TASHKOO

Explosion proof Ex Certified Telephones

Heavy Industry Solutions

- ✓ Analogue
- ✓ VoIP / SIP
- ✓ Sound Powered

info@tashkoo.com

www.tashkoo.com

EEx II-Telephone ExResistTel

- **Explosion proof robust Telephone for rough ambient conditions in hazardous areas of zone 1 + 21 (Gas, Dust) / optional GOST and Inmetro approved / Optional UL approved Nonincendive**
- **Application: Indoors and outdoors (IP66)**
- **II 2G Ex emb [ib] IIC T6/T5**
- **II 2D Ex tD A21 IP66 T 80°C/T 100°C**
- **Housing: GRP (glasfibre reinforced polyester)**
- **Keypad and all metal parts are made by stainless steel V4A**
- **Integrated display**
- **Integrated telephonebook**
- **Handsfree operation**
- **Steel armoured handset cord**
- **The telephone can be operated ar r.H. 98 %**

ResistTel means: making telephone calls in rugged ambient conditions with the best functional security in industrial areas. In ResisTel Telephones the compression-molded housing made of GRP (Glass-fibre-reinforced polyester) is impact protected.
The stainless steel keypad (V4A) withstands high loads and at the same time protects the inner parts of the telephone. The steel armoured handset cord is manufactured to withstand high tensile forces.
With its interesting additional features and options our ResistTel opens many possibilities with regard to your special applications. The ResistTel user interface is simple, user friendly and menu driven. Under all circumstances and in all situations, even when using working gloves.
ResistTel telephones are available in different colors and options to be used in Weatherproof and Explosion proof environments for both Analogue and VoIP applications.

Technical Specifications

Housing Material : Glass-fibre-reinforced polyester
Height x Width x Depth: Approx. 266 mm x 227 mm x 135 mm
Weight: Approx. 5.5 kg
Display: 2-line alphanumerical display with pictograms. Visible area approx. 78 mm x 26 mm.
Keypad: Metal keypad with ice protection. 21 keys with ABC lettering for name entries.
Types of protection: II 2 G EEx em[ib] IIC T5 II 2 G EEx em[ib] IIC T6
II 2 D IP66 T100°C II 2 D IP66 T80°C
-25°C<=Ta<=60°C -25°C<=Ta<=40°C
Approval: DMT 02 ATEX E 183
UL Approved , Nonincendive (Optional)
Hazardous Area Rating : Class1, Division 2 Groups A, B, C, D T6
Approval: UL, Nonincendive
Line voltage: 24 VDC to 66 VDC
Line current: 15 mADC to 100 mADC
Ringing alternating current: 24 to 90 VAC (at 21...54 Hz ringing frequency)
30 to 90 VAC (at 16,6...54 Hz ringing frequency)
Ringing impedance: Greater than 6,0 KΩ at 25 Hz and 24...90 VAC.
Greater than 4,0 KΩ at 50 Hz and 24...90 VAC.
Inquiry key: Flash function adjustable from 40ms to 399ms
Dialling procedure: PD-DTMF operation to be set in the menu. DTMF operation according to the CCITT recommendation Q.23.
PD operation where the pulse/pause ratio can be set to 1.5:1 or 2:1 in the menu.
W-conductor: Connection for external secondary sounder.
Screw terminals: Up to 4 mm2 rigid. Up to 2.5 mm2 flexible.

Receiver:

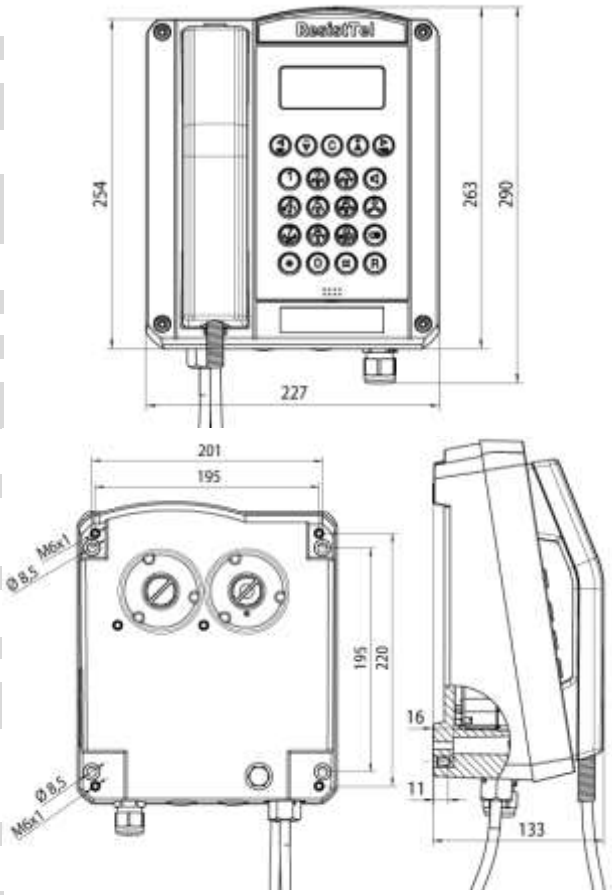
Stabilizer bracket : Integrated, adjustable stabilizer bracket
Handset cord: Stainless steel (V4A) armoured handset cord
Receiver inset: Dynamic receiver inset with leakage field spool for inductive coupling of hearing aids
Mouthpiece : Electret-foil microphone
Noise suppression: greater than 3dB due to integrated mouthpiece horn mouth

Environmental Conditions:

Degree of protection: IP 66 according to EN60529
Impact protection: IK 09 according to EN50102
Operation temperature: -25°C to +60°C for temperature class T5
-25°C to +40°C for temperature class T6
Storage temperature: -25°C to +70°C

Further Characteristics

Optical call signalling: Display shows ((( )))
Ringing sound pressure level: approx. 90 dB(A) at 1m distance
Ringing melodies: 10 melodies selectable
Listening by loudspeaker: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Handsfree operation: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Amplified listening in receiver: Receiver volume can be boosted, in 7 steps from 0 –12 dB(A)
Menus: in several language
Telephone directory: max. 50 entries (names and numbers)



Ordering Information:

Part Number	Description
11286101	ExResistTel ExII-Telephone, black
1128610102	ExResistTel ExII-Telephone, red
11286201	ExResistTel ExII-Telephone black – Protection class I
11286202	ExResistTel ExII-Telephone black – with blind plugs for metal cable gland M20 x 1.5
1128610150	ExResistTel ExII-Telephone, GOST , CUTR
1128610145	ExResistTel ExII-Telephone, black, Inmetro
11286101110	ExResistTel ExII-Telephone, black, UL
11286101112	ExResistTel ExII-Telephone, red, UL

Please send your inquiries to: **info@tashkoo.com**

Information provided is subject to change without notice

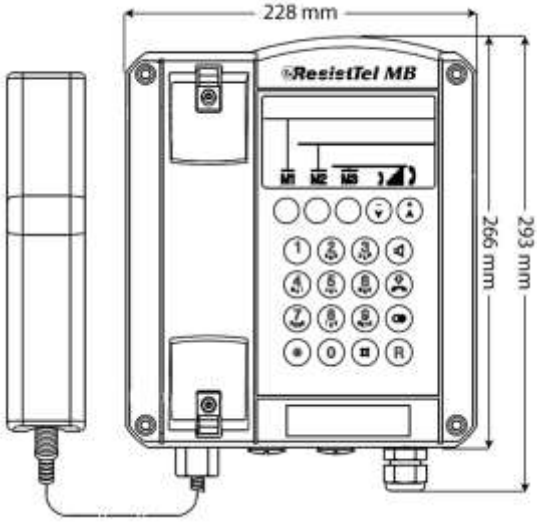
EEx II-Telephone ExResistTel MB

- **Explosion proof robust Telephone for rough ambient conditions in hazardous areas of zone 1 + 21 (Gas, Dust)**
- **Application: Indoors and outdoors (IP66)**
- **II 2G Ex emb [ib] IIC T6**
- **II 2D Ex tD A21 IP66 T 80°C/T 100°C**
- **Housing: GRP (glasfibre reinforced polyester)**
- **Keypad and all metal parts are made by stainless steel V4A**
- **Integrated display**
- **3 programmable memory button**
- **Handsfree operation**
- **Steel armoured handset cord**
- **The telephone can be operated ar r.H. 98 %**

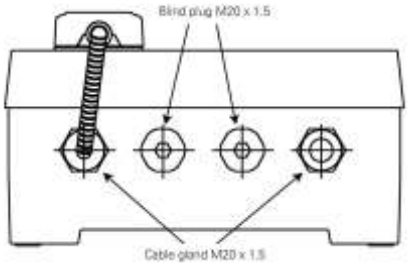
Communication devices for uses in firedamp-endangered industrial areas must be particularly adjusted to their extreme operating conditions. Our ex telephone has been specially designed for applications in the petrochemical industry, as well as offshore installations, mills and port facilities. It is resistant to high temperature differences, humidity, sea water, dust and extensive mechanical strain. The ExResistTel MB is certified for areas susceptible to explosive dusts and gases. It is equipped with a 21-key V4A stainless steel keypad that has been especially designed for use with gloves. The Ex ResistTel MB is certified to DNV GL Marine and offshore standards. A number of accessories and components especially certified for potentially explosive areas even enhance the telephone's functionality. Three direct call keys can be used to quickly call e.g. emergency numbers. The keys may be programmed as required by the user

Technical Specifications

Housing Material : Glass-fibre-reinforced polyester
Height x Width x Depth: Approx. 266 mm x 227 mm x 135 mm
Weight: Approx. 5.5 kg
Keypad: Metal keypad with ice protection. 21 keys with ABC lettering for name entries. incl. 3 direct dial keys (freely programmable)
Types of protection: II 2 G EEx em[ib] IIC T5 II 2 G EEx em[ib] IIC T6
II 2 D IP66 T100°C II 2 D IP66 T80°C
-25°C<=Ta<=60°C -25°C<=Ta<=40°C
Approval: DMT 02 ATEX E 183
Line voltage: 24 VDC to 66 VDC
Line current: 15 mADC to 100 mADC
Ringing alternating current: 24 to 90 VAC (at 21...54 Hz ringing frequency)
30 to 90 VAC (at 16,6...54 Hz ringing frequency)
Ringing impedance: Greater than 6,0 KΩ at 25 Hz and 24...90 VAC.
Greater than 4,0 KΩ at 50 Hz and 24...90 VAC.
Inquiry key: Flash function may be set to 80 ms, 120 ms, 600 ms
Dialling procedure: PD-DTMF operation to be set in the menu. DTMF operation according to the CCITT recommendation Q.23.
PD operation where the pulse/pause ratio can be set to 1.5:1 or 2:1 in the menu.
W-conductor: Connection for external secondary sounder.
Screw terminals: Up to 4 mm2 rigid. Up to 2.5 mm2 flexible.



Insulation class II



Receiver:

Stabilizer bracket : Integrated, adjustable stabilizer bracket
Handset cord: Stainless steel armoured cord
Earpiece: Dynamic capsule with stray field coil for inductive coupling of hearing aids
Mouthpiece : Electret-foil microphone
Noise suppression: greater than 3dB due to integrated mouthpiece horn mouth

Environmental Conditions:

Degree of protection: IP 66 according to EN60529
Impact protection: IK 09 according to EN50102
Operation temperature: -25°C to +60°C for temperature class T5
-25°C to +40°C for temperature class T6
Storage temperature: -25°C to +70°C

Further Characteristics

Ringing sound pressure level: approx. 90 dB(A) at 1m distance
Ringing melodies: 10 melodies selectable
Listening by loudspeaker: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Handsfree operation: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Amplified listening in receiver: Receiver volume can be boosted, in 7 steps from 0 –12 dB(A)

Ordering Information:

Part Number	Description
11286121	ExResistTel ExII-Telephone, MB, black

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Please send your inquiries to:
info@tashkoo.com

EEx II-Telephone ExResistTel ZB

- **Explosion proof robust Telephone for rough ambient conditions in hazardous areas of zone 1 + 21 (Gas, Dust)**
- **Optional GOST approved**
- **Optional UL approved Nonincendive**
- **Application: Indoors and outdoors (IP66)**
- **II 2G Ex emb [ib] IIC T6**
- **II 2D Ex tD A21 IP66 T 80°C**
- **Housing: GRP (glasfibre reinforced polyester)**
- **Without Keypad**
- **Steel armoured handset cord**

Communication devices for uses in firedamp-endangered industrial areas must be particularly adjusted to their extreme operating conditions. Our ex telephone has been specially designed for applications in the petrochemical industry, as well as offshore installations, mills and port facilities. It is resistant to high temperature differences, humidity, sea water, dust and extensive mechanical strain. The ExResistTel MB is certified for areas susceptible to explosive dusts and gases. The Ex ResistTel MB is certified to DNV GL Marine and offshore standards. A number of accessories and components especially certified for potentially explosive areas even enhance the telephone's functionality. Three direct call keys can be used to quickly call e.g. emergency numbers. The keys may be programmed as required by the user

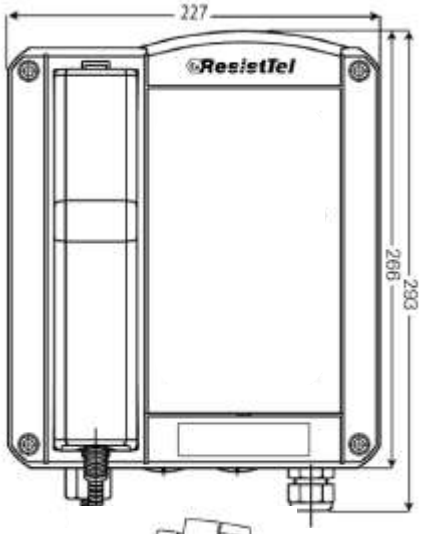
Technical Specifications

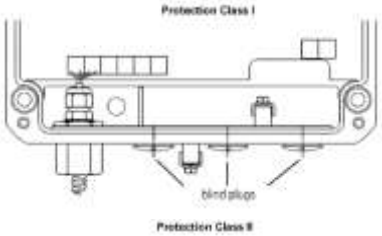
Housing Material : Glass-fibre-reinforced polyester
Height x Width x Depth: Approx. 266 mm x 227 mm x 135 mm
Weight: Approx. 5.5 kg
Keypad: No Keypad
Types of protection: II 2 G EEx em[ib] IIC T5 II 2 G EEx em[ib] IIC T6
II 2 D IP66 T100°C II 2 D IP66 T80°C
-25°C<=Ta<=60°C -25°C<=Ta<=40°C
Approval: DMT 02 ATEX E 183
UL Approved , Nonincendive (Optional)
Hazardous Area Rating : Class1, Division 2 Groups A, B, C, D T6
Approval: UL, Nonincendive
Line voltage: 24 VDC to 66 VDC
Line current: 15 mADC to 100 mADC
Ringing alternating current: 24 to 90 VAC (at 21...54 Hz ringing frequency)
30 to 90 VAC (at 16,6...54 Hz ringing frequency)
Ringing impedance: Greater than 6,0 KΩ at 25 Hz and 24...90 VAC.
Greater than 4,0 KΩ at 50 Hz and 24...90 VAC.
Inquiry key: Flash function may be set to 80 ms, 120 ms, 600 ms
Dialling procedure: PD-DTMF operation to be set in the menu. DTMF operation according to the CCITT recommendation Q.23.
PD operation where the pulse/pause ratio can be set to 1.5:1 or 2:1 in the menu.
W-conductor: Connection for external secondary sounder.
Screw terminals: Up to 4 mm2 rigid. Up to 2.5 mm2 flexible.

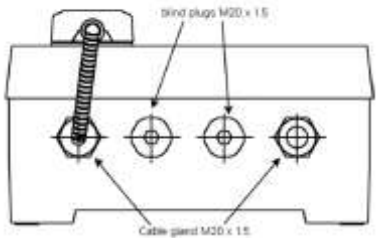
Receiver:
Stabilizer bracket : Integrated, adjustable stabilizer bracket
Handset cord: Stainless steel armoured cord
Earpiece: Dynamic capsule with stray field coil for inductive coupling of hearing aids
Mouthpiece : Electret-foil microphone
Noise suppression: greater than 3dB due to integrated mouthpiece horn mouth

Environmental Conditions:
Degree of protection: IP 66 according to EN60529
Impact protection: IK 09 according to EN50102
Operation temperature: -25°C to +60°C for temperature class T5
-25°C to +40°C for temperature class T6
Storage temperature: -25°C to +70°C

Further Characteristics
Ringing sound pressure level: approx. 90 dB(A) at 1m distance
Ringing melodies: 10 melodies selectable
Listening by loudspeaker: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Handsfree operation: Maximum sound pressure level approx. 68 dB (A) at 1m distance
Amplified listening in receiver: Receiver volume can be boosted, in 7 steps from 0 –12 dB(A)







Information provided is subject to change without notice

Ordering Information:

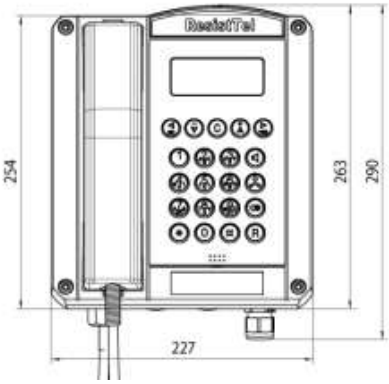
Part Number	Description
11286102	ExResistTel ExII-Telephone ZB black – without keypad and display
1128610202	ExResistTel ExII-Telephone ZB red – without keypad and display
1128610250	ExResistTel ExII-Telephone ZB , GOST – without keypad and display
11286102110	ExResistTel ExII-Telephone ZB , Black, UL – without keypad and display
11286102112	ExResistTel ExII-Telephone ZB , Red, UL – without keypad and display

Please send your inquiries to: **info@tashkoo.com**

EEx II-Telephone VoIP ExResistTel IP2

- **Explosion proof robust Telephone for rough ambient conditions in hazardous areas of zone 1 + 21 (Gas, Dust) / optional INMETRO approval**
- **Application: Indoors and outdoors (IP66)**
- **Illuminated and heated Display**
- **Protocol: H323 and SIP**
- **Connection: 10/100BASE-T**
- **Ethernet LAN, PoE**
- **Power supply: PoE or external supply**
- **Menu controlled**
- **Housing: GRP (glasfibre reinforced polyester)**
- **Keypad and all metal parts are made by stainless steel V4A**
- **Handsfree operation**
- **Steel armoured handset cord**

With approved technology of FHF, the ExResistTel IP2 is suitable for all indoor and outdoor installations. The new ExResistTel IP2 is the ideal device for every weather and a number of different operation sites, including exposure to sea water, high humidity or extensive mechanical strain. The housing is made of impact and shock-resistant plastics and even resistant to acids, alkalis or lubricants.
Its robust design represents a perfect packaging for the latest requirements for IP telephones in hazardous environments combined with proven reliability for critical mission communications and high safety applications.
The ResistTel IP2 is designed to provide ultimate user comfort on the basis of industrial standards and decades of market leading expertise and know-how. It features a display with integrated heating for ultra low temperature environments.



Technical Specifications

Protection type	II 2 G Ex e [ib] mb IIC T4 Gb II 2 D Ex tb [ib] IIIB T135 °C Db
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
RAS protocol	Support for external gatekeeper
RTCP	Real time control protocol – first level of quality of service
Security	Encoded password authentication according to H.235
Voice codecs	G.711 A-law/µ-law (64 kbps), G.729A (16 kbps)
Updates	Configuration recording/reading Boot code and firmware update via HTML upload Automatic update via update server
Access	Via HTML web browser Password-protected with secure authentication
VPN	Tunneling with PPTP encoding via MPPE
DHCP	Dynamic host configuration protocol – IP interfaces settings
Call tone generation	Automatic call tone generation according to European and US standard
Call diversion	Call diversion/redirection
Call waiting	Call waiting, with respective indication to calling subscriber
Pickup	Display indicating that a call can be picked up
Three-party conference	Conference with 3 subscribers, also external subscribers
Name display	To determine the displayed name
Multiple registration	Up to 6 registrations
Time	Exact time information via time server access
Power supply	Power over ethernet according to IEEE 802.3af over spare cable pair or external supply 19.2 V-52.8 VDC
Connection	Port (10/100 Mbit/s)
Housing	293 x 227 x 135 mm (height x width x depth)
Display	182 x 64 pixels
Handset	
Mouthpiece	Electret microphone
Stabilization bracket	Standard equipment
Environmental conditions	
Ambient temperature	-40 °C to +60 °C for devices with steel armoured cord -30 °C to +60 °C for devices with polyurethan spiral cord

Protocols	H.323, SIP, TSIP, SIPS
Relay switching capacity	250 V AC 5 A 100 VA 30 V DC 5 A 100 Watt 230 V DC 0,5 A 100 Watt 50 V DC 1 A 50 Watt
DTMF	H.245 “alphanumeric” or “signal type”
Additional VoIP features	H.245 fast connect enblock dialing overlapped sending
Quality of service	Prioritization of IP packkages over TOS and DiffServ VLAN priority according to IEEE 802.1p/802.1q
Echo compensation	G.168
Troubleshooting	Log and trace files, status displays of interfaces and connections Ping connection test for internet protocol, sending of SNMP traps
NAT	Network address translation – for translation of official IP addresses into non-official addresses and vice versa
DSL access	PPPoE protocol
ICMP	Internet control message protocol - for ping tests
Call transfer	Call transfer, in all usual variants: with/without consultation call, before/after answer etc.
Hold	Call hold/retrieve
Message	Message display on telephone
Pickup list	Display listing the calls which can be picked up
Callback	Call completion, with all common variants such as call back when busy and call back when free
Caller ID	For separate indication of call numbers or groups
Telephone book	Automatic availability of all registrations in central telephone book, integration of external data bases via LDAP
Hands-free	For use without handset
Power consumption	12.95 W , PoE (class 0)
Ringing volume	Max. approx. 95 dB(A) in 1 m distance
Weight (standard model)	Approx. 5,000 g
Operating position	Vertical wall mounting
Earpiece	Dynamic capsule with magnetic field generator
Conformity	
Protection class	IP 66 according to IEC 60529
Impact resistance	IK 09 according to EN IEC 62262:2002

Ordering Information:

Part Number	Description
11286180	ExResistTel ExII-Telephone VoIP black, with steel armoured cord
11286181	ExResistTel ExII-Telephone VoIP black, with polyurethan spiral cord
1128618045	ExResistTel ExII-Telephone IP2 Inmetro

EEx Telephone FernTel 3 / Zone 2

- **Analogue desk/wall telephone for use in areas with explosive atmospheres in Zone 2, 22Application: Indoors and outdoors (IP66)**
- **Optional INMETRO approved**
- **Protection degree IP 65**
- **Stabiliser bracket (optional)**
- **Housing: Polycarbonate**
- **With and without display and keypad , Spiral or steel armoured cord**
- **Receiver volume can be boosted in 2 steps**
- **Ambient temperature -20°C to +55°C**
- **Call tone ≥ 95 dB(A), 1 m**
- **Integrated telephonebook**
- **Explosion protection class :**
  - ✓ **II 3G Ex nA ic IIC T5 Gc**
  - ✓ **II 3D Ex tc ic IIIC T80°C Dc**

The new telephone for use in areas with explosive atmospheres of zone 2 and 22. It's housing is made of impact resistant and shockproof Polycarbonate and approved for Zone 2 and 22 according ATEX.
Within ranges of the chemical and petrochemical industry combustible atmo spheres result again and again from process engineering operational sequence. Caused e.g. by gas, steam or nebula. Its striking signal colour ensures the FernTel 3 / Zone 2 cannot be missed whenever a telephone is urgently needed in Zone 2 and 22.
The resistance of housing and use of screws of stainless steel are especially advantageous for use in areas with high air humidity and explosive atmospheres. A deft hand movement and the desk telephone is converted into a wall telephone.

Technical Specifications

Housing Material : Polycarbonate
Height x Width x Depth: Approx. 293 x 191 x 128 mm
Weight: Approx. 2.3 kg
Operating position: Desktop or vertical wall mounting
Types of protection: II 3G Ex nA ic IIC T5 Gc
II 3D Ex tc ic IIIC T80°C Dc
Call tone: ≥ 95 dB(A), 1 m

Connection data

Call frequency: programmable**:** 16…68 Hz
Pulse-break ratio: programmable**:** 1.5 : 1 60/40 ms
2 : 1 66.7/33.3 ms
MFV : According to CCITT Q23
Line voltage: 24 VDC to 66 VDC

Handset

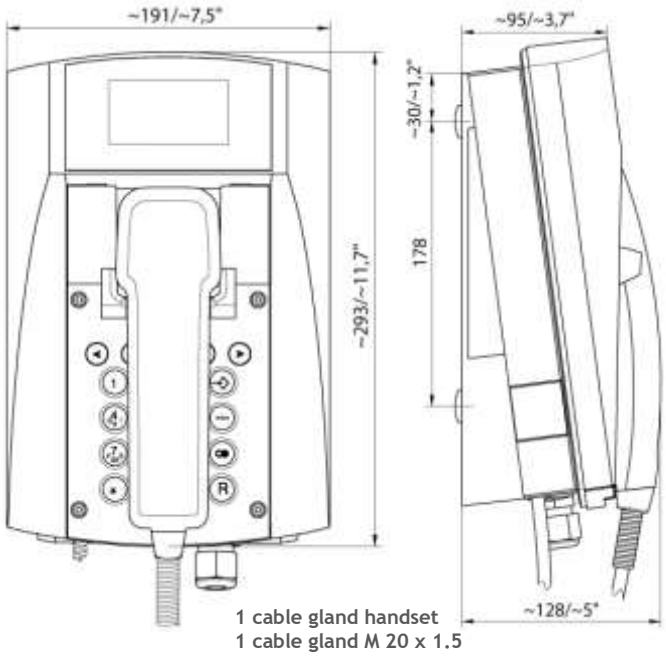
Transmitter capsule: Electret microphone
Connections: Wire up to 0.25 mm2, wire to 2.5 mm2
Incoming telephone line: TCP/La, TCP/Lb
Secondary bell: w1, w

Ambient conditions

Display: -10°C to +55°C
Operating temperature: -20°C to +55°C
Transport and storage temperature: -25°C to +70°C
Protection degree: IP 65

Conformity:

Net access, Acoustics: TBR 21, TBR 38
Electrical Safety : EN60950
Housing degree of protection: IP 65



1 cable gland handset
1 cable gland M 20 x 1.5
1 blind plug M20 x 1.5
2 blind plugs M12 x 1.5

Information provided is subject to change without notice

Ordering Information (ATEX approved):

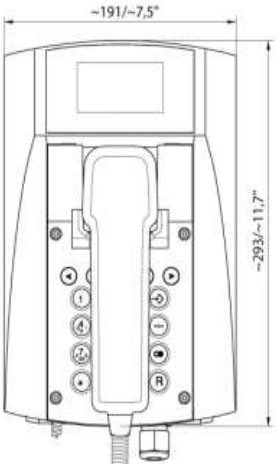
Part Number	Description
11240020	FernTel 3 / Zone 2, without display , spiral cord , black
11241020	FernTel 3 / Zone 2, with display , spiral cord , black
11242020	FernTel 3 / Zone 2, without display , armoured cord , black
11243020	FernTel 3 / Zone 2, with display , armoured cord , black
11240021	FernTel 3 / Zone 2, without display , spiral cord , yellow
11241021	FernTel 3 / Zone 2, with display , spiral cord , yellow
11242021	FernTel 3 / Zone 2, without display , armoured cord , yellow
11243021	FernTel 3 / Zone 2, with display , armoured cord , yellow
11240022	FernTel 3 / Zone 2, without display , spiral cord , red
11241022	FernTel 3 / Zone 2, with display , spiral cord , red
11242022	FernTel 3 / Zone 2, without display , armoured cord , red
11243022	FernTel 3 / Zone 2, with display , armoured cord , red
11240027	FernTel 3 / Zone 2, without display , spiral cord , grey
11241027	FernTel 3 / Zone 2, with display , spiral cord , grey
11242027	FernTel 3 / Zone 2, without display , armoured cord , grey
11243027	FernTel 3 / Zone 2, with display , armoured cord , grey
11245022	FernTel 3 / Zone 2, without keypad , armoured cord , red

Ordering Information (INMETRO approved):

Part Number	Description
1124002045	FernTel 3 / Zone 2, without display , spiral cord , INMETRO, black
1124102045	FernTel 3 / Zone 2, with display , spiral cord , INMETRO, black
1124202045	FernTel 3 / Zone 2, without display, armoured cord, INMETRO, black
1124302045	FernTel 3 / Zone 2, with display , armoured cord, INMETRO, black
1124002145	FernTel 3 / Zone 2, without display , spiral cord , INMETRO, yellow
1124102145	FernTel 3 / Zone 2, with display , spiral cord , INMETRO, yellow
1124202145	FernTel 3/Zone 2, without display, armoured cord, INMETRO, yellow
1124302145	FernTel 3 / Zone 2, with display , armoured cord , INMETRO, yellow
1124002245	FernTel 3 / Zone 2, without display , spiral cord , INMETRO, red
1124102245	FernTel 3 / Zone 2, with display , spiral cord , INMETRO, red
1124202245	FernTel 3 / Zone 2, without display , armoured cord , INMETRO, red
1124302245	FernTel 3 / Zone 2, with display , armoured cord , INMETRO, red
1124002745	FernTel 3 / Zone 2, without display , spiral cord , INMETRO, grey
1124102745	FernTel 3 / Zone 2, with display , spiral cord, INMETRO , grey
1124202745	FernTel 3 / Zone 2, without display , armoured cord, INMETRO, grey
1124302745	FernTel 3 / Zone 2, with display , armoured cord , INMETRO, grey

EEx Telephone FernTel IP / Zone 2

- **VoIP desk/wall telephone for use in areas with explosive atmospheres in Zone 2 and 2 , Optional INMETRO approved**
- **Protection degree IP 65 EN 60529**
- **Stabiliser bracket (optional)**
- **Housing: Polycarbonate**
- **Spiral or steel armoured cord**
- **Pixel-based, illuminated LCD Display , Illuminated keypad**
- **Intelligent and user-friendly menu structure**
- **Standard H.323, SIP , TSIP , SIPS protocols**
- **Power supply Power over Ethernet**
- **Connection to single 10/100-BASE-T Ethernet LAN**
- **Explosion protection class :**
  - ✓ **II 3G Ex nA ic IIC T5 Gc**
  - ✓ **II 3D Ex tc ic IIIC T80°C Dc**



This new telephone with a housing made of impact-resistant and shockproof polycarbonate is approved for zone 2/22 according ATEX. Within the field of chemical and petrochemical industry combustible atmospheres result repeatedly from procedural progress eventually caused by gas, steam or exhalation. Due to its striking signal colour the FernTel IP/zone 2/22 cannot be missed whenever a telephone is urgently needed in zone 2/22. Further advantages concerning the employment in areas with high air humidity and explosive atmospheres are given by the use of an impact-proof thermoplast housing as well as screws made of stainless steel.

The device is easily converted from a wall telephone to a desk telephone. The FernTel IP/zone 2/22 allows efficient working with high comfort completed by the illuminated keypad and display. The standardized features according to H.450 are supported. The FernTel IP/zone 2/22 offers features of high quality based on industrial standards instead of proprietary solutions.

Technical Specifications

Protection type	II 3G Ex nA ic IIC T5 Gc II 3D Ex tc ic IIIC T80°C Dc
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
RTCP	Real time control protocol – first level of quality of service
RAS protocol	Support for external gatekeeper
Voice codecs	G.711 A-law / µ-law (64 kbps), G.723.1 (5.3 kbps), G.729A (16kbps)
VPN	Tunneling with PPTP encoding via MPPE
Updates	Configuration recording/reading, Boot code and firmware update via HTML upload, Automatic update via Update-Server
Access	Via HTML web browser Password-protected with secure authentication
DHCP	host configuration Dynamic protocol – IP interfaces settings
Call transfer	Call Transfer with/without consultation call
Call tone generation	Automatic call tone generation according to European and US standard
Call diversion	Call Diversion Unconditional, Busy, No Reply
Call waiting	Call Waiting inclusive Signalling of second Call Information
Three-party conference	Conference with 3 subscribers, also external subscribers
Name display	To determine the displayed name
Time	Exact time information via time server access
Power Supply	Power over Ethernet (IEEE 802.3af)
Display	128 x 64 pixels
Connection	Port (10/100 Mbit/s)
Housing	Polycarbonate , height x width x depth 293 x 191 x 128 mm
Keypad	with stainless steel plate

Protocols	H.323, SIP, TSIP, SIPS
Additional VoIP features	H.245 fast connect enblock dialing overlapped sending
DTMF	H.245 “alphanumeric” or “signal type”
Security	Encoded password authentication according to H.235
Quality of service	Prioritization of IP packkages over TOS and DiffServ VLAN priority according to IEEE 802.1p/802.1q
Echo compensation	G.168
Troubleshooting	Log- and Trace-Files, State Display of Interfaces and Connections, Ping Connection Test sending of SNMP Traps over Internet Protocol
NAT	Network address translation – for translation of official IP addresses into non-official addresses and vice versa
DSL access	PPPoE protocol
ICMP	Internet control message protocol - for ping tests
Calling Number Identification	Message display on telephone
Hold	Call hold/retrieve
Telephone book	Automatic availability of all registrations in central telephone book, integration of external data bases via LDAP
Caller ID	For separate indication of call numbers or groups
Multiple registration	Up to 6 registrations
Ringing Volume	approx. 95 dB(A) at 1 m distance
Protection Degree	acc. to IEC60529 IP 65
Temperature range	-20°C to +55°C
Weight	Approx. 2.4 kg
Operating position	Vertical wall mounting

Ordering Information (ATEX approved):

Part Number	Description
11241120	FernTel IP / Zone 2, with spiral cord , black
11241121	FernTel IP / Zone 2, with spiral cord , black/yellow
11241122	FernTel IP / Zone 2, with spiral cord , black/red
11241127	FernTel IP / Zone 2, with spiral cord , black/grey
11243120	FernTel IP / Zone 2, with armoured cord , black
11243121	FernTel IP / Zone 2, with armoured cord , black/yellow
11243122	FernTel IP / Zone 2, with armoured cord , black/red
11243127	FernTel IP / Zone 2, with armoured cord , black/grey

Ordering Information (INMETRO and UL approved):

Part Number	Description
1124112145	FernTel IP / Zone 2, with spiral cord , INMETRO, black/yellow
1124112245	FernTel IP / Zone 2, with spiral cord , INMETRO, black/red
1124312045	FernTel IP / Zone 2, with armouredl cord, INMETRO, black
1124312145	FernTel IP / Zone 2, with armouredl cord , INMETRO, black/yellow
1124312245	FernTel IP / Zone 2, with armoured cord , INMETRO, black/red
1124312745	FernTel IP / Zone 2, with armoured cord , INMETRO, black/grey
11241142	FernTel IP / Zone 2, with spiral cord , UL, black/red
11243142	FernTel IP / Zone 2, with armoured cord , UL, black/red

Please send your inquiries to: **info@tashkoo.com**

EEx II-Telephone Auteldac 5

- **IECEx certified**
- **Application: Indoors and outdoors (IP66)**
- **II 2 G & II 2 GD ATEX Certified telephone for Gas and Dust**
- **INMETRO Approved for Gas and Dust**
- **Zone 1 & 2, Zone 21 & 22 Compliant models**
- **CE (EMC Directive 2014/30/EU)**
- **ATEX Product Directive 2014/34/EU**
- **Full keypad with 3 programmable memory buttons, or CB (0 button) variant**
- **Optional removable headset**
- **90dB sounder (adjustable)**
- **Beacon / external sounder actuator**
- **Robust and weather resistant up to IP66**
- **Extended cord length available**

The Auteldac 5 (A5) telephone is an ATEX and IECEx approved, weather resistant unit, designed to withstand arduous industrial atmospheres and environmental extremes.

Certified for safe operation in hazardous areas, the Auteldac 5 carbon loaded glass filled polyester enclosure eliminates risk of rust and corrosion. Features such as 'electronic on-hook sensing' and 'electronic tone ringer' ensures an enclosure protection of up to IP66. Should the handset be left off-hook, the A5 will automatically revert to on-hook state after a period of 7 minutes (optional).

Auteldac 5 telephones come complete with an integral ringer with volume control and secondary beacon / external sounder actuator as standard. An inductive coupler is fitted to aid the hard of hearing. For hands-free telephone use, the Auteldac 5 headset* version can be provided.

Technical Specifications

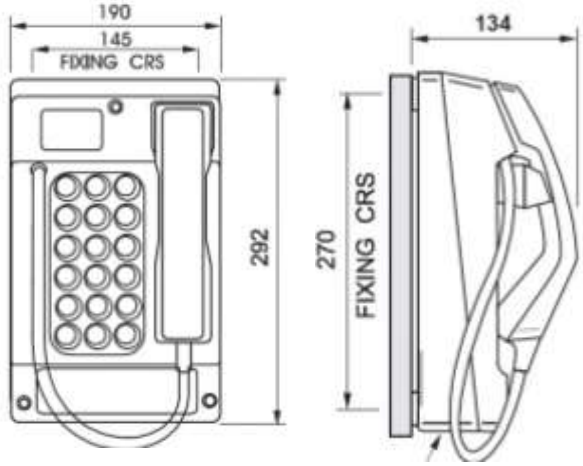
Enclosure: Carbon loaded glass-filled polyester (colour: black)
Surface resistance: <109Ω
Handset: Conductively coated polycarbonate handset with coiled cord or stainless steel spiral cord. Noise cancelling options. Extended cord lengths available.
Keypad: Weathersealed tactile digital keypad
Approval: EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/ EU, RoHS 2 Directive 2011/65/EC, ATEX Product Directive 2014/34/EU, Tested to TBR21 / TBR38)
Telephone compliance
Baseefa14ATEX0362 II 2G Ex e ib mb IIC T4 Gb (-20°C ≤ Ta ≤ +60°C)
II 2G Ex e ib mb IIC T5 Gb (-20°C ≤ Ta ≤ +50°C)
II 2D Ex ib tb IIIC T180°C Db (-20°C ≤ Ta ≤ +60°C)

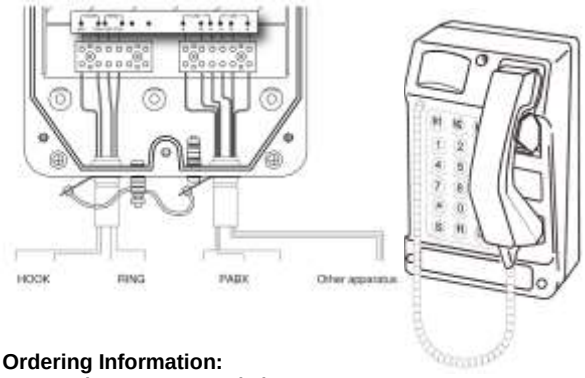
IECEx BAS 14.0165 Ex e ib mb IIC T4 Gb (Ta = -20°C ≤ Ta ≤ +60°C)
Ex e ib mb IIC T5 Gb (Ta = -20°C ≤ Ta ≤ +50°C)
Ex ib tb IIIC T180°C Db (Ta = -20°C ≤ Ta ≤ +60°C)

INMETRO (Brazil) IEx 15.0096
Ex e ib mb IIC T4 Gb (Ta = -20°C ≤ Ta ≤ +60°C)
Ex e ib mb IIC T5 Gb (Ta = -20°C ≤ Ta ≤ +50°C)
Ex ib tb IIIC T180°C Db (Ta = -20°C ≤ Ta ≤ +60°C)

Headset compliance II 2G EEx ib IIC T4 (-20°C ≤ Ta ≤ +40°C)
TUV03ATEX2124
Hookswitch: Electronic with no mechanical moving parts
Weather Ingress protection: Up to IP66
Ringing: Shrill warble tone >90 dBA @ 1 metre typical. Internal volume control.
Power Supply: Drawn from telephone line
Integral Ring Detector: Contact closure following the ringing cadence, rated at 230Vac, 3A r.m.s.
Isolated hookswitch sensor: Additional contact rated at 230Vac, 150mA r.m.s.
Parallel Terminal Block: Duplicated line terminals allows connection to a parallel device without an additional junction box.
Time Out: Enforces a fixed call maximum time limit to 7 minutes from lifting of the handset. User selectable ON or OFF
Dialling system: LD or DTMF (switchable)
Recall Button: Internally switchable from Earth Loop Recall (600ms pulse) and Timed Break Recall 100ms, 250ms or 600ms.
Certified Operating Temperature: -20° C up to +60° C
Relative Humidity: Up to 95% (non-condensing) Weight: approx. 3.2 kg
Headset: The headset cord is approximately 820mm long and can extend to approximately 2m. The headset extension lead will allow the operator to use the headset over 6 metres away from the telephone.

Information provided is subject to change without notice





Ordering Information:

Part Number	Description
212-02-5020-400	Auteldac 5, CB blk 320mm n/c, curly cord
212-02-5028-400	Auteldac 5, 18btn blk 320mm n/c, curly cord
212-02-5020-410	Auteldac 5, CB+ headset socket*, curly cord
212-02-5028-410	Auteldac 5, 18btn blk 320mm n/c + headset socket*, curly cord
212-02-5020-500	Auteldac 5, CB blk 745mm n/c, steel cord
212-02-5028-500	Auteldac 5, 18btn blk 745mm n/c, steel cord
212-02-5020-510	Auteldac 5, CB + headset socket*, steel cord
212-02-5028-510	Auteldac 5, 18btn blk 745mm n/c + headset socket*, steel cord

Please send your inquiries to: **info@tashkoo.com**

EEx II-Telephone VoIP Auteldac 4

- IECEx/ATEX Zone 1 VoIP telephone
- CE Compliant
- II 2 G & II 2 GD ATEX Certified telephone for Gas and Dust
- INMETRO Approved for Gas and Dust
- Zone 1 & 2, Zone 21 & 22 Compliant models
- Power over Ethernet (spare pair only)
- VoIP SIP Protocol (RFC3261)
- Web Page configuration
- Real time alarm reporting via e-mail
- Full keypad with 3 programmable memory buttons, or CB variant
- Operating Temperature -20°C to +50°C
- Adjustable Sounder, Configurable relay output
- Robust and weather resistant (IP66 with curly cord)
- Industrv standard robust handset . curlv cord or armoured SS

The VoIP Auteldac 4 (A4) is the world's first ATEX and IECEx Zone 1 & Zone 21 approved IP telephone. Providing simple network connection without the need for analogue convertors, extending VoIP access to arduous industrial atmospheres and environmental extremes.

With only one voice and data infrastructure to install and maintain, VoIP telephony saves time, money and call costs.

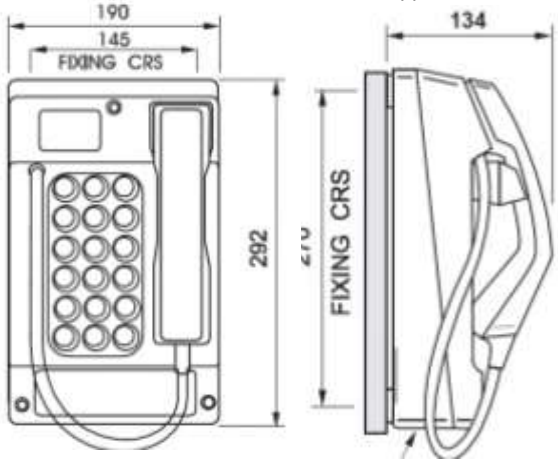
Certified for safe operation in hazardous areas, the VoIP A4 body is made from carbon loaded glass filled polyester. The elimination of moving parts ensures a high level of reliability in industrial and hazardous environments and enables ingress protection up to IP66.

The VoIP A4 telephone has a configurable relay output fitted as standard, which may be used for ring strobe activation or local speaker mute. An inductive coupler is fitted to aid the hard of hearing. For hands-free telephone use, the Auteldac 4 has the option of an ATEX approved headset*

Technical Specifications

Enclosure: (Wall mounted) Black carbon loaded glass-filled polyester
Surface resistance: <109Ω
Handset: Polycarbonate handset with conductive coating, with coiled cord or stainless steel spiral cord (extended cord lengths available)
Certified Operating Temperature: -20°C to +50°C
Keypad: Weathersealed tactile digital keypad
Relative Humidity: Up to 95% (non-condensing)
Weather Ingress protection: IP66 Curled cord, IP54 Steel Cord
Connection type: Spring loaded cage clamps
Network: 100BaseT
Power Supply: External 24V min, 48Vmax dc or IEEE Compliant Power-Over-Ethernet (PoE). Alternative B (spare pairs) only, not data pair. Draws up to 7W.
Call set-up Protocol: Session Initiation Protocol (SIP) (RFC 3261 compliant)
Codes & Audio: G.711 A-Law G.711 µ-Law G.722 G.729 G.723.1 MP-MLQ G.723.1 ACELP Codec preference sequence, DTMF in band/out of band (RFC2883), Configurable comfort tones (nation specific)
Security: Password protected
Quality of Service: Priority of IP Packets according to TOS and DiffServ VLAN Priority according to IEEE8021.p/802.1q
Reliability: MTBF 53,000 hours
Redundancy: Supports up to 4 SIP proxys
Configuration: Via configuration file or on board password protected web page server. Static IP address or DHCP.
Monitoring: Automatic fault reporting via email or Syslog messaging. Real-time over TCP/IP proprietary Syslog application.
Audio Path Testing: Allows remote testing of handsets, to verify that a phone is functioning acoustically. Can be run on demand or on a scheduled basis, reporting its results via Syslog and / or email.
Update Server: Configuration and Firmware update via TFTP
IP Address: Static IP provisioning or Dynamic Host Configuration Protocol (DHCP)
ICMP: Internet Control Message Protocol for inbuilt ping test
Memory Dialling: Numbers or URIs (with comfort tones)
Configurable Call Lists: Max 20 entries which divert to next in list if the call fails
External I/O: Single Relay contact pair rated for external beacon or sounder. Configurable activation e.g. on ringing cadence. Contact rating 5Amps @250Vac max.
Call Records: Via call description reports
Time/Date: Simple Network time Protocol with time zone and daylight saving. Date format – European / US
Ringing: Configurable via configuration file or web page. 90db @ 1 metre typical. Configurable volume
Time Out: Enforces a fixed call maximum time limit (variable) from lifting of the handset. User selectable.
Weight: approx. 3.2 kg

Information provided is subject to change without notice



Approvals

Telephone compliance
Baseefa14ATEX0362
II 2G Ex e ib mb IIC T4 Gb (-20°C ≤ Ta ≤ +60°C)
II 2G Ex e ib mb IIC T5 Gb (-20°C ≤ Ta ≤ +50°C)
II 2D Ex ib tb IIIC T180°C Db (-20°C ≤ Ta ≤ +60°C)

IECEx BAS 14.0165
Ex e ib mb IIC T4 Gb (Ta = -20°C ≤ Ta ≤ +60°C)
Ex e ib mb IIC T5 Gb (Ta = -20°C ≤ Ta ≤ +50°C)
Ex ib tb IIIC T180°C Db (Ta = -20°C ≤ Ta ≤ +60°C)

INMETRO (Brazil) IEx 15.0096
Ex e ib mb IIC T4 Gb (Ta = -20°C ≤ Ta ≤ +60°C)
Ex e ib mb IIC T5 Gb (Ta = -20°C ≤ Ta ≤ +50°C)
Ex ib tb IIIC T180°C Db (Ta = -20°C ≤ Ta ≤ +60°C)

Headset compliance
II 2G EEx ib IIC T4 (-20°C ≤ Ta ≤ +40°C) TUV03ATEX2124

Ordering Information:

Part Number	Description
212-02-7000-001	VoIP Auteldac 4 Curly Cord, 0btn, Dust & Gas
212-02-7008-001	VoIP Auteldac 4 Curly Cord, 18btn, Dust & Gas
212-02-7000-010	VoIP Auteldac 4 Stainless Steel Cord, 0btn, Gas
212-02-7008-010	VoIP Auteldac 4 Stainless Steel Cord, 18btn, Gas

Please send your inquiries to: **info@tashkoo.com**

Ex Howl-Call Telephones

- **Sound-powered telephone systems for use in rough conditions, including areas with explosive atmospheres and fire-damp**
- **Telephony without power supply**
- **Wide range of accessories , For rough conditions**
- **Sound-powered telephone system for use in hazardous areas of zone 1**
- **Application: Indoors and Outdoors (IP 54)**
- **Housing: Plastic black**
- **Expl. Protection class:**
  - ✓ **1 MI EEx ia I**
  - ✓ **II 1G EEx ia IIC T6**

Simple construction, Quick installation for frequent changes in work sites, Light and mobile devices, always ready for use, Reduces work load on existing branch exchanges, Good value for money

If you want or need to telephone in areas where this is normally not possible, you need a sound-powered telephone system. Operation without external power supply and complex equipment, sound-powered telephony is ideal for communications whenever there is no power supply available, e.g. at blast furnaces, in tunnelling or mining, or off shore on oil rigs or high-sea steamers, and provides a direct connection to the switchboard, base, bridge or colleagues on the surface. Or wherever. This surprisingly easy, but effective method is already used widely to call for material, report faults or save lives.

The howl-call telephone is a soundpowered device with highly efficient dynamic transmitter and receiver capsules offering communication without power supply. The call signal is generated by turning the rotary knob with an audio frequency dynamo. All telephones are equipped with an extremely sturdy, impact-resistant and weatherproof housing and have success fully proven their worth in years of operation in mining, tunnelling, on building sites and in industrial operations. Their range is approximately 10 km

Technical Specifications

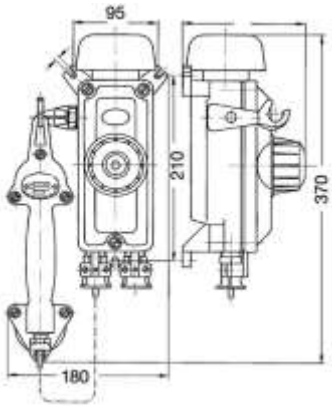
Hand telephone 5069

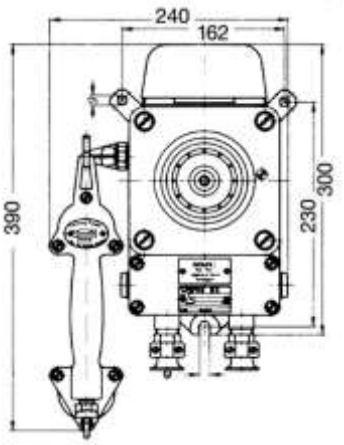
Expl. protection class:	II 1 G Ex ia IIC T6 I M1 Ex ia I
Approval:	**DMT 02 ATEX E 009**
Weight:	Approx. 1.3 kg With prick pincers approx. 1.5 kg

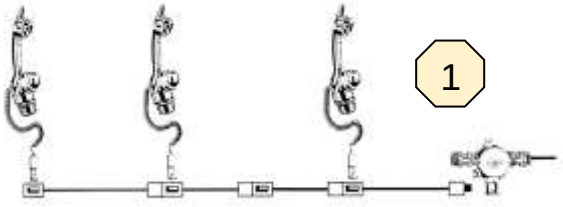
Wall telephone 5220

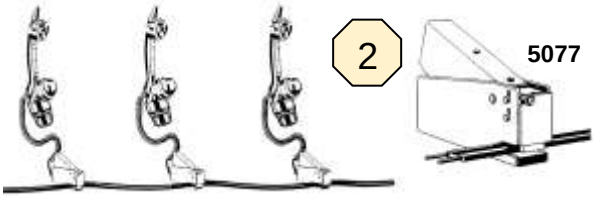
Expl. protection class:	II 1 G Ex ia IIC T6 I M1 Ex ia I
Approval:	BVS 03 ATEX E 433
Weight:	approx. 2.3 kg

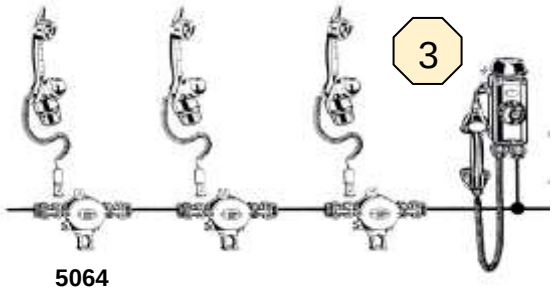
Information provided is subject to change without notice











5064

Possible Configurations:

1. With movable telephone cable, plug connection, with hand telephone
2. With movable telephone cable, with “prick pincers” – the quick connection from any part of the cable
3. With firmly installed cable, for plug-connected hand telephones and / or permanently installed wall telephones

A manually operated electromagnetic call generator generates a warble current with a frequency of approximately 2000 Hz, which is transmitted directly to the transmitter capsule by a two-wire cable. This current causes an acoustic warble call to be transmitted by the diaphragm of the transmitter capsule

Ordering Information:

Part Number	Description
113 262 01	5069 Howl-Call Telephone, Without snap-in plug
113 270 01	5069 Howl-Call Telephone, With snap-in plug Coupling socket/Wall socket
113 270 02	5069 Howl-Call Telephone, With prick pincers Flat-band cable
113 271 01	5220 Without amplifier Fixed installed or movable cable
Accessories	
119 027 02	5555 Snap-in plug, high impact-resistant plastic
118 210 02	5554 Coupling socket, high impact-resistant plastic
118 201 03	5564 Wall socket, plastic
113 243 01 Ax	5077 Prick pincers, stainless steel sheet, with 1 m cable
921 260 226	Flat-band cable, two-core, tensile strength approx. 500 N (Lengths on request)

Please send your inquiries to: **info@tashkoo.com**

A103 Intrinsically Safe Mine Telephones

- **ATEX Certified**
- **Full 15 button keypad, plus Emergency push**
- **button operation**
- **DTMF/LD dialling and recall options**
- **Intrinsically safe**
- **No moving parts**
- **Wall mounting, simple installation**
- **Rugged and weather resistant to IP55**
- **Robust handset- curly cord**
- **Large tactile buttons, easy to see and operate**

The A103 is a push button telephone, purpose-designed for underground coal mining installation and use, providing automatic dialling via a surface interface into a standard PAX or PABX surface exchange. Its ruggedised, welded steel casing with stove-enamel coating is saline resistant.

The telephone is made of glass filled polyester with polycarbonate curly cord handset which is impact resistant and sealed to IP55. Twin speakers give >90dBA SPL for ringing and when used as a loudspeaker unit under emergency conditions.
The all-electronic internal module is conformal coated for reliability. An easily accessible Ni-MH battery module in each telephone provides the internal audio amplifier's operating supply and is trickle charged from the telephone line.

Connection is via a simple twisted-pair cable that can be contained within a multi-core cable if required. Up to three telephones can be connected for 'party-line' working from one line pair by a four-core link.

Operation is simple, with finger guide holes for ease of dialling, even when wearing thick gloves. An easily distinguishable button operates an emergency alert (to an Emergency desk, if fitted).

The telephone may be configured for either DTMF or LD dialling. When DTMF has been selected, the Star, Hash and Recall buttons enable access to all of the extended functions of the exchange.

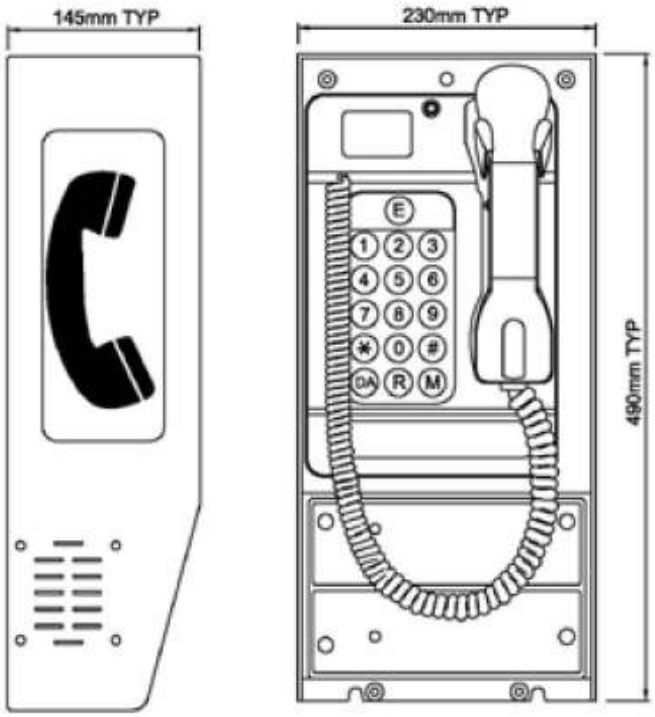
Immediate re-dialling is achieved by use of the Recall button.

Applications: Underground, coal mining

Technical Specifications

Casing Material: Carbon loaded glass-filled polyester
Dimensions : W 230MM X H 490MM X D 145MM
Casing Surround: Sheet steel, stove enamelled
Handset Material: Polycarbonate
Keypad: Weather sealed tactile digital keypad
Degree of Protection: IP55
Weight: 9kg
Operating Temperatures: -20°C to +40°
Controls:
Press to Dial/Accept call
Keypad Dialling
Press to Recall
Press for Emergency
Press switch on handset (disables broadcast speech)
Operating Power: 8.4V dc from internal 600 mAh Ni-MH rechargeable battery module, charged from the line @ 24V dc at 10mA
Operating Current (from battery): 250mA nominal (loudspeaker ringing)
Loudspeakers: Two (Mylar). Facing each way along the mine shaft
Audio Output: 2W peak into 16 Ohms
Acoustic Output: 95dBA @ 1m
System Supply: Via ST1 Interface, requires connection to a barrier

Information provided is subject to change without notice



Approvals

Radio & Telecommunications Terminal Equipment Directive 1999/5/EC (R&TTE)
2011/65/EC ROHS 2 Directive
ATEX 94/9/EC Directive – I M1
Ex ia I Ma (Ta = -20°C Ta +40°)
Baseefa12ATEX0197

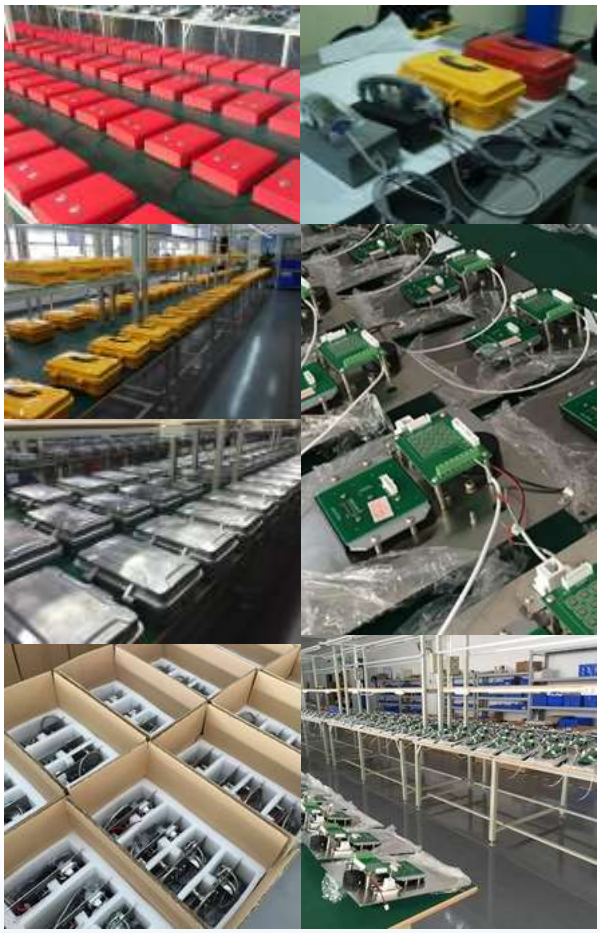
Ordering Information:

Part Number	Description
022-02-0069-003	A103 Intrinsically Safe Mine Telephone

Please send your inquiries to:
info@tashkoo.com

TASHKOO offers a range of Explosionproof analogue, VoIP-SIP and Sound Powered telephones designed for arduous environment. Open protocol hardware gives telecoms designers the flexibility to furnish an entire estate with the same hardware, but with a choice of connectivity for each location. This allows projects to be deployed efficiently and cost-effectively, our offered standard telephones are offered from leading manufacturers. But where we really excel is our flexibility when you need a customized product.

The successful cooperation with thousands of customers all over the world and the supports to hundreds of projects have made us and our offered products a reliable and popular supplier of industrial phones and phone accessories. The main products include explosionproof telephones, in Analogue, VoIP/SIP and Sound powered applications



The offered products are in compliance with:

Radio & Telecommunications Terminal Equipment Directive

FCC Part 15 Subpart B Class B

TASHKOO is a British specialist company in the field of Electrical, Telecommunications & Control systems and solutions. TASHKOO engineers and professionals have over 20 years of experiences in turn-key projects for manufacturing, systems integrations, installations and commissioning of advanced technology products for electrical , power line, telecommunications and control systems and solutions.

TASHKOO engineers have many years of successful experiences to supply customers with the most cost effective solutions based on latest technology products from the world leading manufacturers. TASHKOO is experienced in providing complete solutions for complex requirements.

TASHKOO can offer value added services which will save your money, resources, and headaches and smoothly get your electrical, telecommunications & control systems up and running in a shorter time. We can simply customize our offers to suit your technical requirements.

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