

Explosion proof VoIP telephone

ExResistTel IP4 / IP164



EATON

Powering Business Worldwide

FHF BA 9711-100

ExResistTel IP4 / IP164 – Brief operating instructions

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Reference

Please read these operating instructions carefully before installing the device.

ExResistTel IP4 is a variant of our weatherproof standard telephone ResistTel IP4. These instructions are therefore limited to explaining the differences to the standard model. If you are familiar with our standard device, reading these brief operating instructions should be sufficient. Otherwise, it is advisable to also read the enclosed operating instructions for our standard device.

Please check the contents of the box for completeness.

All power must be disconnected before the device is opened.

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1 VoIP telephone ExResistTel IP4 / IP164

Congratulations on purchasing an ExResistTel IP4 / IP164 VoIP phone. These instructions are intended to help you get to know the device better and to familiarize you with how to use it.

1.1 Device description

The ExResistTel IP4 / IP164 telephone with Voice over IP technology is a modern communication device that was developed for industrial use. Components, connections and fastenings are designed in such a way that they can withstand harsh industrial environments and function reliably even in rough everyday work.

As it is an IP telephone, all of the functions described here are heavily dependent on the configuration and support of the gateway (PBX, PABX) used.

If you have any questions, please contact the manufacturer, your service partner or your IT department.

1.1.1 Task

The ExResistTel IP4 / IP164 phone is used as a stationary device in areas that are at risk of an explosive gas or dust atmosphere and require devices of device group II of device category 2G & 2D.

1.1.1.1 Ignition protection classification and other protection classifications

The ExResistTel IP4 / IP164 phone is implemented in the following protection classifications.

- Ignition protection classification: II 2G Ex eb ib mb [ib Gb] IIC T4 Gb
II 2D Ex ib tb [ib Db] IIIC T130°C Db
- IP protection rating: IP66
- IK shock-resistance rating: IK09
- Ambient temperature range: -40 °C ≤ Ta ≤ 60 °C with armoured cord
-30 °C ≤ Ta ≤ 60 °C with coiled cord

1.1.1.2 Applied standards (excerpt)

- EN IEC 60079-0:2018
- EN 60079-7:2015
- EN 60079-11:2012
- IEC 60079-11:2023
- EN 60079-18:2015
- EN 60079-31:2014

1.1.1.3 Special conditions / Table of restrictions

Please observe the following requirements to ensure orderly operation of the ExResistTel IP4 / IP164.

- The ExResistTel IP4 / IP164 phone must be integrated into the local potential equalisation via the provided connection.
- A fuse with a maximum rated current of 5 A according to IEC 60127 must be connected upstream of the switching contact connections. The fuse may be housed in the associated supply unit or must be connected upstream separately. The fuse rated voltage must be equal to or greater than the maximum working voltage value of 250 V. The breaking capacity of the fuse link must be equal to or greater than the prospective short-circuit current at the installation site (typically 1500 A).
- If a reduction of the prospective short-circuit current to a value <100 A is not guaranteed at the connections DC, PoE or LAN, a fuse according to IEC 60127 must be connected upstream at each of these inputs.

1.2 As-delivered condition

Package content

Depending on the version, the explosion-proof IP telephone package includes:

- 1 x telephone (handset with armoured or spiral cord)
- Operating instructions FHF BA 9710-10 for the weatherproof standard version ResistTel
- These brief operating instructions FHF BA 9711-100

Accessories (optional):

- Cable/line entry M20 x 1.5 for housing entries (i), (iv) & (v).
- FHF Ex-Headset-Kit Part No. FHF11286104

1.2.1 Sling holder

The holding strength for the handset is continuously adjustable.

Loosen the screws (12) and move the latch (13) (see Figure 1 on page 6). Pushing the stopping catches together increases the holding strength whereas pulling them apart reduces it. Tighten the screws again.

1.2.2 Hearing aid compatibility

The receiver is equipped with a leakage field spool for coupling of hearing aids. Users of a hearing aid with inductive receiver may receive the signal from the receiver inset directly.

1.3 CE symbol

We hereby declare that this product is in compliance with the essential health and safety requirements of

- ATEX Directive 2014/34/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS Directive 2011/65/EU
- Electrical and Electronic Equipment WEEE Directive 2012/19/EG (EAR: DE 58023377)

The device conforms to directive 2011/65/EU and the delegated directives 2017/2102/EU and (EU)2015/863.

The corresponding standards, technical rules and specifications can be found in the (optional) attached declaration of conformity and the declarations of conformity on our website.

2 Assembly and Installation

The telephone is intended for vertical use and may only be mounted on a closed wall.

In this telephone connected cords may have hazardous voltages.

In order to prevent water from entering the housing, it is essential that no seals are damaged during assembly and installation. The ingress of water can cause accessible parts of the telephone to become live.

Installation and connection must be carried out by competent personnel familiar with electrical and network installations.

2.1 Preparatory work

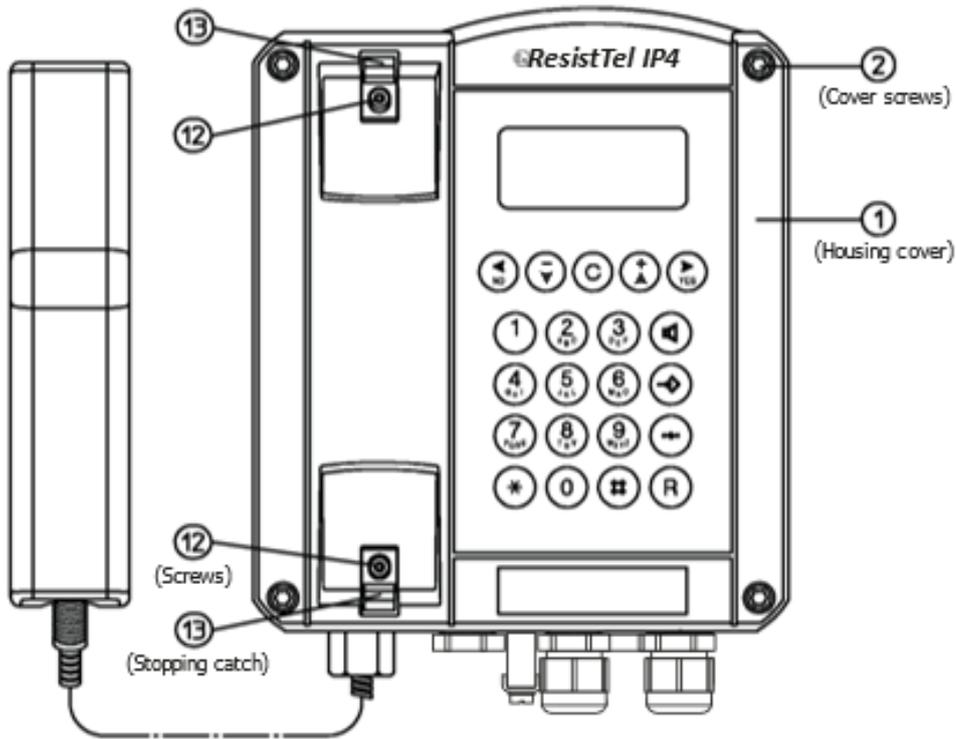


Figure 1 - Housing top view

First remove the upper part of the housing and set it aside until the installation is complete. To do this, loosen the four cover screws (2), carefully lift the upper part of the housing and disconnect the connecting cable between the upper and lower part at the connector (7), which is plugged into the pin strip (8) of the upper part of the housing (see Figure 1 to Figure 3).

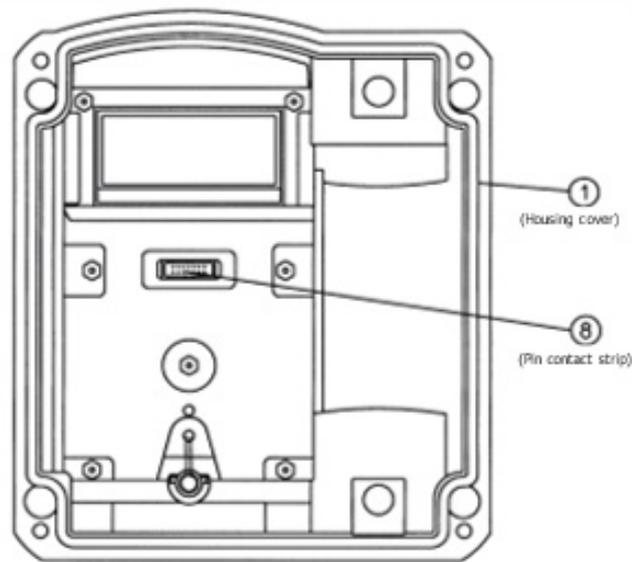
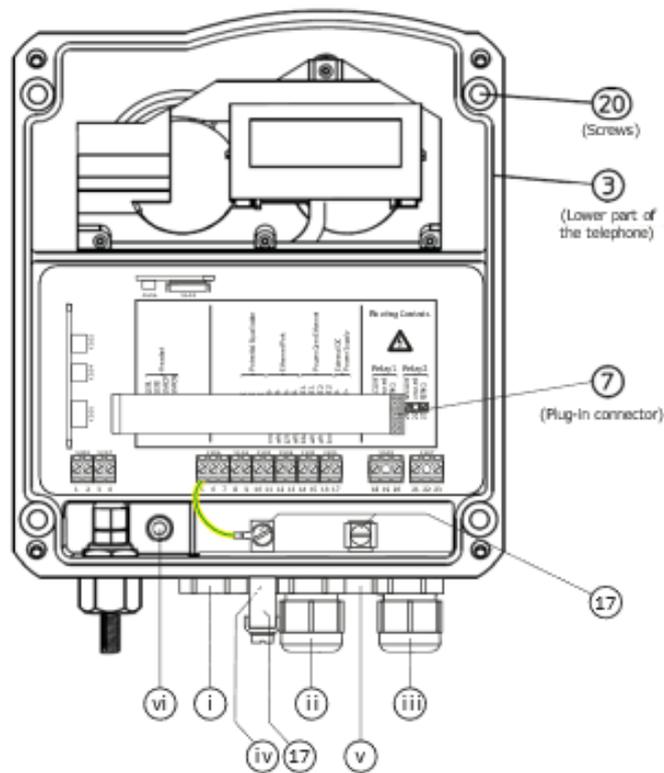


Figure 2 – Interior view of the upper part of the housing



- (i) Blanking plug M20 x 1.5
- (ii) Cable/line entry M20 x 1.5
- (iii) Cable/line entry M20 x 1.5
- (iv) Blanking plug M20 x 1.5
- (v) Blanking plug M20 x 1.5
- (vi) Blanking plug M20 x 1.5 (housing base)

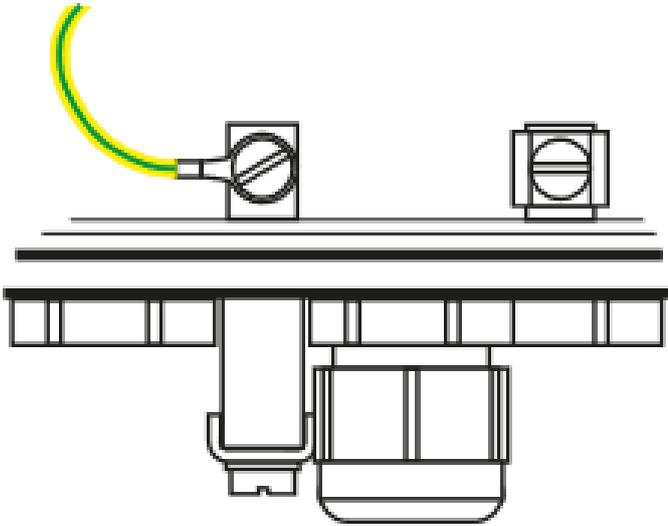
- (17) Equipotential terminals

Figure 3 - Interior view of the lower part of the housing and position of the cable/line entries

If you are using the headset from our ex-headset kit, you can use the bracket included in the kit to hang the headset and connecting cable there. Fasten this bracket to the lower part of the housing and use the screws included in the kit, which are screwed into the threaded bushings set into the rear of the housing base. If necessary, replace the blanking plugs (i), (iv) & (v) with suitable cable/conduit entries if you need to insert more than two connection cables into the telephone.

2.3.1.2 Equipotential bonding terminal block

There are two equipotential terminals in the connection area of the lower part of the housing, which are connected to the external equipotential terminal via a metal plate. The inner left terminal is connected to terminal block 5 and thus includes the electronics block in the equipotential bonding. This connection is safety-relevant and must not be severed. The inner right terminal is intended as an alternative to the outer equipotential bonding terminal.



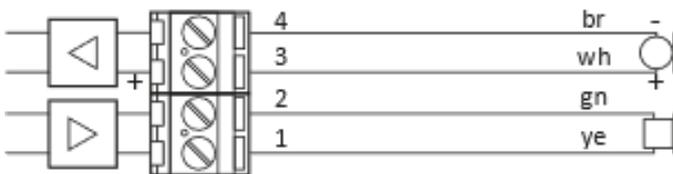
Connectivity:
 $1.5 \text{ mm}^{2\text{mm}^2} \leq A_{\text{LtgRigid}} \leq 6.0 \text{ mm}^{2\text{mm}^2}$
 $1.5 \text{ mm}^{2\text{mm}^2} \leq A_{\text{LtgFlex}} \leq 3.8 \text{ mm}^{2\text{mm}^2}$

Stripping length:
 $l_{\text{isol}} = 10 \text{ mm}$

2.3.2 Ex ib IIC headset connection

Terminals 1-4 are used to connect an approved intrinsically-safe headset, such as the FHF headset from our ExHeadset kit FHF11286104. The interconnection with other headsets must be verified according to the respective installation regulations. Standard IEC/EN 60079-25 must be observed here.

When connecting a headset, make sure that the positive microphone connection of the headset is connected to terminal 3. The colours specified in the connection diagram below are the wire colours of the connection cable of our headset FHF11286104; the ends of the unused wires (grey and pink) of this connecting cable must be insulated with a piece of insulating tape or cut off if necessary.



e.g. headset FHF11286104

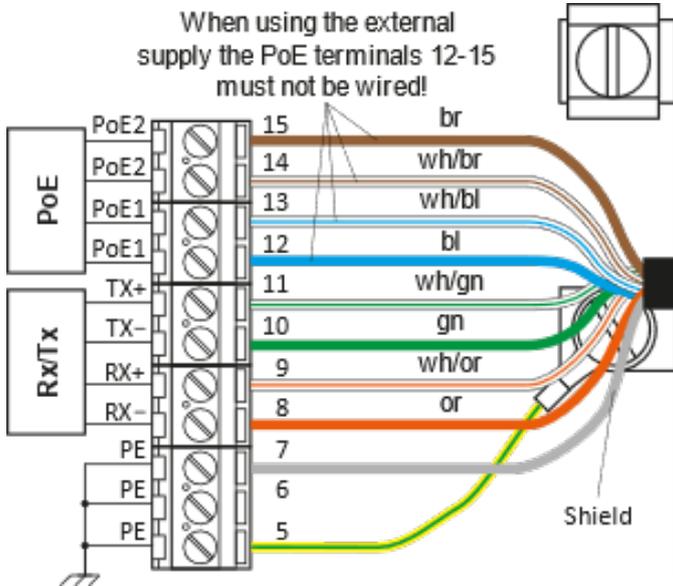
Ignition protection classification: intrinsic safety Ex ib IIC
 only for connection to passive circuits

Maximum values:
 $U_o = 16.4 \text{ V}$
 $I_o = 220 \text{ mA}$
 $P_o = 450 \text{ mW}$
 $C_o = 424 \text{ nF}$
 $L_o/R_o = 78 \text{ } \mu\text{H}/\Omega$

These circuits are galvanically connected to the potential equalisation.

2.3.3 Ex eb Ethernet connection

Terminals 8-15 are used to connect the Ethernet network cable, which can also be used for PoE device supply in addition to data transmission. Our network interface uses two pairs of the network line for 10/100 Base-TX data transmission according to IEEE802.3 and two further pairs for the PoE supply (Power Over Ethernet) according to IEEE802.3af. Gigabit transmission and PoE variants that use all four wire pairs together are not supported and are not permitted. CAT 5e S/UTP cables with braided shielding or better are suitable as network cables.



PoE (Power over Ethernet) in accordance with IEEE 802.3af
 $37.0 V_{DC} \leq V_{PoE} \leq 57.0 V_{DC}$
 $I_{PoE} \leq 350 \text{ mA}_{DC}$
 $P_{PoE} \leq 12.95 \text{ W (Class 0)}$

Ignition protection classification PoE: Increased safety Ex eb
 Max. values (safety-specific):
 $U_m = 57 \text{ V}$
 $I_K = 100 \text{ A}$

Ignition protection classification LAN: Increased safety Ex eb
 Max. values (safety-specific):
 $U_m = 57.3 \text{ V}$
 $I_K = 100 \text{ A}$



Caution!

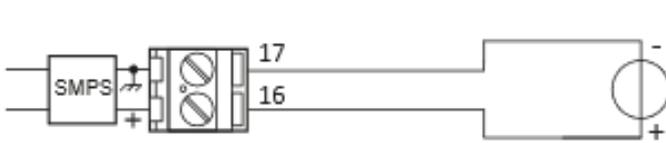
- Only SELV, PELV or ES1 power supplies may be used to power the phone.
- If you power the phone via the PoE supply (Power over Ethernet) of the network connection cable, connection terminals 16 and 17 must not be used to connect an external power supply.
- If a reduction of the prospective short-circuit current to a value of < 100 A cannot be guaranteed at the PoE or LAN connections, a fuse in accordance with IEC 60127 must be connected upstream at each of these inputs

Conductive shielding of the network cable must be connected to one of the equipotential bonding terminals 6 or 7. To do this, strip the cable sheath, separate the cable pairs and the surrounding braided shield, and twist the braided shield into a cable that is routed in a suitable insulating tube. Remove any shielding foil or sheath wires that may be present. The total length of cable pairs and "shield cable" should not be longer than necessary for safe cable routing. It is advisable to carry out the work described before inserting the network cable into the housing.

2.3.4 Ex eb DC connection (ext. power supply)

The external DC power supply should be connected to terminals 16 and 17.

Make sure to use sufficient conductor cross-sections so that the minimum required DC voltage is always available at the terminals. Further information on this can be found in Technical information in these operating instructions.



$$22.8 V_{DC} \leq V_{DC} \leq 52.8 V_{DC}$$

$$I_{DC} \leq 650 \text{ mA}_{DC}$$

$$P_{DC} \leq 15.00 \text{ W}$$

Ignition protection classification: Increased safety Ex eb

Max. values (safety-specific):

$$U_m = 53 \text{ V}$$

$$I_k = 100 \text{ A}$$

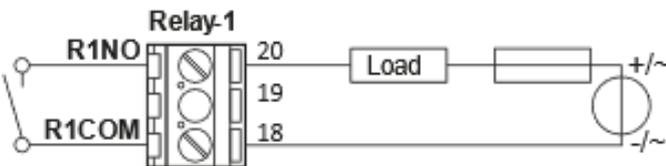


Caution!

- Only SELV, PELV or ES1 power supplies may be used to power the phone.
- If you power the phone via terminals 16 and 17, terminals 12-15 of the PoE supply of the Ethernet connection must not be used.
- If a reduction of the prospective short-circuit current to a value $< 100 \text{ A}$ is not guaranteed at the connections, a fuse according to IEC 60127 must be connected upstream at each of these inputs.

2.3.5 Ex eb connections Relay-1 and Relay-2

Equipment to be switched on/off must be connected to terminals 18 & 20 or 21 & 23, which are connected to the electro-mechanical relays Relay-1 and Relay-2. The NO contacts of both relays can switch DC and AC loads in the specified load range.



$$\text{AC: } V_{\text{switch}} \leq 250 \text{ V}_{AC} / I_{\text{switch}} \leq 5.0 \text{ A}_{AC}$$

$$S_{\text{switch}} \leq 100 \text{ VA}$$

$$\text{DC: } V_{\text{switch}} \leq 230 \text{ V}_{DC} / I_{\text{switch}} \leq 5.0 \text{ A}_{DC}$$

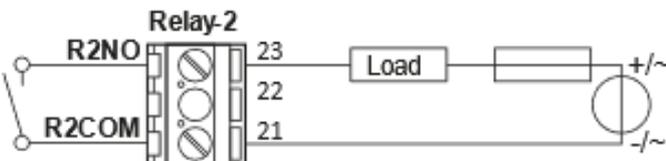
$$P_{\text{switch}} \leq 100 \text{ W}$$

Ignition protection classification:

Increased safety Ex eb

Max. values (safety-specific):

$$U_m = 250 \text{ V}$$



$$\text{AC: } V_{\text{switch}} \leq 250 \text{ V}_{AC} / I_{\text{switch}} \leq 5.0 \text{ A}_{AC}$$

$$S_{\text{switch}} \leq 100 \text{ VA}$$

$$\text{DC: } V_{\text{switch}} \leq 230 \text{ V}_{DC} / I_{\text{switch}} \leq 5.0 \text{ A}_{DC}$$

$$P_{\text{switch}} \leq 100 \text{ W}$$

Ignition protection classification:

Increased safety Ex eb

Max. values (safety-specific):

$$U_m = 250 \text{ V}$$



Caution!

- The permissible load currents of the output contacts are voltage dependent. Calculate their maximum values as shown below by dividing the quotient of switching power P_{switch} or apparent switching power S_{switch} and the switching voltage V_{switch} . The result must also not exceed the specified maximum value for the switching current I_{switch} .

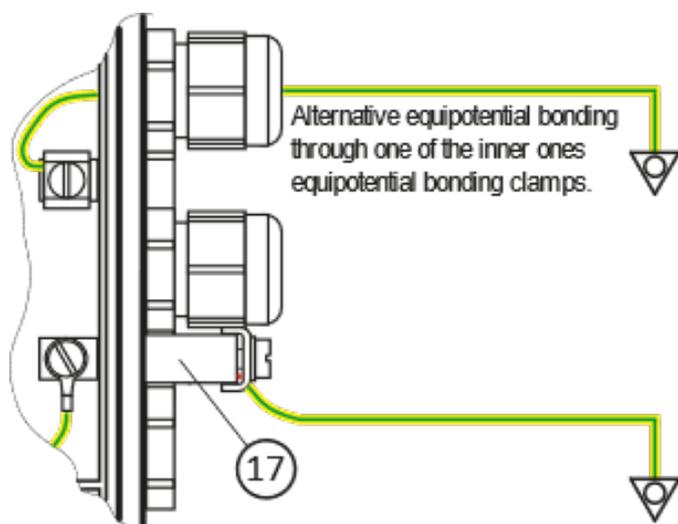
$$\text{AC: } I_{LoadMax} = S_{switch} / V_{switch} = 100 \text{ VA} / 230 \text{ V} = 0,435 \text{ A} \quad I_{LoadMax} \leq I_{switchMax}$$

$$\text{DC: } I_{LoadMax} = P_{switch} / V_{switch} = 100 \text{ W} / 48 \text{ V} = 2,08 \text{ A} \quad I_{LoadMax} \leq I_{switchMax}$$

- The circuits of the switching contacts of both relays must not be connected to different phase conductors of an AC network.
- A fuse with a maximum rated current of 5 A according to IEC 60127 must be connected upstream of the switching contact connections. The fuse may be housed in the associated supply unit or must be connected upstream separately. The fuse rated voltage must be equal to or greater than the maximum working voltage value of 250 V. The breaking capacity of the fuse link must be equal to or greater than the prospective short-circuit current at the installation site (typically 1500 A).

2.3.6 Equipotential connection, equipotential terminal

Connect the potential equalisation of the place of installation to the equipotential terminal (17) of the ExResistTel IP4 / IP164, which is located at the bottom centre of the housing and is accessible from the outside. Alternatively, there are two further equipotential terminals available in the connection area, to which the potential equalisation line inserted in the housing can be connected. The connection capacity of the potential-equalisation terminal allows the connection of potential-compensation –lines with cross sections in the specified range.



Connectivity:

$$1.5 \text{ mm}^2 \leq A_{LtgStarr} \leq 4.0 \text{ mm}^2$$

$$1.5 \text{ mm}^2 \leq A_{LtgFlex} \leq 3.8 \text{ mm}^2$$

Stripping length:

$$l_{isol} = 10 \text{ mm}$$



Caution!

- The internal connection between the terminal block 5 and the lower or left inner equipotential bonding terminal is relevant to safety and must not be interrupted.

2.4 Final work

Please carry out a final check of the attachments and connections to ensure proper commissioning and safety. Check that the (1) cover seal inserted in the upper part of the housing is properly seated; connect the connecting cable leading out of the electronics block to the pin strip (8) using plug connectors (7). Place the upper part of the housing carefully on the lower part of the housing and fasten the two parts together using the four cover screws (2) (see Figure 1 to Figure 3). The tightening torque for the cover screws is in the range of 1.2 – 1.5 Nm.

- 3 Commissioning -> see standard operation instructions
- 4 Operation -> see standard operation instructions
- 5 Menu -> see standard operation instructions

6 Electrical characteristics of the interfaces

DC (External power supply)
(Terminals 16 & 17)

Ignition protection classification: Increased safety Ex eb
 $U_n = 22.8 - 52.8 V_{DC}$
 Max. voltage (safety-specific):
 $U_m = 53 V$
 $I_k = 100 A$

PoE supply
(terminals 12, 13, 14 & 15)

Ignition protection classification: Increased safety Ex eb
 $U_n = 37.0 - 57.0 V_{DC}$
 Max. voltage (safety-specific):
 $U_m = 57 V$
 $I_k = 100 A$

LAN
(Terminals 8, 9, 10 & 11)

Ignition protection classification: Increased safety Ex eb
 $U_n = \pm 2.5 V_{10 \text{ BASE-TX}}$ or
 $U_n = \pm 1.0 V_{100 \text{ BASE-TX}}$
 Max. voltage (safety-specific):
 $U_m = 57.3 V$

Relay-1 and Relay-2
(Terminals 18 & 20 and 21 & 23)

Ignition protection classification: Increased safety Ex eb
 $U_n \leq 250 V_{AC}$ or
 $U_n \leq 230 V_{DC}$
 $I_{max} \leq 5 A$
 for permissible maximum values, see Technical specifications
 Max. voltage (safety-specific):
 $U_m = 250 V$

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

Type of ignition protection: Intrinsic safety Ex ib IIC, only for connection to passive circuits
 Maximum values:
 $U_o = 16.4 V$
 $I_o = 220 mA$
 $P_o = 450 mW$
 $C_o = 424 nF$
 $L_o/R_o = 78 \mu H/\Omega$
 These circuits are galvanically connected to the potential equalisation.

The equipment must be connected to the local potential equalisation in a fail-safe manner!

7 Technical data

Terminals 1 - 23		Min	Type	Max	Unit
A _{UlgR}	Clamping capacity, rigid conductor cross-section	0.2		4.0	mm ²
A _{UlgF}	Clamping capacity, flexible conductor cross-section	0.2		2.5	mm ²
I _{Isol}	Stripping length		7		mm ²
Equipotential terminals (17)					
A _{UlgR}	Clamping capacity, rigid conductor cross-section	1.5		6.0	mm ²
A _{UlgF}	Clamping capacity, flexible conductor cross-section	1.5		3.8	mm ²
I _{Isol}	Stripping length		10		
Ethernet connection, terminals 8-15					
LAN	VOIP data transfer, terminals 8-11	10/100 BASE-TX			
U _m	Max. voltage (safety-specific)			57.3	V _{DC}
⁵⁾ I _K	Max. current (safety-specific)			100	A _{DC}
¹⁾ PoE (Power over Ethernet) IEEE 802.3af, terminals 12-15					
V _{PoE}	Supply voltage	37.0		57.0	V _{DC}
I _{PoE}	Supply current			350	mA _{DC}
P _{PoE}	Power supply Class 0			12.95	W
U _m	Max. voltage (safety-specific)			57.3	V _{DC}
⁵⁾ I _K	Max. current (safety-specific)			100	A _{DC}
^{1) 2)} External power supply DC, terminals 16-17					
V _{DC}	Supply voltage	22.8		52.8	V _{DC}
I _{DC}	Supply current			650	mA _{DC}
P _{DC}	Power supply			15.00	W
U _m	Max. voltage (safety-specific)			57.0	V _{eff}
⁵⁾ I _K	Max. current (safety-specific)			100	A _{eff}
⁴⁾ Relay-1 and Relay-2, terminals 18&20 and 21&23					
V _{switch}	Switch voltage	AC		250	V _{AC}
		DC		230	V _{DC}
³⁾ I _{switch}	Switch voltage	AC		5.0	A _{AC}
		DC		5.0	A _{DC}
S _{switch}	Apparent switch voltage	AC		100	VA
P _{switch}	Switching capacity	DC		100	W
U _m	Max. voltage (safety-specific)			250	V _{eff}
Optional headset, terminals 1-4 only for connection to passive Ex ib IIC circuits					
U ₀	Maximum output voltage			16.4	V _{DC}
I ₀	Maximum output current			220	mA _{DC}
P ₀	Maximum output power			450	mW
C ₀	Maximum external capacity			424	nF
L ₀ /R ₀	Maximum external inductance/resistance ratio			78	μH/Ω
Housing					
Material		Glass-fibre reinforced polyester			
I _{HxWxD}	Dimensions	Height		293	mm
		Width		227	mm
		Depth		135	mm
e	Housing entries	Cable/line entry	(ii-iii)	M20 x 1.5	
		Blanking plug	(i, iv-v)	M20 x 1.5	
		Blanking plug	(vi)	M20 x 1.5	
m	Weight		approx. 5.0		kg
h	Max. operating altitude			2000	m
	Operating position		vertical wall mounting		

Environmental conditions

T _A	Operating temperature	with armoured cord	-40	60	°C
		with spiral cord	-30	60	°C
T _T / T _S	Transport and storage temperature		-40	+70	°C
Degree of protection		IP 66 according to EN/IEC 60529			
Degree of protection against external mechanical impacts		IK 09 according to EN/IEC 50102			
Humidity		5% - 85% RH (non-condensing, non-icing)			

Conformity

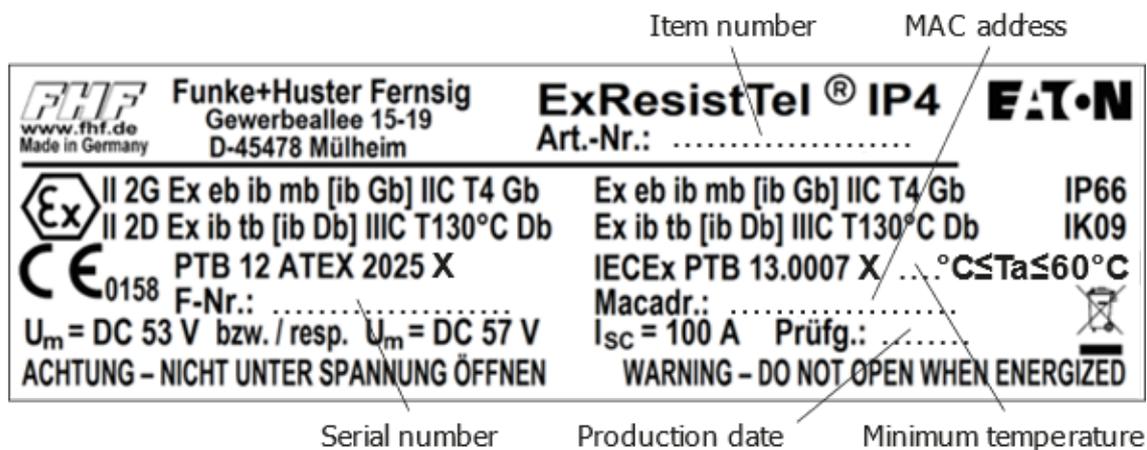
atex	EC type examination certificate	PTB 12 ATEX 2025 X II 2G Ex eb ib mb [ib Gb] IIC T4 Gb II 2D Ex ib tb [ib Db] IIIC T130°C Db
iecx	IECEx Certificate of Conformity	IECEx PTB 13.0007 X Ex eb ib mb [ib Gb] IIC T4 Gb Ex ib tb [ib Db] IIIC T130°C Db

Menu

T _L	Minimum activation time for secondary button function	0.5	s
T _{SHIFT_TO}	Time limit Shift key secondary function		5.0 s
T _{DZA}	Minimum activation time mode change Digit2Alpha	2.0	s

- The phone may only be powered by SELV, PELV or ES1 rated power supplies. In addition, only one power supply may feed the telephone. Use either PoE or the external DC power supply.
- The DC power supply must be floating.
- The allowable load currents of the output contacts are voltage-dependent. Calculate their maximum values as shown below by dividing the quotient of switching power P_{switch} or apparent switching power S_{switch} and the switching voltage V_{switch} . The result must also not exceed the specified maximum value for the switching current I_{switch} .
 AC: $I_{LoadMax} = S_{switch} / V_{switch} = 100 \text{ VA} / 230 \text{ V} = 0.435 \text{ A}$ $I_{LoadMax} \leq I_{switchMax}!$
 DC: $I_{LoadMax} = P_{switch} / V_{switch} = 100 \text{ W} / 48 \text{ V} = 2.08 \text{ A}$ $I_{LoadMax} \leq I_{switchMax}!$
- A fuse with a maximum rated current of 5 A according to IEC 60127 must be connected upstream of the switching contact connections. The fuse may be housed in the associated supply unit or must be connected upstream separately. The fuse rated voltage must be equal to or greater than the maximum working voltage value of 250 V. The breaking capacity of the fuse link must be equal to or greater than the prospective short-circuit current at the installation site (typically 1500 A).
- The circuits of the switching contacts of both relays must not be connected to different phase conductors of an AC network.
- If a reduction of the prospective short-circuit current to a value <100 A is not guaranteed at the connections, a fuse according to IEC 60127 must be connected upstream at each of these inputs.

7.1 Marking (nameplate)



Minimum temperature:
 -30 °C with coil cord
 -40 °C with armoured cord

Figure 5 - Nameplate

8 Notes

8.1 Maintenance

The phone does not contain any wear parts that require maintenance.

8.2 Care and Servicing

The phone is maintenance free. Nevertheless, cleaning should be carried out from time to time when the phone is subject to heavy soiling from dust, grease, oil etc.

Cleaning work may only be carried out with a damp cloth in order to avoid electrostatic charges.

Never use pointed objects for cleaning.

8.3 Disposal

The phone must be disposed of as electronic waste. During disassembly, the plastic, metal and electronic components must be disposed of separately. In any case, the disposal regulations of the respective country of use must be observed.

8.4 Warning and Safety Instructions

This item is an explosion-proof and weatherproof Voice-over-IP telephone, specially designed for use in harsh industrial environments.

The following warnings and safety instructions must be observed:

- The telephone is designed to protection class I and may only be connected to and operated with the specified voltages.
- The device must be connected and installed by trained specialist personnel in accordance with the prescribed installation regulations.
- Proper connection must be ensured. The connecting cables must be laid in such a way that there is no risk of tripping.
- It must be ensured that the telephone, the connecting cable, etc. are not damaged. It is not permitted to operate the phone when it is damaged.
- The telephone may only be operated under the specified environmental conditions (please see Chapter 7 Technical data on page 14). Adverse ambient conditions, such as ambient temperatures that are too high or too low, are not permitted because they encourage the failure of electronic components.
- The telephone may only be operated under the specified electrical conditions (see Chapter 7 Technical data on page 14). In particular, the warnings printed there must be observed. Non-observance of the electrical conditions and warnings can lead to property damage and personal injury!
- When operating the telephone, legal and commercial regulations, accident-prevention regulations and electrical regulations must be observed.
- In the case of repairs, only professionally-installed original replacement parts are permitted. Other replacement parts can lead to damage and the guarantee is void.
- Before repairing or replacing the phone, it must be disconnected from all power sources. If maintenance or repairs on live equipment are unavoidable, these may only be carried out by qualified personnel.
- Dust must not get into the device when the phone is open.
- Repair work may only be carried out by the manufacturer or their authorised agent, and a new inspection must be carried out. This may also apply to the replacement of the lead-out cable ends installed by the manufacturer, depending on the type and version of the telephone.
- Only original replacement parts may be used for repairs. Other replacement parts can lead to damage.
- Operation of this device or equipment may cause radio interference in residential areas.
- Changes to the product that serve technical progress are also possible without prior notice.

