

Industrial Weatherproof Telephone

FernTel 3000

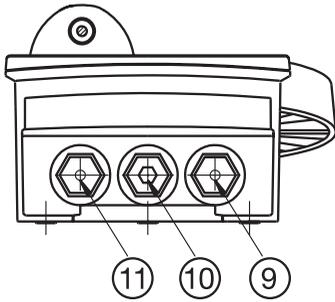
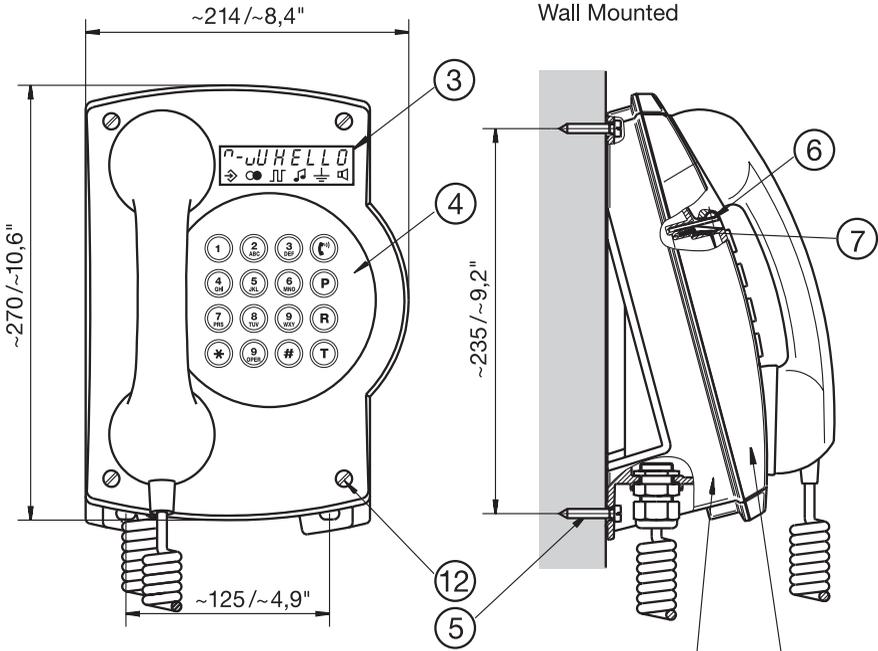


UL Registration Number E209659
FCC Registration Number
6SH Ger-35065-TF-E
Ringer Equivalence Number REN 0,9B

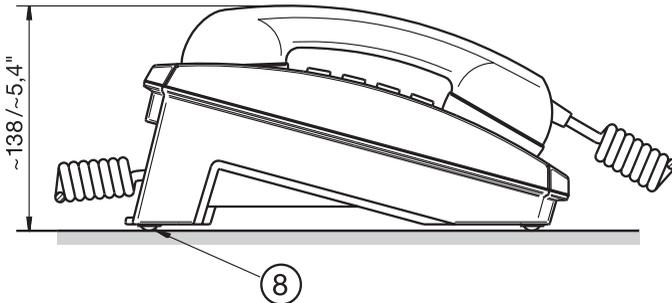
User manual



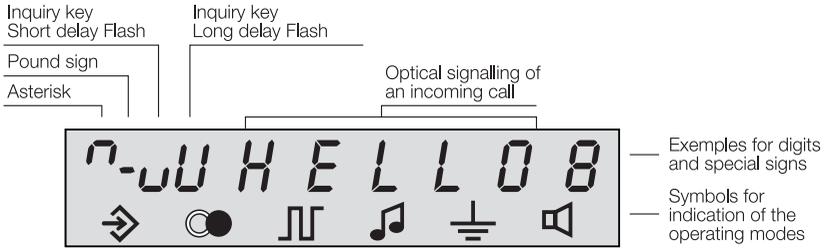
Telephone Characters



Desk Mounted



LC Display



	The telephone is in programming mode.		Dialling procedure PD (Pulse Dialling) is ON
	The number from the last number redial memory is being dialled.		Inquiry call mode is ON
	Dialling procedure DTMF (Dual-tone multifrequency) is ON		The Amplified Listening in Receiver feature is ON

Keyboard

				← Amplified Listening in Receiver feature
				← Programming key
				← Last number redial
		# key"/>		← Inquiry key
				← Hash sign (only in DTMF mode)
				← Asterisk (only in DTMF mode)

Note

Please read the User Manual carefully prior to installing the telephone.
Make sure no equipment parts are missing.

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Warning and security notes

When installing any telephone equipment, please observe to the following guidelines to ensure the safety of all personnel:

- **NEVER** install telephone wiring during a lightning storm.
- **NEVER** install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- **NEVER** touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- **USE CAUTION** when installing or modifying telephone lines.
- **TO REDUCE** the risk of fire use only No. 26 AWG or larger telecommunication line cord

This device is a weatherproof telephone designed for use in a rough industry environment. The following warning and safety notes must be observed:

1. The telephone may be connected to and operated with the prescribed voltage only. Make sure the telephone is properly connected. The connecting wire must be routed in a way to prevent persons from tripping over it.
2. The telephone may be operated under the environmental conditions laid down in Technical Data only. Operation in hostile environmental conditions, for instance too high or too low ambient temperatures, is not allowed, as this may cause electronic parts to malfunction.
3. Make sure the telephone connecting wire and any other parts of the telephone are not damaged. If the telephone has been damaged it should not be operated.
4. During operation of the telephone legal and professional regulations, safety regulations, and electrical regulations must be observed.
5. If the telephone has to be repaired, the repair must be done professionally, using original spare parts only. Spare parts from other sources may cause damage.
6. Prior to maintenance or replacement of the telephone the line must be disconnected. Maintenance or repair works that have to be carried out while electrical power is connected may be carried out only by trained and skilled personnel.
7. The listening quality may be **marginally reduced due to the** influence of strong external magnetic fields.
8. The manufacturer of this product reserves the right to technical alterations without further notice.
9. Although this equipment can use either loop disconnect or DTMF signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is strongly recommended that the equipment be set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call set up.

Package contents

The delivery consists of:

- 1 industrial telephone, type WTS 100
- options bag with latching hook cover and 4 rubber stand-offs (for desktop version)
- this user manual

General operating instructions

1. The weatherproof telephone, type WTS 100, has been developed to access analogue dial-up ports.
2. The telephone is equipped with a proximity detecting hook switch. This means that the handset must be put down to interrupt or end an active call.
3. Memory procedures, which begin with the **programming key** (P), must also end with this key in order to be stored in memory.
4. The **receiver** must be lifted to enable programming of the different functions.
5. If more than 2 minutes pass without a number being dialed, the exchange may turn off the **power supply**. You will then no longer hear a dial tone. In this case put down the receiver and wait approximately 2 seconds before you lift it again. Procedures, which you have begun, but not yet completed using the **programming key** (P), must be repeated.
6. If a procedure has been successfully completed, you will hear an **acknowledgement tone**. An **error tone** informs you in case of an operating error.
7. If you are receiving a call, your telephone will ring with the ringing sound pressure level you have set. When the telephone is ringing the **HELLO** is shown on the display.
8. The receiver has a receiver inset, which is equipped with a magnetic field sender. User of **hearing aids** with an inductive receiver may receive the signal of the receiver inset directly with this telephone.
9. **Forgetting the PIN is comparable to losing a key.** If you have forgotten your PIN, please contact one of our service dealers.

Setting up the telephone

Mounting the telephone on the wall

Open the telephone by loosening the 4 cover screws **12**, and screw the base **1** onto the wall or another carrier using 3 screws (see *front cover for details*). Use three 1/4"-20 machine screws **5** with nuts or #14 wood screws with dowel of appropriate length, depending on the mounting surface. The mounting surface should be even to rest on all three stand-offs. Connect the telephone according to the connection diagram (*Fig. 2*). Please note that the cable diameter must comply with the corresponding dimensions of the cable gland, otherwise the requirements of the NEMA/IP rating will not be fulfilled. When all the connections have been made, fasten lid **2** on base **1** with screws **12**. The operating procedures may now be used to perform individual adjustments of the telephone. Check for proper telephone operation by calling to and from another telephone.

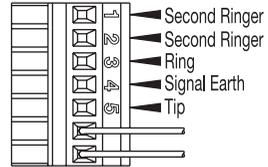


Fig. 2

Setting up the telephone on desktop

Open the telephone by loosening the 4 lid screws **12**, turn lid **2** 180° and screw it on to base **1**. It is recommended to remove the latching hook **6** by unscrewing screw **7** and replace it by the enclosed cover. The ship-with, self adhesive rubber stand-offs **8** should be placed in the corresponding recesses in the base. Connect the telephone according to the diagram (*Fig. 2*). Check for proper telephone operation by calling to and from another telephone.

Connecting a secondary sounder

If you want the telephone to control a secondary sounder as well, you will have to replace the blind plug 10 by a cable gland NPT 1/2" with hexagon 24 mm, NEMA 4X/IP 66. Please note that the cable diameter must comply with the corresponding dimensions of the cable gland, otherwise the requirements of the NEMA/IP rating will not be fulfilled. The secondary sounder is connected at the terminals **Second Ringer** (*Fig. 2*). When all the connections have been made, fasten lid **2** on base **1** with screw **12**.

Exchange of a cable gland

If you wish to replace the cable gland fitted in the factory with a different one – **use only size 1/2", NEMA 4X** – isolate the telephone from the telephone network. Unscrew the 4 lid screws **12** and open the telephone. Remove the cables from the relevant cable gland. Loosen the counter nut (spanner size 24) on the cable gland and remove it. Before fitting a new cable gland, check the seal of the housing for possible damage. Insert a new cable gland and fasten it with a suitable counter nut. Then pull your cables through the cable gland and connect each lead as shown in *Fig. 2*. Follow the instructions given by the manufacturer of the cable gland regarding type and size of the cable allowed. When all the connections have been made, fasten lid **2** on base **1** with screw **12**.

Operating procedures

Please unfold back cover!

Using the accompanying procedure and the keys **0** through **9** the ringing melody may be individually modified. In the factory settings the key **1** is the active setting.

Setting the ringing options

Using the accompanying procedure the ringing volume may be adjusted in stages from **1** to **5** (**1** = low; **5** = high) and stored, even during an active call. In the as-delivered condition this function is set to stage **5**.

Setting the ringing sound pressure level

The telephone enables you to boost the normal volume in the handset by **6 dB** or **12 dB**. After having lifted the handset by used to adjust the set receiver volume.

Amplified Listening Receiver function

When the handset is hung up again, the receiver volume will return to normal.

If you have dialed a telephone number and the other participant does not answer, or the line is busy, please try again by using the **last number redial**.

Last number redial

You may program the Inquiry key function yourself, if you use **dual-tone multifrequency** (DTMF)

Programming the enquiry key – earth

Programming the enquiry key – flash

Programmable Automatic Pause Function (APF). If a code is required to gain access to the next level of the network (internal or external) it is not necessary to pause between the access code (typically 0 or 9) and the required number. The APF **once activated during set up** will automatically inset the correct delay required by the system.

Entering the APF

The APF offers a choice of **short** or **long** pause to ensure compatibility with most switches. The factory setting is for a short pause.

Programming the duration of the APF

Please refer to your terminal equipment documentation to determine the delay required for your system.

Deleting the APF

Certain settings, like for instance disable/enable device programming, are protected by a code number against random change or misuse. In the factory setting the **PIN 0000** is the active setting. You may change the PIN.

Disable device programming

Enable device programming

- **Forgetting the PIN is comparable to losing a key.** If you have forgotten your PIN, please contact your **FHF** dealer.

Change PIN

Factory settings

The factory settings are as follows:

Dialing procedure	DTMF (tone duration 90 ms)
Amplified Listening in Receiver function	two-stage (6 dB/12 dB)
Signaling Flash	80 ms
Sounder response frequency	(15 ... 68) Hz
Automatic Pause Function	3 s
Melody	1
Ringing sound pressure level	5
PIN	0000

If the factory setting does not correspond to the technical data of the telephone system the setup procedure needs to be programmed accordingly.

Setup procedure

Setup performance features



	Function	Code
Ringing response Sounder response frequency	23 ... 68 Hz	41
	15 ... 54 Hz	42
	23 ... 54 Hz	43
	15 ... 68 Hz	44
Dialing parameter	DTMF, tone duration unlimited	91
	DTMF, tone duration 70 ms	92
	DTMF, tone duration 90 ms	93
	PD 1,5 : 1	94
	PD 2 : 1	95
Deleting memory and restoring the factory settings		33

- When „**Restoring the factory settings**“ the existing PIN will not be changed automatically.

Signal tones

In addition to the ringing melody, which sounds upon every incoming call, your telephone may send out further acoustic signals in the form of simple tones, which may serve to give you useful information during programming.

Tone	Number	Significance
Acknowledgement tone	1 long tone ■	Completing a correctly performed procedure
Error tone	4 short tones ■■■■	An error has been registered during the course of a procedure. Procedure cancelled.

General notes

User Instructions

Federal Communication Commission regulations require that the following instructions be followed when connecting to the US public telephone network.

This equipment complies with Part 68 of the FCC Rules. On the front panel of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be given to the telephone company.

The REN is used to determine the quality of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to the line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily (see the note at the end of this section). If possible, they will notify and you will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in their facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

Note. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on party lines or coin service provided by telephone company.

Service

You have purchased a modern **FHF** product, which has been subject to rigid quality control. If you have any questions about this telephone, or if malfunctions should occur even after the guarantee period – please contact your **FHF** dealer. Before you make the call, however, please find the type and product numbers on the product name plate.

Maintenance and cleaning

The telephone is maintenance free. If it is operated in areas where it is subjected to large amounts of dust, grease, oil etc. the telephone should be cleaned from time to time. Use a moist cloth to wipe off the device. **Warning! Never use sharp or pointed instruments to clean the telephone. Do not use cleaning agents.**

Replacement parts

For a detailed list please contact your local agent or contact email: info@fhf.de

Warranty

Equipment. *FHF* warrants for a period of one (1) year from the date of shipment, that any *FHF* equipment supplied hereunder shall be free of defects in material and workmanship, shall comply with the then-current product specifications and product literature, and if applicable, shall be fit for the purpose specified in the agreed upon quotation or proposal document. If (a) Seller's goods prove to be defective in workmanship and/or material under normal and proper usage, or unfit for the purpose specified and agreed upon, and (b) Buyer's claim is made within the warranty period set forth above, Buyer's sole and exclusive remedy, and the warranty period on any repaired or replacement equipment shall be one (1) year from the date the original equipment was shipped. In no event shall *FHF* warranty obligations with respect to equipment exceed 100 % of the total cost of the equipment supplied hereunder. Buyer may also be entitled to the manufacturer's warranty on any third-party goods supplied by *FHF* hereunder. The applicability of any such third-party warranty will be determined by *FHF*.

Services. Any services *FHF* provides hereunder, whether directly or through subcontractors, shall be performed in accordance with the standard of care with which such services are normally provided in the industry. If the services fail to meet the applicable industry standard, *FHF* will, for a period of one (1) year from the date of completion, re-perform such services at no cost to Buyer. Re-performance of services shall be Buyer's sole and exclusive remedy, and in no event shall *FHF* warranty obligations with respect to services exceed 100 % of the total cost of services provided hereunder.

Warranty Periods. Every claim by Buyer alleging a defect in the goods and/or services provided hereunder shall be deemed waived unless such claim is made in writing within the applicable warranty periods as set forth above. Provided, however, that if the defect complained of is latent and not discoverable within the above warranty periods, every claim arising on account of such latent defect shall be deemed waived unless it is made in writing within a reasonable time after such latent defect is or should have been discovered by Buyer.

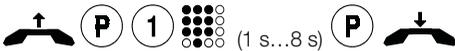
Limitation/Exclusions. The warranties herein shall not apply to, and *FHF* shall not be responsible for, any damage to the goods or failure of the services supplied hereunder, to the extent caused by Buyer's neglect, failure to follow operational and maintenance procedures provided with the equipment, or the use of technicians not specifically authorized by *FHF* to maintain or service the equipment.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Technical data

FCC Registration Number		6SH GER-35065-TF-E
UL Registration Number		E209659
Ringer Equivalency Number		REN 0,9B
Connecting data		
Line voltage		24 ... 66 V _{DC}
Line current		18 ... 100 mA
Ringing alternating current		30 ... 150 V _{AC}
Ringing frequency		16,67 ... 54 Hz
Input impedance		≥ 6,0 Ω bei 25 Hz
		≥ 3,5 Ω bei 50 Hz
Earth function		Line Tip to Signal Earth available
Pulse dialing (PD)	Dialing frequency	10 Hz
	Pulse/pause ratio	2,0 : 1 66,7/33,3 ms 1,5 : 1 60,0/40,0 ms
Dual-tone multifrequency (DTMF)		-6 dB power level of the low group
CCITT Q23		-4 dB power level of the high group
Ringing sound pressure level approx.		96 dB (A) at 1 m / 3,3 ft
Housing		
Material		Polycarbonat UL 94V-5A
Height x Width x Depth approx.		380 x 240 x 148 mm/10,63 x 7,87 x 5,43 in
Weight approx.		3,6 kg / 8,1 lbs
Display		16 digits, digit height 11mm, pictograms
Operating position		Desktop or vertical wall mounting
Handset (receiver)		
Microphone		Electret condenser
Receiver inset		Dynamic receiver inset, meets hearing aid compatibility technical standards per FCC Section 68.316
Connections		
		Connectors up to 2,5 mm ² / AWG 14
Network connection (USOC)		Tip / Ring
Secondary sounder/Second Ringer		
Signaling at private branch exchanges		Signal Earth
Ringing loudspeaker		permanently connected
Environmental conditions		
Ambient operation temperatures		-10° to +50° C / +14° to 122° F
Transport and storage temperatures		-20° to +60° C / -4° to 140° F
Humidity		90 % non-condensing
Degree of protection		IP 66 (IEC 529)/ Type 4X Enclosure (UL 50)

Operating Procedures



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