



(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 23 ATEX 1 215 X

Revision 1

(4) Equipment: REALWEAR NAVIGATOR Z1, intrinsically safe head-mounted tablet, model T21S

(5) Manufacturer: i.safe MOBILE GmbH

(6) Address: i_Park Tauberfranken 10
97922 Lauda-Koenigshofen
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 22TH0387.

(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 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:

I M1 Ex ia I Ma
 II 2G Ex ib IIC T4 Gb
II 2D Ex ib IIIC T200°C Db

Certification department of explosion protection

Tuerkheim, 2024-05-02

Ulrich Feike

Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH.

(13)

Annex

(14) **EU - Type Examination Certificate EPS 23 ATEX 1 215 X**

Revision 1

(15) Description of equipment:

The intrinsically safe, robust REALWEAR NAVIGATOR Z1 head-mounted tablet was developed for use in Zone 1 and 21 hazardous areas and for the use in mines susceptible to firedamp.

The device offers numerous technologies such as Wi-Fi 6, Bluetooth 5.2, GPS, 3-axis accelerometer, magnetometer, and gyroscope. It is equipped with a 48MP camera, LED light, display with 24° field of view, internal 94dB speaker and 4 digital microphones with active noise suppression, which enable precise speech recognition even in 100dBA typical industrial noise.

Electrical data:

Power supply: The device has a replaceable and rechargeable Li-Ion battery model B21S.
 $U_0 = 3.7 \text{ V}$ ($U_{0_max} = 4.2 \text{ V}$) / 2.56 Ah / 9.472 Wh

USB interface: The device has a USB interface for charging and data transfer. Opening the interface cover in hazardous areas is not permitted. Data connections and charging are only permitted outside hazardous areas and only with the i.safe PROTECTOR cable or other accessories specified by i.safe MOBILE GmbH.

Camera module: The device has interchangeable camera modules:
 Visual Camera Module and Thermal Camera Module
 These can be changed outside the hazardous areas. In hazardous areas, a camera module must be properly mounted and screwed down to the device with all screw covers in place.

Audio jack: The device has a 3.5mm audio jack socket. The Earbud hearing protection headphones model H1100G, model H1101G or other accessories that meet the connection values may be used in hazardous areas. The audio jack does not need to be covered.

Connection values for the audio jack AJ:

Output voltage:	$U_{AJ} = U_{0_max} = 4.2 \text{ V}$
Output current:	$I_{o_max} = 274 \text{ mA}$ (linear characteristic)
Output power (thermal):	$P_o = 288 \text{ mW}$
Effective internal capacitance:	$C_i = 0 \text{ }\mu\text{F}$
Effective internal inductance:	$L_i = 0 \text{ }\mu\text{H}$
Internal resistance:	$R_{AJ_res} = 15.323 \text{ }\Omega$

An approved headset with high impedance may be connected:

Permissible voltage:	$U_i = 4.2 \text{ V}$
Permitted power input:	$P_i = 10 \text{ mW}$

Only accessories approved by i.safe MOBILE may be used in hazardous areas.



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(16) Reference number: 22TH0387

(17) Special conditions for safe use:

The battery shall be charged outside hazardous areas only.

The device must be protected from impacts with high impact energy, against excessive UV light emission and high electrostatic charge processes.

The device shall be protected from exposure of oil, greases and hydraulic fluids.

The permissible ambient temperature range is -20 °C to +55 °C.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Tuerkheim, 2024-05-02

Ulrich Feike