



# 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](http://www.iecex.com)

Certificate No.: **IECEx EPS 23.0053X**

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[Certificate history](#):

Issue 1 (2024-05-02)  
Issue 0 (2023-12-18)

Status: **Current**

Issue No: 2

Date of Issue: **2024-12-05**

Applicant:  
**i.safe MOBILE GmbH**  
i\_Park Tauberfranken 10  
97922 Lauda-Koenigshofen  
**Germany**

Equipment: **REALWEAR NAVIGATOR Z1, intrinsically safe head-mounted tablet, model T21S**

Optional accessory:

Type of Protection: **Intrinsic safety "i"**

Marking: **Ex ia I Ma**

**Ex ib IIC T4 Gb**

**Ex ib IIIC T200°C Db**

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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





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Manufacturer: **i.safe MOBILE GmbH**  
i\_Park Tauberfranken 10  
97922 Lauda-Koenigshofen  
**Germany**

Manufacturing  
locations:

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 60079-11:2023** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:7.0

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/ExTR23.0062/03](#)

Quality Assessment Report:

[DE/EPS/QAR12.0003/16](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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.  
 $U_0 = 3.7 \text{ V}$  ( $U_{0\_max} = 4.2 \text{ V}$ ) /  $2.56 \text{ Ah}$  /  $9.472 \text{ Wh}$

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 V
Output current:	$I_{0\_max}$	= 274 mA (linear characteristic)
Output power (thermal):	$P_0$	= 288 mW
Effective internal capacitance:	$C_i$	= 0 $\mu\text{F}$
Effective internal inductance:	$L_i$	= 0 $\mu\text{H}$
Internal resistance:	$R_{AJ\_res}$	= 15.323 $\Omega$

An approved headset with high impedance may be connected:

Permissible voltage:	$U_i$	= 4.2 V
Permitted power input:	$P_i$	= 10 mW

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

## SPECIFIC CONDITIONS OF USE: YES as shown below:

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.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Minor technical change.