

Flameproof version of the weatherproof
telephone FernTel IP

FernTel IP Z2 / Z22



Operating manual



The FernTel IP Z2/Z22 telephone is a flameproof version of the weatherproof FernTel IP telephone with all its features. The operating manual is still valid, with the addition of the following items.

Operation

The FernTel IP Z2 / Z22 telephone is used as a stationary device in areas potentially endangered by an explosive gas or dust atmosphere.

Designed for Device Group II and Categories 3G and 3D, it may be operated within zones 2 and 22.

The FernTel IP Z2 / Z22 telephone must be connected to a LAN (Local Area Network) connection equipped with PoE (Power over Ethernet).

Commissioning

For operation and commissioning, the application of standard IEEE 802.3af is compulsory.

Contrary to the normal FernTel IP, the FernTel IP Z2 / Z22 has no LAN cable plug bush. Also, there is no second LAN receptacle on the right-hand side of the telephone. Thus the LAN plug for the LAN cable is no longer part of the delivery.

Remove the keypad plate (item 6) of the FernTel IP Z2 / Z22, and guide the LAN cable through the cable gland (item 4) on the lower side of the telephone, and secure the cable using the cable gland.

The FernTel IP Z2 / Z22 delivery includes a bag with a connector socket with a cut-and-clamp device for connecting the LAN cable with the short, 8 pin cable piece within the telephone.

Follow the instructions on the bag for shortening and placing the individual conductors, and secure the LAN cable to the connector. Please pay attention to the coloured markings for the wiring standards T568A (A series) and T568B (B series). Then insert the plug of the short piece of cable (item 5) into this connector, until it clicks into place.

Plug the connector of the ribbon cable onto the pin contact strip (item 7) on the keypad, replace the keypad plate onto the telephone housing and tighten the four screws (item 8) firmly.

Connecting and adjusting

Connect the device using an RJ45 plug in the VoIP telephone with the following normative PoE allocation:

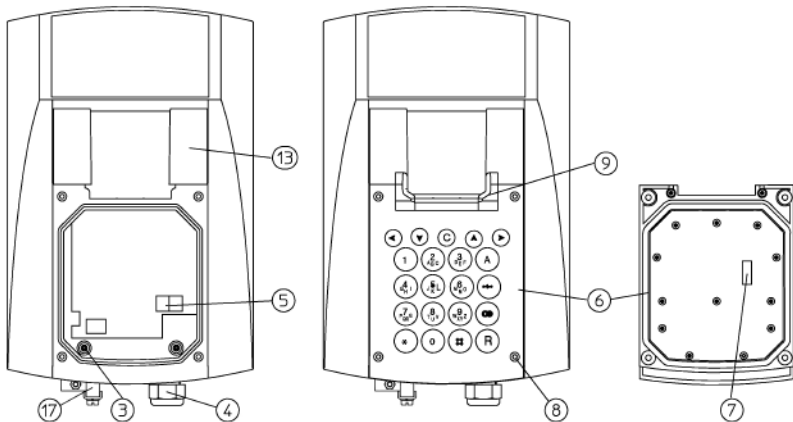
| RJ45 plug | PIN | Spare-Pair supply | Phantom supply | |
|-----------|-----|-------------------|----------------|----------|
| | | | Midi-x | Midi |
| | 1 | RX+ | Rx+ / V- | Rx+ / V+ |
| | 2 | RX- | Rx- / V- | Rx- / V+ |
| | 3 | TX+ | Tx+ / V+ | Tx / V- |
| | 4 | V+ | - | - |
| | 5 | V+ | - | - |
| | 6 | TX+ | Tx- / V+ | Tx / V- |
| | 7 | V- | - | - |
| | 8 | V- | - | - |

Upon connecting the cable, please make sure the exposed conductors are placed in the plug connector and are securely fastened.

The outer terminal of the electrostatic potential compensation (17) must be connected to the potential compensation at the place of installation, in order to avoid a dangerous electrostatic build-up in case of any electrostatic occurrence.

Marking on connection

X101



The configuration of the FernTel IP Z2 / Z22 follows as described in the operating manual of the normal FernTel IP.

Operating position

The telephone may be mounted on a wall or used as a desk telephone.

Service

The telephone contains no serviceable parts.

Care and maintenance

The telephone is maintenance-free. Still, if the operating area is highly contaminated by dust, fat, oil etc., the device should be cleaned from time to time.

The device may only be cleaned using a damp cloth in order to avoid electrostatic charging.

Never use sharp objects for cleaning.

During maintenance, check accessible seals for function, e.g. regarding possible damage or positioning. If the seals are damaged, operating the telephone is not allowed. Damaged seals must be replaced.

Disposal

The complete device should be disposed of as electronic waste. When the device is disassembled, plastics, metals and electronics components are to be disposed of separately. In every single case the national requirements and regulations for waste disposal must be observed.

Warnings and security information

This device is a flameproof, weatherproof telephone especially designed for use in rough industrial environments.

Please note the following warnings and security information:

- The installation and adjustment of the device must be carried out by qualified personnel in accordance with the prescribed installation regulations taking the specified types of protection into account.
- This apparatus is a Protective Class II device and may only be connected to and operated at the voltage it was designed for.
- Make sure the connections are in perfect order.
- Make sure the telephone housing, the connecting cable and the receiver cord are not damaged. If the device is damaged, it may not be operated.
- While operating the device in commercial facilities, the accident prevention regulations of the Employers' Liability Insurance Association regarding the use of electrical systems and devices must be observed.
- The device may be operated solely under the stated ambient conditions. Unfavourable ambient conditions can lead to damage of the device and thus present a potential danger for the user.

Unfavourable ambient conditions include:

- Humidity of air too high (>75% rel., condensing)
 - Moisture and dust (pay attention to the degree of protection)
 - Flammable gases, vapours and solvents not covered by the type of protection for the device
 - Too high ambient temperatures (> +55°C)
 - Too low ambient temperatures (< -20°C)
- During operation of the device the temperature must not exceed nor fall below the prescribed range of ambient temperatures. It is not allowed to operate the device with an additional cover.
- Make sure the wiring is voltage-free upon connecting or disconnecting the wires in the terminal room.
- If electrical connections must be carried through in the hazardous area, the enclosure must be opened and closed as follows:
- Remove voltage from the device.
 - Loosen the fastening screws from the keypad insert
 - Remove the keypad insert and unfasten the keypad cable
 - Make the connections while the device is open
 - When the work is done, plug the keypad back on, and place the keypad insert back on the lower part of the device.

Make sure the seal is correctly positioned and in perfect working order. Then tighten the fastening screws in a diagonal pattern.

- Only blind plugs and cable glands as prescribed by the manufacturer may be used.

Should these points not be observed, the explosion protection of the device cannot be guaranteed. The device then poses a potential threat to the user's life and can cause the ignition of an explosive atmosphere.

CE symbol

The FernTel IP Z2 / Z22 fulfils the demands of the R&TTE Directive 1995/5/EC, the EMC Directive 89/336/EC and the ATEX directive 94/9/EC. The CE symbol confirms the conformity of the device with the above mentioned Directives.

EMC Directive

The device meets the demands of the new EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC and the R&TTE Directive 1999/5/EC.

The CE symbol confirms the conformity of the device with the above mentioned Directives.

Technical Specifications

Connection data at X101

| | | |
|----------------------------------|---|--|
| Power supply | Power over Ethernet according to IEEE 802.3af | |
| Voltage POE | 48 VDC (min. 44 V, max. 57 V) | |
| Power consumption | 3.5 W | |
| Display | 128 x 64 pixels | |
| Ringling sound pressure level | max. approx. 95 dB (A) at 1 m | |
| Housing (height x width x depth) | 293 x 191 x 128 | |
| Weight | approx. 2,300 g | |
| Operating position | Table or vertical wall mounting | |
| Receiver | Microphone | Electret-foil microphone |
| | Receiver inset | Dynamic receiver inset with magnetic field generator |
| Connection X101 | (10/100 Mbit/s) LAN cable with 8 conductors AWG 22 to 24 for solid conductors, or AWG 24 for multi-wired conductors | |


Dimensions Connecting cable / Cable entry

| | |
|-----------------------------------|-------------------------|
| Cable glands | M20 x 1,5 |
| Blind plugs | M20 x 1,5 / M12 x 1,5 |
| Connecting cable diameter | 6 – 13 mm |
| Connection potential compensation | 1,5 – 4 mm ² |

Ambient temperature range and explosion protection

| | |
|-------------------------------------|---|
| Type of protection | II 3G Ex nA nL IIC T5 II 3D Ex tD A22 IP65 T80°C |
| Operating ambient temperature range | -20°C ≤ Ta ≤ +55°C |
| Storage and transport temperature | -25°C ≤ Ta ≤ +70°C |
| Housing degree of protection | IP65 |

Labelling

| | |
|---|---|
| Firma | FHF Funke+Huster Fernsig GmbH |
| Type | FernTel IP Z2 |
| DEKRA | BVS 08 ATEX E 022 |
| CE 0158  | II 3G Ex nA nL IIC T5 II 3D Ex tD A22 IP65 T80°C -20°C ≤ Ta ≤ +55°C IP65 Ui 60 VDC |
| IECEX | Ex nA nL IIC T5 IECEX BVS 08.0009 |

EG-KONFORMITÄTSERKLÄRUNG EC DECLARATION OF CONFORMITY DECLARATION CE DE CONFORMITE DECLARACIÓN DE CONFORMIDAD CE

Bezeichnung des Erzeugnisses: / Designation of Product:
Désignation du produit: / Designación del producto:

- Telefon
- Telephone
- Téléphone
- Teléfono

Gerätetyp oder Typenbezeichnung der Einzelkomponenten:
Equipment Type or Type Designation of Individual Component:
Modèle d'appareil ou désignation de modèle des composants:
Tipo de aparato o designación del tipo de los componentes individuales:

■ FernTel IP Z2

Einschlägige EG-Richtlinie(n): / Relevant EC Directive(s):
Directive(s) CE en vigueur: / Directiva(s) CE pertinente(s):

94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen
Verwendung in explosionsgefährdeten Bereichen
94/9/EC: Equipment and protective systems intended for use in
potentially explosive atmospheres
94/9/CE: Appareils et systèmes de protection destinés à être utilisés
en atmosphères explosibles
94/9/CE: Aparatos y sistemas de protección para uso en atmósferas
potencialmente explosivas

Angewandte harmonisierte Normen, insbesondere:
The following harmonised standards have been applied:
Normes harmonisées appliquées, notamment:
Normas armonizadas aplicadas, especialmente:

EN 60079-0:2006 / IEC 60079-0:2004 Ed 4
EN 60079-15:2005 / IEC 60079-0:2005 Ed 3
EN 61241-0:2006
EN 61241-1:2004

EG-Baumusterprüfbescheinigung: / EC-Type Examination Certificate:
Attestation d'examen CE de type: / Certificado de examen CE:

BVS 08 ATEX E 022

Benannte Stelle für die Bescheinigung:
Notified body of the certificate:
Organisme notifié de l'attestation:
Organismo Certificado de examen:

DEKRA

Kennnummer:
Inspection number: /
Número d'identification: /
Número de examen:

0158

■ Hiermit erklären wir, dass das nachfolgend bezeichnete Erzeugnis aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der(n) genannten EG-Richtlinie(n) entspricht. Bei einer nicht mit uns abgestimmten Änderung des Erzeugnisses verliert diese Erklärung ihre Gültigkeit.

■ We herewith declare that the product identified below, based on its development and type as well as on the specific design we have brought into circulation, conforms to the relevant basic safety and health requirements of the EC Directive(s) cited below.

This declaration shall become invalid if any modification we have not authorised is made to the product.

■ Nous attestons, par le présent document, que le produit désigné ci-après a été conçu et fabriqué, quant au modèle mis en circulation par nos services, conformément aux exigences fondamentales de sécurité et de santé en vigueur de la ou des directives CE citées.

En cas de modification du produit non convenue avec nos services, la présente déclaration perd sa validité.

■ Por la presente declaramos que el siguiente producto satisface por su diseño y tipo constructivo así como en la versión comercializada por nosotros los requisitos de seguridad y salud fundamentales y pertinentes de la(s) directiva(s) CE indicada(s).

En caso de una modificación del producto no acordada con nosotros, la presente declaración pierde su validez.

Diese Erklärung wird verantwortlich für den Hersteller / Importeur - This declaration is made on behalf of the manufacturer / importer - La présente déclaration, dont le fabricant / importateur ci-après assume la responsabilité - Esta declaración es formulada en forma responsable para el fabricante / importador

FHF Funke + Huster Fernsig GmbH

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Deutschland · Germany · Allemagne · Alemania

abgegeben durch · by the authorised signatory · est déposée par · por

Dr. Oplitz, Hans-Peter

Name, Vorname / Surname, forename / nom, prénom / apellido y nombre

Geschäftsführung / Managing Director / Direction / Gerencia

Stellung im Betrieb des Herstellers / Position in manufacturer's company / fonction dans l'entreprise du fabricant / puesto en la empresa del fabricante

Mülheim an der Ruhr

Ort / Place / ville / Lugar

6.3.2008
Datum / Date / date / Fecha


Rechtsgebundene Unterschrift / Legally binding signature / signature légale / Firma válida

Subject to
alterations or
errors



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