



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

Certificate No.: **IECEX EPS 19.0114X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2019-12-12)

Status: **Current** Issue No: 1

Date of Issue: **2020-05-15**

Applicant: **Pepperl+Fuchs GmbH**
Lilienthalstr. 200
68307 Mannheim
Germany

Equipment: **Intrinsically safe smartphone Smart-Ex 02 *** M**

Optional accessory:

Type of Protection: **intrinsic safety "I"**

Marking: **Ex ia op is I Ma IP64**

Approved for issue on behalf of the IECEx
Certification Body:

Holger Schäffer

Position:

Certification Manager

Signature:
(for printed version)

Date:

2020-05-12



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 or use of this QR Code.



Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany





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Manufacturer: **Pepperl+Fuchs GmbH**
Lilienthalstr. 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 60079-11:2011 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

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 Report:

DE/EPS/ExTR19.0116/01

Quality Assessment Report:

DE/PTB/QAR06.0008/11



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

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:

$U_i = 4.2 V$	$I_i = 50 mA$	$P_i = 100 mW$	$C_i = 0.2 \mu F$	$L_i = 1 \mu H$
$U_o = 4.2 V$	$I_o = 0.35 A$	$P_o = 0.5 W$	$C_o = 3 \mu F$	$L_o = 440 \mu H$



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Marking and specific conditions of use changed.