



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 19ATEX1016X** Issue: **1**

4 Equipment: **Tab-Ex 02 DZ1**** Flameproof Tablet Enclosure**

5 Applicant: **Pepperl + Fuchs GmbH**

6 Address: Lilienthalstraße 200
68307 Mannheim
Germany

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN 60079-11:2012
EN 60079-28:2015	EN 60079-31:2014	

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



I M2
Ex db ia op is I Mb
Ta = -20°C to +50°C

Project Number 4172

Signed:

Title: Director of Operations

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 19ATEX1016X
Issue 1

13 DESCRIPTION OF EQUIPMENT

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.

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	✓	✓	

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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		✓

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	21 May 2019	R70185989A	The release of the prime certificate.
1	31st October 2019	4172	<ul style="list-style-type: none">Transfer of certificate Sira 19ATEX1016X from Sira Certification Service to CSA Netherlands B.V.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 The equipment shall only be used in areas with a low risk of mechanical impact.

15.2 Electrical connections to the equipment are not permitted in the hazardous area.

15.3 The 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 EN IEC 60079-0: 2018, Clause 26.11.

15.4 The model 'Tab-Ex 02 DZ1 WWAN' shall only be opened for SIM Card access in the non-hazardous area as per Pepperl and 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.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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Certificate Annexe



Certificate Number: Sira 19ATEX1016X

Equipment: Tab-Ex 02 DZ1**** Flameproof Tablet Enclosure

Applicant: Pepperl + Fuchs GmbH

Issue 0

Drawing	Sheets	Rev	Date (Sira Stamp)	Title
16-1447CS-01	2 of 42	00	10 May 19	Z1_Tab-Ex_Block_Diagramm (14-3048B)
16-1447CS-01	3 of 42	00	10 May 19	Z1_Connection_PCB_Circuit_Diagram (05-7874_2)
16-1447CS-01	4 of 42	00	10 May 19	Z1_Connection_PCB_Parts_List (31-2382)
16-1447CS-01	5 of 42	00	10 May 19	Z1_Connection_PCB_Build_Up (07-CHJ2)
16-1447CS-01	6 of 42	00	10 May 19	Z1_Connection_PCB_Layout_Top (05-7874)
16-1447CS-01	7 of 42	00	10 May 19	Z1_Connection_PCB_Layout_Route15 (05-7874)
16-1447CS-01	8 of 42	00	10 May 19	Z1_Connection_PCB_Layout_Bottom (05-7874)
16-1447CS-01	9 of 42	00	10 May 19	Z1_Connection_PCB_Mounting_Top (05-7874)
16-1447CS-01	10 of 42	00	10 May 19	Z1_Connection_PCB_Coating_Top (05-7874)
16-1447CS-01	11 of 42	00	10 May 19	Z1_Relay_PCB_Circuit_Diagram (01-A181)
16-1447CS-01	12 to 14	00	10 May 19	Z1_Relay_PCB_Parts_List (02-A2G0)
16-1447CS-01	15 of 42	00	10 May 19	Z1_Relay_PCB_Build_Up (07-CF03)
16-1447CS-01	16 of 42	00	10 May 19	Z1_Relay_PCB_Mounting_Top (03-AF00A)
16-1447CS-01	17 of 42	00	10 May 19	Z1_Relay_PCB_Mounting_Bottom (03-AF00A)
16-1447CS-01	18 of 42	00	10 May 19	Z1_Relay_PCB_Coating_Top (03-AF00A)
16-1447CS-01	19 of 42	00	10 May 19	Z1_Relay_PCB_Layout_Top (05-7753)
16-1447CS-01	20 of 42	00	10 May 19	Z1_Relay_PCB_Layout_Route2 (05-7753)
16-1447CS-01	21 of 42	00	10 May 19	Z1_Relay_PCB_Layout_Route15 (05-7753)
16-1447CS-01	22 of 42	00	10 May 19	Z1_Relay_PCB_Layout_Bottom (05-7753)
16-1447CS-01	23 of 42	00	10 May 19	Z1_Dock_PCB_Circuit_Diagram (01-A170)
16-1447CS-01	24 of 42	00	10 May 19	Z1_Dock_PCB_Parts_List (02-A2F4)
16-1447CS-01	25 of 42	00	10 May 19	Z1_Dock_PCB_Build_UP (07-CEE4)
16-1447CS-01	26 of 42	00	10 May 19	Z1_Dock_PCB_Mounting_Bottom (03-AEY3)
16-1447CS-01	27 of 42	00	10 May 19	Z1_Dock_PCB_Layout_Top (05-7736)
16-1447CS-01	28 of 42	00	10 May 19	Z1_Dock_PCB_Layout_Bottom (05-7736)
16-1447CS-01	29 of 42	00	10 May 19	Z1_Dock_PCB_Layout_Route2 (05-7736)
16-1447CS-01	30 of 42	00	10 May 19	Z1_Dock_PCB_Layout_Route15 (05-7736)
16-1447CS-01	31 of 42	00	10 May 19	Z1_Dock_PCB_Definition_Hard_Gold (05-7736)
16-1447CS-01	32 of 42	00	10 May 19	Z1_Dock_PCB_Dimensions (05-7736)
16-1447CS-01	33 of 42	00	10 May 19	Z1 Top Key PCB Release drawing (66001825)
16-1447CS-01	34 to 36	00	10 May 19	Tab-Ex 02 DZ1 S-Pen General Assembly Drawing
16-1447CS-01	37 of 42	00	10 May 19	Z1_Battery_PCB_Circuit_Diagram (100016SP10A03G)
16-1447CS-01	38 of 42	00	10 May 19	Z1_Battery_PCB_Parts_List (100016SL10A02G)
16-1447CS-01	39 of 42	00	10 May 19	Z1_Battery_PCB_Mounting_Top (100016BA10A03G)
16-1447CS-01	40 of 42	00	10 May 19	Z1_Battery_PCB_Layout_Top (100016YA10A03G)
16-1447CS-01	41 of 42	00	10 May 19	Z1_Battery_PCB_Layout_Bottom (100016YB10A03G)
16-1447CS-01	42 of 42	00	10 May 19	Z1_Battery_PCB_Build_UP (100016BU10A01G)
16-1447CS-04	2 of 30	00	01 May 19	Exploded View Z1 (04-DN16A)
16-1447CS-04	3 to 6	00	01 May 19	Joint dimensions Z1 (04-DN15A)
16-1447CS-04	7 of 30	00	01 May 19	A Top Cover (04-DLM0B)
16-1447CS-04	8 of 30	00	01 May 19	A Rear Cover (04-DLV1A)

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Certificate Annexe

Certificate Number: Sira 19ATEX1016X

Equipment: Tab-Ex 02 DZ1**** Flameproof Tablet Enclosure

Applicant: Pepperl + Fuchs GmbH

Drawing	Sheets	Rev	Date (Sira Stamp)	Title
16-1447CS-04	9 of 30	00	01 May 19	D Top Cover (04-DLL6A)
16-1447CS-04	10 of 30	00	01 May 19	D Rear Cover SIM (04-DLU5C)
16-1447CS-04	11 of 30	00	01 May 19	LCD Pane gluing (04-DM63B)
16-1447CS-04	12 of 30	00	01 May 19	Camera Frame Z1 (04-DLW1)
16-1447CS-04	13 of 30	00	01 May 19	D Battery Pack Cover (04-DLL5A)
16-1447CS-04	14 of 30	00	01 May 19	Sim Blocker Z1A (100016FZ82A02G)
16-1447CS-04	15 of 30	00	01 May 19	Sim Blocker Z1B (100016FZ146A00G)
16-1447CS-04	16 of 30	00	01 May 19	ExD Filter Z1 (04-DM76)
16-1447CS-04	17 of 30	00	01 May 19	ExD Filter Frame Z1 (100016FZ86A02G)
16-1447CS-04	18 of 30	00	01 May 19	ExD Filter USB Z1 (100016FZ95A01G)
16-1447CS-04	19 of 30	00	01 May 19	Thermal Conductive Mat Z1 (100016FZ87A03G)
16-1447CS-04	20 of 30	00	01 May 19	LCD Pane Gorilla (100016F161A00G)
16-1447CS-04	21 of 30	00	01 May 19	LCD Pane Schott (04-DRU6)
16-1447CS-04	22 of 30	00	01 May 19	Camera Pane Gorilla (100016FZ162A)
16-1447CS-04	23 of 30	00	01 May 19	Printed Camera Pane (04-DMC7A)
16-1447CS-04	24 of 30	00	01 May 19	SIM Plug (100016FZ166A)
16-1447CS-04	25 of 30	00	01 May 19	Light Protector Foil (04-DPY9)
16-1447CS-04	26 of 30	00	01 May 19	Stylus Holder DZ1 (04-DMX7B)
16-1447CS-04	27 of 30	00	01 May 19	A Top Cover with Threaded Bush (04-DNX1A)
16-1447CS-04	28 of 30	00	01 May 19	D Rear Cover with Threaded Bush (04-DPF7A)
16-1447CS-04	29 of 30	00	01 May 19	ExD Battery Pack (04-DQR9A)
16-1447CS-04	30 of 30	00	01 May 19	Intermediate Pin Z1 (100016FZ48A)
16-1447CS-09	2 to 3	00	01 May 19	Control Drawing Tab-Ex 02 DZ1 ATEX IECEx 45-5485
16-1447CS-09	7 to 8	00	01 May 19	Control Drawing Tab-Ex 02 DZ1 Mining 45-5492
16-1447CS-09	9 to 11	00	01 May 19	116-0460 Tab-Ex 02 DZ1 ATEX/IECEx Group II & III Marking Labels.
16-1447CS-09	12 to 14	00	01 May 19	116-0461 Tab-Ex 02 DZ1 ATEX/IECEx Group I Marking Labels.
16-1447CS-09	18 to 27	00	01 May 19	Safety Instructions Group I
16-1447CS-09	28 to 37	00	01 May 19	Safety Instructions Group II & III
16-1447CS-09	48 to 56	00	01 May 19	SIM Card Installation DOCT - 6352

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