



BUREAU  
VERITAS



## (1) EU - Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres – Directive 2014/34/EU  
(3) EU - Type Examination Certificate Number

EPS 19 ATEX 1 255 X

Revision 1

- (4) Equipment: Intrinsically safe smartphone Smart-Ex 02 \*\*\* M  
(5) Manufacturer: Pepperl+Fuchs GmbH  
(6) Address: Lilienthalstrasse 200  
68307 Mannheim  
Germany  
(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.  
(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 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 and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 19TH0459.  
(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

EN 60079-28:2015

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.  
(11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.  
(12) The marking of the equipment shall include the following:



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Certification department of explosion protection

Hamburg, 2020-05-15



H. Schaffer

(13)

## Annex

(14) **EU - Type Examination Certificate EPS 19 ATEX 1 255 X**

**Revision 1**

(15) Description of equipment:

The intrinsically safe Smart Phone of type Smart-Ex 02 \*\*\* M is a communication device intended for use in mines susceptible to firedamp. The device provides additional features such as camera, GPS, NFC, acceleration sensor, WiFi, Bluetooth, vibration motor, headphone connector, magnetic sensor and flash-light. Different integrated antennas can be used for the usual cellular systems. The device is equipped with an exchangeable Li-Ion battery unit. Charging and wired data transfer is done via the magnetic USB-connector in ordinary locations only.

Electrical data:

Supply: Two rechargeable built-in Li-Ion batteries in parallel  
Battery pack Ex-BP S02 nominal data: 3.7 V, 4400 mAh, 16.28 Wh or  
Battery pack Ex-BP S02C nominal data: 3.7 V, 3920 mAh, 14.5 Wh

Charging and  
Wired data transfer:  $U_m = 6V$ , outside of classified hazardous locations only

(16) Reference number: 19TH0459

(17) Special conditions for safe use:

Ambient temperature range:  $0^{\circ}C \leq T_{amb} \leq +50^{\circ}C$

The battery pack is only allowed to be charged and replaced outside of the classified hazardous location.

It must be ensured that the power supply for charging fulfills the requirements for SELV or PELV and  $U_m = 6V$ .

The Battery-Cover for card and battery-pack access must be mounted and screwed tight before entering the hazardous location.

The device has to be protected against high energy impacts.

The device shall not be used in close proximity to processes producing high electrostatic charges.

The device shall not be repaired or dismantled (except the Battery-Cover in ordinary locations).

The device shall not be used where chemical agents such as oil or grease are likely to come into contact with the equipment.

Before entering a hazardous location the USB cover must be closed tight and shall not be opened again until the end user is in a safe area.

It is allowed to use the 3.5mm Audio Plug in the hazardous locations for connections to certified accessory meeting the following entity parameters:

$U_i = 4.2 V$  /  $I_i = 50 mA$  /  $P_i = 100 mW$  /  $C_i = 0.2 \mu F$  /  $L_i = 1 \mu H$

$U_o = 4.2 V$  /  $I_o = 0.35 A$  /  $P_o = 0.5 W$  /  $C_o = 3 \mu F$  /  $L_o = 440 \mu H$

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Hamburg, 2020-05-15

