



(1) UK - Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – UKSI 2016:1107 (as amended)

(3) UK - Type Examination Certificate Number

EPS 23 UKEX 1 095 X

Revision 1

(4) Equipment: Smartphone Type Smart-Ex 03 *** DZ1

(5) Manufacturer: Pepperl+Fuchs SE

(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 United Kingdom Limited, approved body No. 8507 in accordance with UKSI 2016:1107 (as amended) Part 4, 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 Schedule 1 of UKSI 2016:1107 (as amended). The examination and test results are recorded in the confidential documentation under the reference number 22TH0346.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

IEC 60079-11:2023

(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 UK - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with UKSI 2016:1107 (as amended). Further requirements 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:



II 2G Ex ia IIC T4 Gb

II 2D Ex ia IIIC T135 °C Db



Certification department of explosion protection

N. Wilkinson
Natalie Wilkinson

Warrington, 11-03-2024

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(13)

Annex

(14) **UK - Type Examination Certificate EPS 23 UKEX 1 095 X**

Revision 1

(15) Description of equipment:

The intrinsically safe smartphone of type Smart-Ex 03 *** DZ1 is a communication device intended for use in explosive hazardous areas. The device is equipped with a replaceable battery pack unit type Ex-BP S03 or Ex-BP S03s.

Ambient temperature range: $-20\text{ °C} \leq T_a \leq +60\text{ °C}$

Electrical interface data for use in hazardous areas:

USB-C				
$U_o = 4.2\text{ V}$	$I_o = 0.8\text{ A}$	$P_o = 0.6\text{ W}$	$C_o = 2\text{ }\mu\text{F}$	$L_o = 8\text{ }\mu\text{H}$
$U_i = 4.4\text{ V}$	$I_i = 1.5\text{ A}$	$P_i = \text{not relevant}$	$C_i = 15\text{ }\mu\text{F}$	$L_i = 2\text{ }\mu\text{H}$

Audio				
$U_o = 3.6\text{ V}$	$I_o = 0.290\text{ A}$	$P_o = 0.210\text{ W}$	$C_o = 2.6\text{ }\mu\text{F}$	$L_o = 730\text{ }\mu\text{H}$
$U_i = 4.5\text{ V}$	$I_i = 0.030\text{ A}$	$P_i = \text{not relevant}$	$C_i = 0\text{ }\mu\text{F}$	$L_i = 0\text{ }\mu\text{H}$

Optional Accessories:

CR-Ex S03	cradle with belt or spring clip
LC-Ex S03	leather case with belt or spring clip
LH-Ex S03	leather holster
RL ID01	retractable lanyard
EXT-C2LCOIL	coil tether
Mini QD Loop	mini disconnect clip with loop
ST 02	stylus pen without tether
ST 01	tether for stylus pen

(16) Reference number: 22TH0346

(17) Special conditions for safe use:

The device shall be protected against high energy impacts.

When used in group IIC or IIB environments, the device shall not be used in close proximity to processes producing high electrostatic charges.

Charging, SIM-card replacement and battery pack replacement is only allowed in ordinary (non-hazardous) areas.

The device may only be charged in a temperature range of 0 °C to 45 °C .

Charging and wired data-transfer via the USB-C interface is limited to a maximum voltage of 6 V (U_m) and a current of 10 A (I_m).

It must be ensured that the power plug/supply used for charging and wired data connections via the USB-C port is a non-shock hazard extra low voltage equipment such as SELV, PELV or ES1 as per IEC 62368-1 (former IEC 60950-1) or equivalent.

It must be ensured that the battery cover is mounted properly before entering the hazardous location so that the IP rating of the device is not affected.

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(17) Special conditions for safe use: (continuation)

Intrinsically safe equipment for use in the hazardous location connected to the audio jack or USB-C interface must fulfill one of the following:

- The combination of the intrinsically safe equipment and the Smart-Ex 03 *** DZ1 must be assessed, and the certificate of the equipment must allow the connection to the Smart-Ex 03 *** DZ1.
- The equipment entity parameter must match with the Smart-Ex 03 *** DZ1 entity parameter as indicated above.

The following spare parts are allowed to be replaced by the end user in ordinary non-hazardous locations:

a) USB-C Cover b) Audio Jack door c) Battery cover / battery pack

Repairs are only to be conducted by the manufacturer or an authorized service center.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Warrington, 11-03-2024



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