



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEx PTB 13.0007

issue No.:0

Certificate history:

Status:

Current

Date of Issue:

2013-02-21

Page 1 of 4

Applicant:

FHF Funke + Huster Fernsig GmbH
Gewerbeallee 15-19
45478 Mülheim a.d. Ruhr
Germany

Electrical Apparatus:
Optional accessory:

Telephone
type ExResistTel IP2

Type of Protection:

increased safety, intrinsic safety, encapsulation and protection by enclosure

Marking:

Ex e [ib] mb IIC T4 Gb
Ex tb [ib] IIIC T135°C Db
IP 66

Approved for issue on behalf of the IECEx
Certification Body:

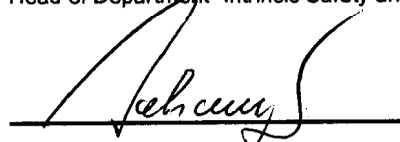
Dr.-Ing. Ulrich Johannsmeyer

Position:

Head of Department "Intrinsic Safety and Safety of Systems"

Signature:
(for printed version)

Date:


2013-03-08

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 the Official IECEx Website.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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Page 2 of 4

Manufacturer: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim a.d. Ruhr
Germany

Additional Manufacturing location
(s):

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 electrical apparatus 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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2009 Edition: 3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate does not indicate compliance with electrical 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/PTB/ExTR13.0010/00

Quality Assessment Report:
DE/BVS/QAR07.0004/05



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Schedule

EQUIPMENT:

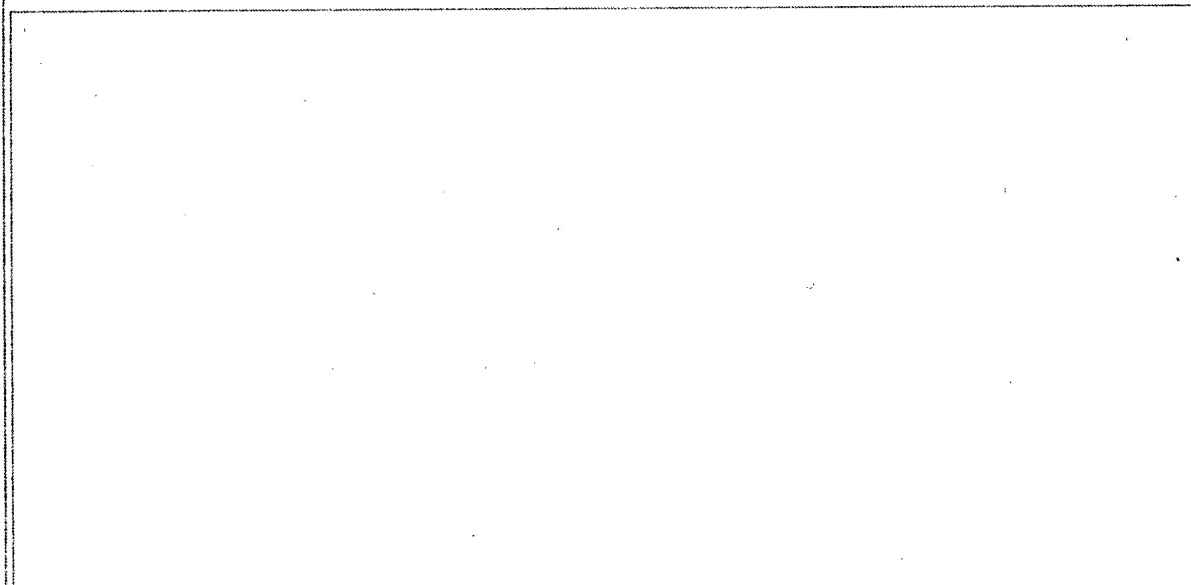
Equipment and systems covered by this certificate are as follows:

The telephone, type ExResistTel IP2 is used for voice transmission via Ethernet according to the VoIP mode (IEEE802.3).

It is applied as stationary equipment in potentially explosive gas or dust atmospheres. The intended operating position of the telephone is vertically suspended on a wall.

The permissible range of the ambient temperature is -40 °C up to +60 °C.

CONDITIONS OF CERTIFICATION: NO





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Certificate No.: IECEx PTB 13.0007

Date of Issue: 2013-02-21

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EQUIPMENT(continued):

Electrical data

Supply, DC
(terminals 16 & 17)

non-intrinsically safe
 $U_n = 19.2 \dots 52.8 \text{ VDC}$
 safety-related maximum voltage:
 $U_m = 53 \text{ VDC}$

Supply, PoE
(terminals 11, 12, 14 & 15)

non-intrinsically safe
 $U_n = 24 \dots 48 \text{ VDC}$
 safety-related maximum voltage:
 $U_m = 57 \text{ VDC}$

LAN
(terminals 8, 9, 10 & 13)

non-intrinsically safe
 $U_n = \pm 2.5 \text{ V}$ (signal 10 BASE-TX) or
 $U_n = \pm 1 \text{ V}$ (signal 100 BASE-TX)
 safety-related maximum voltage:
 $U_m = \pm 7 \text{ V}$ (signal)
 $U_m = 57 \text{ V DC}$ (offset)

LAN cable shield

for terminals refer to operating instructions manual

Relay 1 and 2
(terminals 18 & 19 or 21 & 23)

non-intrinsically safe
 $U_n = \text{up to } 250 \text{ VAC}$ or up to 230 VDC
 $I_{max} = \text{up to } 5 \text{ A}$
 for permissible maximum values refer to operating instructions manual)
 safety-related maximum voltage:
 $U_m = 250 \text{ V}$

Optional headset
(terminals 1, 2, 3 & 4)

type of protection Intrinsic Safety Ex ib IIC,
 only for connection to passive circuits
 Maximum values:
 $U_o = 16.4 \text{ V}$
 $I_o = 220 \text{ mA}$
 $P_o = 450 \text{ mW}$
 the maximum permissible external capacitance C_o is 424 nF,
 the maximum permissible external L/R-ratio is 78 $\mu\text{H/O}$
 the circuit is electrically connected to ground

The equipment is infallibly connected to the local equipotential bonding system.





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Certificate No.:

IECEx PTB 13.0007

Issue No.: 1

Certificate history:

Issue No. 1 (2016-8-1)

Issue No. 0 (2013-2-21)

Status:

Current

Date of Issue:

2016-08-01

Page 1 of 5

Applicant:

FHF Funke + Huster Fernsig GmbH
Gewerbeallee 15-19
45478 Mülheim a.d. Ruhr
Germany

Equipment:

Telephone

Optional accessory:

type ExResistTel IP2

Type of Protection:

increased safety, intrinsic safety, encapsulation and protection by enclosure

Marking:

Ex e [ib] mb IIC T4 Gb
Ex tb [ib] IIIC T135°C Db
IP 66

Approved for issue on behalf of the IECEx
Certification Body:

Dr. Ing. F. Lienesch

Position:

Head of department "Explosion Protection in Sensor Technology and
Instrumentation"

Signature:
(for printed version)

26-08-16

Date:

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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin



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IEC 60079-18 : 2014 Edition: 4.0	Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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Quality Assessment Report:

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EQUIPMENT(continued):

Electrical data

Supply, DC (terminals 16 & 17)	non-intrinsically safe Un = 19.2 ... 52.8 VDC safety-related maximum voltage: Um = 53 VDC
Supply, PoE (terminals 11, 12, 14 & 15)	non-intrinsically safe Un = 24 ... 48 VDC safety-related maximum voltage: Um = 57 VDC
LAN (terminals 8, 9, 10 & 13)	non-intrinsically safe Un = $\pm 2,5$ V (signal 10 BASE-TX) or Un = ± 1 V (signal 100 BASE-TX) safety-related maximum voltage: Um = ± 7 V (signal) Um = 57 V DC (offset)
LAN cable shield	for terminals refer to operating instructions manual
Relay 1 and 2 (terminals 18 & 19 or 21 & 23)	non-intrinsically safe Un = up to 250 VAC or up to 230 VDC Imax = up to 5 A for permissible maximum values refer to operating instructions manual safety-related maximum voltage: Um = 250 V
Optional headset (terminals 1, 2, 3 & 4)	type of protection Intrinsic Safety Ex ib IIC, only for connection to passive circuits Maximum values: Uo = 16.4 V Io = 220 mA Po = 450 mW the maximum permissible external capacitance Co is 424 nF, the maximum permissible external L/R-ratio is 78 μ H/Ohm the circuit is electrically connected to ground

The equipment is infallibly connected to the local equipotential bonding system.



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

The silicone foam, used as speaker gasket, is provided by a different manufacturer.

The telephone may be manufactured alternatively without display or without individual buttons. In these cases the respective areas in the metal cover plate will not be punched.

Instead of the heavy-gauge cable used for the handset also a helix / spiral cable may be used in combination with a cable gland of type ESKE/1-S-L-eRDE 20.