FHF
FUNKE+HUSTER·FERNSIG

ResistTel IP2 Weatherproof VoIP Telephone

IP Telephone for Indoor and Outdoor Use

▶ IP 66 protection class as per IEC60529

▶ Ambient temperature range -40°C to +70°C (heated display)

▶ Ring signal ≥ 95 dB(A) at a distance of 1 m

▶ Pixel-based illuminated LCD display

▶ V4A alphanumerical keypad

▶ Web based monitoring (operating, handset, hands free, ringing)

▶ Intelligent, user friendly menu structure

▶ Standard protocols H.323, SIP, TSIP, SIPS

▶ Power supply: PoE or external supply

▶ Connection to 10/100-BASE-T Ethernet

▶ Hands free communication

VoIP

Application

Proven technology from FHF makes the ResistTel IP2 suitable for all outdoor applications.

The new ResistTel IP2 is the ideal unit for all kinds of weather conditions at a wide variety of very diverse facilities – whether sea water, high humidity or extreme mechanical demands.

The housing is made of impact and shock resistant fiberglass-reinforced polyester. Even acids, alkalis or lubricants have no effect on the housing. Its robust design is the perfect "packaging" to meet the latest require-ments demanded of VoIP telephones for outdoor use. It is always available when a telephone is urgently needed, such as in emergency situations.

The ResistTel IP2 makes work more effective by providing especially convenient telephone services.

An illuminated, heated display rounds out the convenience features of the ResistTel IP2.

It also supports all features of the H.450 standard.

The ResistTel IP2 offers high-quality features based on industry standards and our decades of experience.

A headset, available as accessory equipment, can be easily connected to the telephone. A handsfree function is also integrated into the unit.
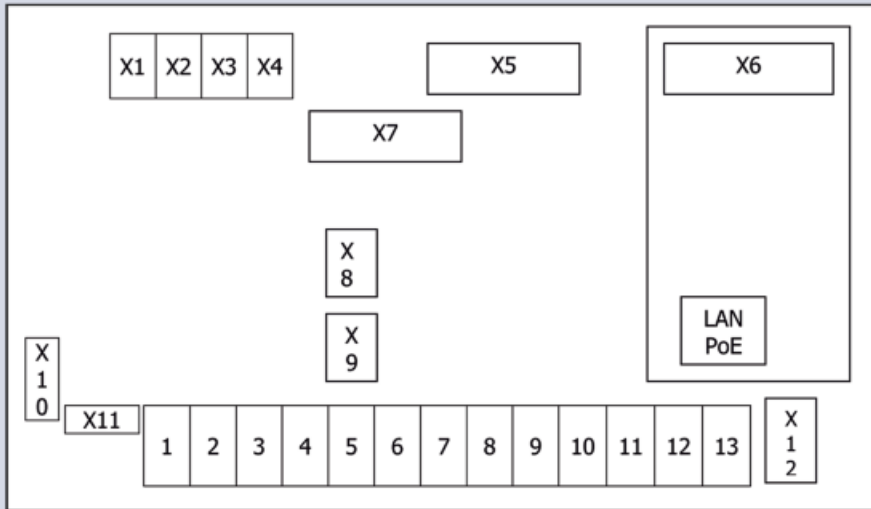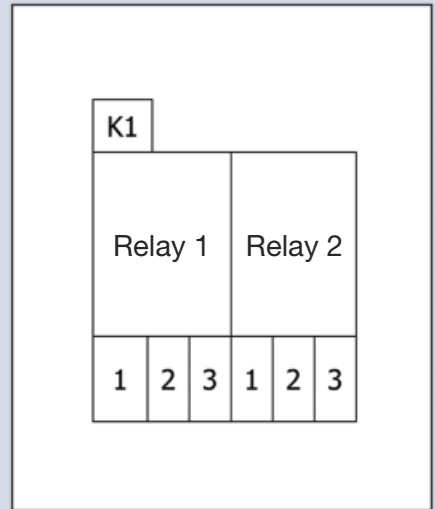
Telephone for Outdoor Facilities

Proven technology from FHF makes the ResistTel IP2 suitable for all outdoor applications.

Features

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Display	182 x 64 pixels
Protocols	H.323, SIP, TSIP, SIPS
General	H.323 version 4 including H.225, H.235, H.245 and RAS Gatekeeper routed signalling, H.450, Session Initiation Protocol (SIP) RTP, SRTP Real Time Protocol – for voice data transmission
RTCP	Real Time Control Protocol – first level of "Quality of Service"
RAS protocol	Support for an external gatekeeper
DTMF	H.245 "Alphanumeric" or "Signal Type"
Additional VoIP features	H.245 fast connect en-bloc dialing overlapped sending
Security	Encrypted password authentication as per H.235
Quality of Service	IP packet prioritization via TOS and DiffServ VLAN priority as per IEEE 802.1p / 802.1q
Audio codecs	G.711 A-law / μ-law (64 kbps), G.729A (16 kbps)
Echo compensation	G.168
Access	HTML via web browser Password protected with secure authentication
Troubleshooting	Log and trace files and status display of interfaces and connections Ping connection test for Internet Protocol, sending of SNMP traps
Updates	Configuration save and restore, Boot code and firmware updates via HTML upload Automatic updating via update server
DSL access	PPPoE protocol
VPN	Tunneling with PPTP encryption with MPPE
NAT	Network Address Translation – translates public IP addresses into private local address space addresses and vice versa
DHCP	Dynamic Host Configuration Protocol – sets up the IP interfaces
ICMP	Internet Control Message Protocol – for ping tests
Call signal generation	Automatic call signal generation as per European and US standards
Call transfer	Call Transfer in all common variants: with/without asking, before/after answering, etc.
Call diversion	Call Diversion / Redirection
Call hold	Call Hold / Retrieve
Call waiting	Call Waiting with corresponding signaling to calling party
Message	Telephone displays that a message is waiting
Pickup	Telephone displays that a call can be picked up
Pickup list	Telephone displays a list of calls that can be picked up
Name display	For signaling which name should be displayed
Call back	Call Completion with all common variants such as call back when busy and call back when free
3-way conference	With 3 parties, also external parties
Caller ID	For special signaling of individual phone numbers or phone number groups
Multiple registration	Maximum of 6 registrations
Telephone book	All registrations available automatically from central telephone book, External databases integrated via LDAP
Time	Precisely accurate time data via time server access

Connection Diagrams

Connection Diagram with LAN Switch Module
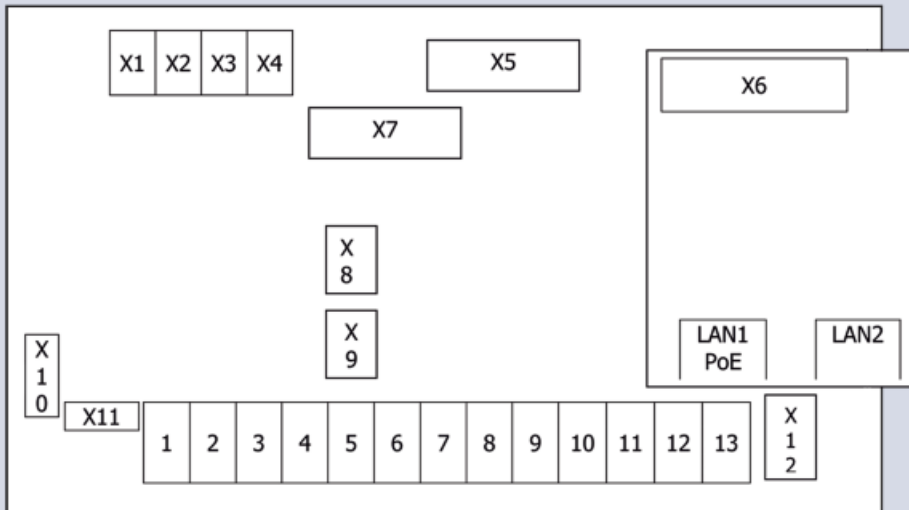
Connector	Description
X1	Loudspeaker left (ringing)
X2	Loudspeaker right (handsfree and ringing)
X3	Heater of the Display
X4	Illumination of the Display
X5	Display
X6	LAN module
X7	Keypad
X8	Hookswitch (Reed Contact)
X9	RS232 Module (optional)
X10	Amplifier Module (optional)
X11	Handset
X12	Relay Module (optional)
LAN PoE	LAN with PoE (LAN-Link, single LAN Module)
LAN1 PoE	LAN1 with PoE (LAN-Link, Switch LAN Module)
LAN2 (PC)	LAN2 (PC-Link, Switch LAN Module)
1-13	Terminals (See Operating Instructions for assignments)

Connectors and Terminals of the ResistTel IP2

Connector	Description
K1	Cable to the main board (connection to plug in X12)
1 (relay 1)	Idle contact relay 1
2 (relay 1)	Base contact relay 1
3 (relay 1)	Switching contact relay 1
1 (relay 2)	Idle contact relay 2
2 (relay 2)	Base contact relay 2
3 (relay 2)	Switching contact relay 2

Connectors and Terminals of the Relay Module

Technical Specifications

Connection Data

Powered via Power over Ethernet as per IEEE 802.3af, or via external 48-V DC PoE power supply (44 V min., 57 V max.)

Voltage of external power supply when not using the optional electrically isolated inputs	15 V - 57 V DC
Voltage of external power supply when using the optional electrically isolated inputs	21.5 V - 57 V DC
Power consumption	13 W
Connection	RJ45 port (10/100 Mbit/s)
Ring signal volume	Approx. 95 dB(A) maximum at a distance of 1 m
Housing (height x width x depth)	293 x 227 x 135 mm
Weight (standard model)	approx. 5.000 g
Display	182 x 64 pixels
Mounting position	Vertical wall mounting
Switching capacity of optional relay	240 V AC, 6A 24 V DC, 6A 32 V DC, 5A 48 V DC, 1A

Handset

Voice capsule	Electret microphone
Earpiece capsule	Dynamic capsule with magnetic field generator
Handset securing mechanism in cradle	Standard equipment

Environmental Conditions

Ambient operating temperature	-40 °C to +70 °C
Transport and storage temperature	-40 °C to +80 °C

Conformity

Protection class	IP66 as per IEC 60529
Impact resistance	IK09 as per EN IEC 62262:2002

(1) (Telephone Front Half)
(8) (Connector Header)

(2) (Front Half Screws)
(1) (Telephone Front Half)
(12) (Screws)
(12) (13) (Retaining Hook)

(20) (Screws)
(3) (Telephone Back Half)
(7) (Plug Connector)
(6) (Blind Plug)
(5) (Blind Plug)
(4) (Screw-on Cable Clamp)
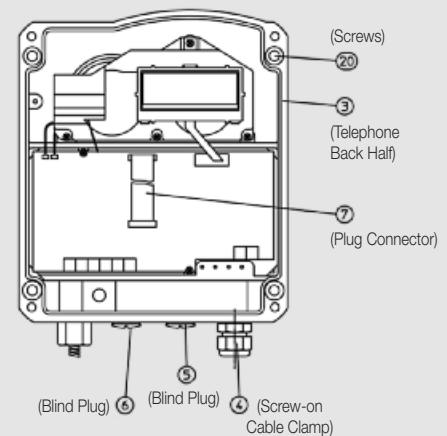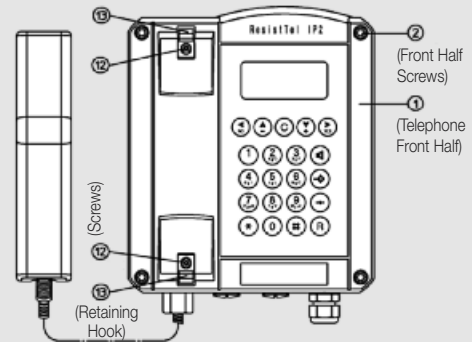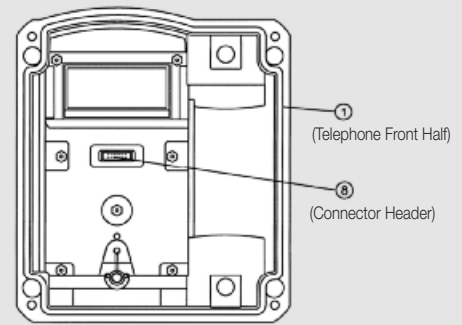
Ordering Data

Type	Designation	Housing Color	Options	Art.-No.
ResistTel IP2	VoIP Telephone	Black		112 643 80
ResistTel IP2	VoIP Telephone	Black	with optional 2nd LAN connection	112 643 81
ResistTel IP2	VoIP Telephone	Black	with optional relay contact	112 643 82
ResistTel IP2	VoIP Telephone	Black	with optional 2nd LAN connection and relay contact	112 643 83
ResistTel IP2	VoIP Telephone	Red		112 643 80 02
ResistTel IP2	VoIP Telephone	Red	with optional 2nd LAN connection	112 643 81 02
ResistTel IP2	VoIP Telephone	Red	with optional relay contact	112 643 82 02
ResistTel IP2	VoIP Telephone	Red	with optional 2nd LAN connection and relay contact	112 643 83 02

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