure



The tablets are based on standard Samsung models, with the main modification being some additional battery protection circuitry. The three models therefore have the following features.

Features		Tab-Ex 01 DZ1 SIM	Tab-Ex 01 DZ1 WWAN	Tab-Ex 01 DZ1 Wifi
8.0 inch display 800x1280 pixels		✓	✓	✓
Quad core processor 1200MHz		✓	✓	✓
1536MB RAM / 16GB storage / microSD		✓	✓	✓
Battery capacity 4450mAh		✓	✓	✓
Micro USB 2.0		✓	✓	✓
SIM card holder		✓	✓	
WWAN	GSM: 850/900/1800/1900 MHz	✓	✓	
	UMTS: 850/900/1900/2100 MHz	✓	✓	
	LTE: 900/1800/2100/2600 MHz	✓	✓	
Bluetooth: 4.0		✓	✓	✓
Wi-Fi: 802.11 a/b/g/n		✓	✓	✓
Accelerometer and Light Sensor		✓	✓	✓
Rear Camera 3.1 megapixels with autofocus		✓	✓	✓
Front Camera 1.2 megapixels		✓	✓	✓
Multi-Touchscreen		✓	✓	✓
GPS, A-GPS, Glonass, NFC		✓	✓	✓
Android OS		✓	✓	✓

### Conditions Of Manufacture

- i. Products marked Ex db ia I Mb shall only be fitted with Type 1 Glass.