

Weatherproof Intercom Station

Intelly Com



Operating manual



Operating Manual - IntellyCom

Notes

Please read the operating manual carefully before installing the device.

Texts and illustrations have been compiled and software created with the utmost care, however errors cannot be completely ruled out. This documentation is therefore supplied under exclusion of any liability or warranty of suitability for specific purposes. FHF reserves the right to improve or modify this documentation without prior notice.

Before opening or dismantling the device it has to be separated from all voltage supply.

General Description

The IntellyCom is a weatherproof Intercom Station which can be operated in the analogue, public telephone network or can be connected to analogue terminals of branch exchanges.

The IntellyCom is available in different designs:

- With casing it is made for wall mounting or it can be fixed on pylons and joists.
- Without casing it is meant as built-in unit.

This manual describes below the construction with casing. The connection of the built-in unit is made correspondingly, but without considering the cable entries.

The Intercom Station comprises

- a loudspeaker and
- a microphone for voice communication
- a hookswitch key as operating element
- and a LED (part of the hookswitch key) as loop current indicating element.

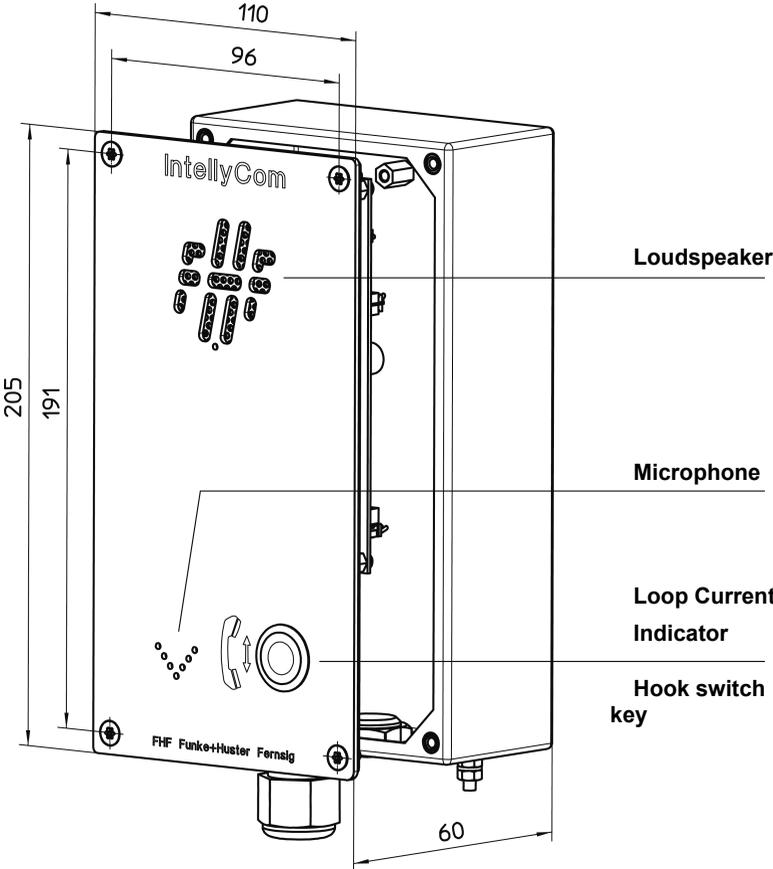
Utilization and programming is identical in all devices.

Features

- Pulse / tone dialing
- Automatic clear-down capability
- Automatic answering capability or answering after a programmable number of rings
- Chained numbers if the the called number is busy or does not answer after a programmable time
- Remote programming of
 - telephone number
 - ringer volume
 - ringer melody
 - loudspeaker volume
 - automatic call acceptance
 - dialing type

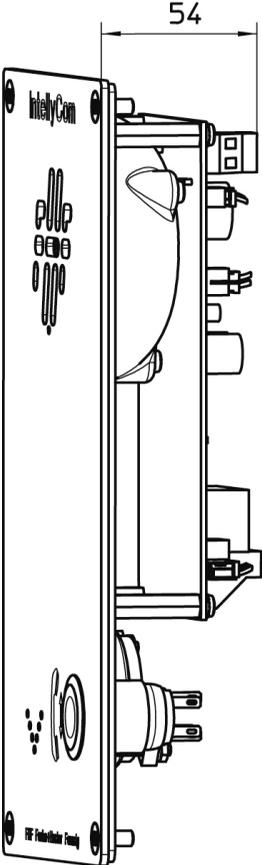
Intercom Station IntellyCom

with casing

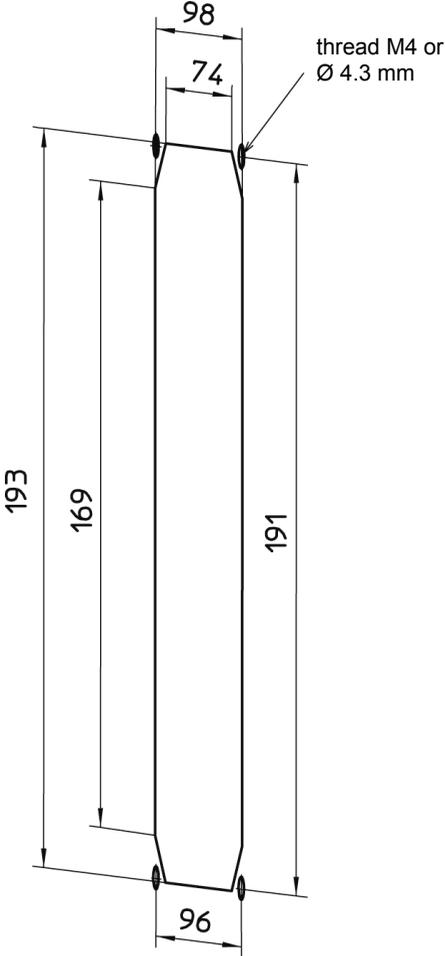


Intercom Station IntellyCom

built-in unit



assembly cut-out



Connection

Opening the Intercom Station

To gain access to the circuit board or the tamper alarm switch, unfasten the four screws in the front panel.

Attention: Before opening or dismantling the device it has to be separated from all voltage supply.

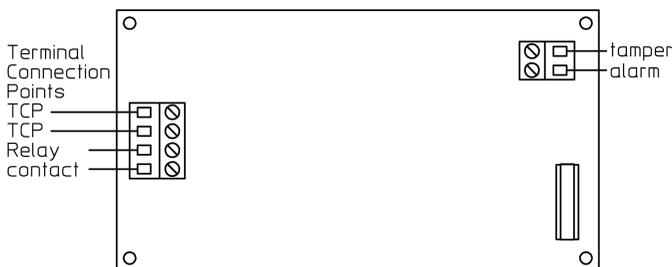
Concluding notes

CE (cable entry)	M20 x 1.5
Protection rating CE	IP66
Connection cable	Ø 5 to 9 mm
Wire and connector diameter	0.14 to 2.5 mm ²

Only appropriate tools may be used for the assembly of the CE. The cable connection is suitable for firmly secured conduits only. When locking the equipment, ensure tight fit and cleanliness of all sealing. To retain the protection rating IP 66, cover screws must be screwed in either side, diagonally with 1.4 Nm each.

Connection of the tamper alarm switch

Pull the control line through the cable gland of the box and connect the two wires to the insulated screw joints of the tamper alarm switch. The voltage and the maximum power in the tamper alarm circuit shall not exceed 60 V_{DC} or 30 V_{AC} respectively 30 W.



Connection of the telephone line

Pull the telephone line through the cable gland of the box and connect it to the Terminal Connection Points TCP.

Relay contact output

The Intercom Station board comprises a relay contact which can be activated from a remote telephone or telephone system. This relay can control for example electric door entry mechanism, signaling and other electrical devices. The voltage at the relay contact terminals shall not exceed 60 V_{DC} or 30 V_{AC}. The maximum power is 30 W. The maximum current is 1 A. Another cable gland is needed to connect a cable to the relay contacts. Exchange it with the sealing plug.

The operating of the relay is described below. In all cases the relay will be deactivated on hanging up.

Note:

When the on/off button is pressed, IntellyCom dials the programmed telephone number(s). If no telephone numbers have been programmed, the intercom station remains “occupied”.

The intercom station disconnects automatically when you and your speaking partner pause for longer than the programmed pause limit (*13xx*), when your speaking partner hangs up and IntellyCom detects the telephone’s busy signal, or when the programmed conversation duration limit (*12xx*) has expired.

The intercom station mutes the microphone or undoes a previous muting if the on/off button is pressed briefly during the conversation. IntellyCom’s loop current indicator light displays a blinking light to indicate that the microphone is switched to mute, or a continuous light to indicate the active state.

Attention!

To guarantee the protection against contact a voltage equalizing cable has to be connected to the voltage equalizing screw of the casing or in case of the built-in unit to the corresponding mounting tab on the inside of the built-in unit.

The IntellyCom complies with the casing design of the casing kind of protection IP66. For the built-in version the installer has to take care that the desired protection against water and dust will be achieved by appropriate seals. In case of deficient built-ins the installer assumes the entire responsibility.

For the casing construction the distance to other live components has to be constructed safely in built-in condition, see EN 60950-1!

Operation

Making a Call

Press the on/off button.

The loop current indicator light blinks to indicate that a connection is being made, and changes to the continuous “on” state, when the receiving party answers the call.

To converse with your respondent, speak in the direction of the Intercom station from a distance of about 30 cm.

To disconnect, press the on/off button and release when a signal tone announces the expiration of the programmed minimum press duration (*32xx* (2 s)). The loop current indicator light will go out and the intercom station will go back to standby.

Receiving a Call

When the intercom station rings, press the on/off button.

The loop current indicator light goes on, glowing continuously.

Conduct your conversation.

To disconnect, press the on/off button as above under “Making a Call”. The loop current indicator light will go out and the intercom station will go back to standby.

Programming

The Intercom Station IntellyCom is designed to be programmed remotely over the telephone line. Programming is carried out using sequences keyed from a telephone, when connected to the IntellyCom to be programmed.

Remote programming codes are split into two classes Class 0 and Class 1 which are distinguished by different enclosing characters; “#” for Class 0 and “*” for Class 1.

The IntellyCom accepts Class 1 programming codes only if the user has the right to program. This is achieved by sending the Class 0 programming code #AccessCode#. The factory setting is AccessCode=1234.

Class 0 programming codes are always accepted.

Programming Codes

For each programming sequence below the telephone responds with an acknowledge or an error tone. In case of an error tone the programming sequence has to be repeated.

Class 0 Programming Codes

Code	Function
# <i>accesscode</i> #	Request the programming rights Factory setting: <i>accesscode</i> =1234 The corresponding programming function refuses the values 0600 and 0990 and responds with an error tone.
# <i>relaycode</i> #	Activate relay Factory setting: <i>relaycode</i> =1 The corresponding programming function refuses the values 0600 and 0990 and responds with an error tone.
#0600#	Request phone_ID
#0990#	Cleardown
##	Deactivate relay

Class 1 Programming Codes

Code	Function
*100 <i>dialmode</i> *	Select dial mode <i>dialmode</i> =1 Tone dialing (DTMF) <i>dialmode</i> =2 Pulse dialing 1.5:1 <i>dialmode</i> =3 Pulse dialing 2:1 Factory setting: <i>dialmode</i> =1 Tone dialing (DTMF)

101disablebusy	<p>Set up option "Disable in case of busy tone"</p> <p><i>disablebusy=0</i> Disable in case of busy tone activated <i>disablebusy=1</i> Disable in case of busy tone deactivated</p> <p>Delivery condition: <i>disablebusy=0</i> Disable in case of busy tone activated</p>
102ringback	<p>Set up option "Ring back schema"</p> <p><i>ringback=0</i> Ring back schema 2 <i>ringback=1</i> Ring back schema 24 <i>ringback=2</i> Ring back schema 246</p> <p>Delivery condition: <i>ringback=1</i> Ring back schema 24</p>
11number_of_rings	<p>Number of rings before automatic answer</p> <p><i>number_of_rings=00</i> Automatic answer without ringing Microphone and Speaker muted <i>number_of_rings=01-98</i> Automatic answer with ringing <i>number_of_rings=99</i> No automatic answer</p> <p>Factory setting: <i>number_of_rings=03</i></p>
12t_max_call_duration	<p>Maximum call duration</p> <p>Length of conversation before automatic clear down</p> <p><i>t_max_call_duration=00</i> No limit <i>t_max_call_duration=01-99</i> minutes</p> <p>Factory setting: <i>t_max_call_duration=00</i></p>
13t_duration_of_silence_before_cleardown	<p>Duration of silence before automatic cleardown</p> <p><i>t_duration_of_silence_before_cleardown=00</i> Does not clear down on duration of silence <i>t_duration_of_silence_before_cleardown=01-99</i> seconds</p> <p>Factory setting: <i>t_duration_of_silence_before_cleardown=28</i> seconds</p>
140speaker_volume	<p>Loudspeaker volume</p> <p><i>speaker_volume=0-7</i> 0 = mute</p> <p>Factory setting: <i>speaker_volume=7</i></p>

<p>*142duplex_profile*</p>	<p>Set up duplex profile of voice communication</p> <p><i>duplex_profile=0-4</i> (full duplex -semi-duplex)</p> <p>Delivery condition: <i>duplex_profile=0</i> full - duplex</p> <p>Remark: In case of inappropriate electrical and/or acoustic installation conditions co-coupling effects (whistler) may occur. In those cases modify the regulation of the profile in to the higher values (semi-duplex).</p>
<p>*150ringer_melody*</p>	<p>Ringer melody</p> <p><i>ringer_melody=0-8</i></p> <p>Factory setting: <i>ringer_melody=7</i></p>
<p>*160ringer_volume*</p>	<p>Ringer volume</p> <p><i>ringer_volume=0-7</i> 0 = mute</p> <p>Factory setting: <i>ringer_volume=6</i></p>
<p>*17t_button_pressed_before_offhook*</p>	<p>Duration for which button must be pressed continuously before the Intercom Station goes offhook</p> <p><i>t_button_pressed_before_offhook=00</i> Immediate <i>t_button_pressed_before_offhook=01-99</i> *0.1 seconds</p> <p>Factory setting: <i>t_button_pressed_before_offhook=00</i></p>
<p>*20t_wait_call_answered*</p>	<p>Interval between memory M1-M8 auto-dial attempts</p> <p><i>t_wait_call_answered=00</i> unlimited <i>t_wait_call_answered=01-99</i> seconds</p> <p>Factory setting: <i>t_wait_call_answered=15</i> seconds</p>
<p>*25t_relay_on_duration*</p>	<p>Relay activation time</p> <p><i>t_relay_on_duration=00</i> unlimited <i>t_relay_on_duration=01-99</i> seconds</p> <p>Factory setting: <i>t_relay_on_duration=02</i> seconds</p>
<p>*2600*relaycode*</p>	<p>Relay activation code</p> <p><i>relaycode=0-9999</i> except: 0600, 0990 and actual accesscode</p> <p>Factory setting: <i>relaycode=1</i></p>

*3000*accesscode*	<p>Access Code</p> <p><i>accesscode=0000-9999</i> except: 0600, 0990 and actual relaycode</p> <p>Factory setting: <i>accesscode=1234</i></p>
32t_button_pressed_before_onhook	<p>Duration for which button must be pressed continuously for clear down to take place</p> <p><i>t_button_pressed_before_onhook=05-99 *0.1 seconds</i></p> <p>Factory setting: <i>t_button_pressed_before_onhook=20 = 2 seconds</i></p>
*5000*phone_id*	<p>Program Intercom Station ID</p> <p><i>phone_id=0-9999</i></p> <p>Factory setting: empty</p>
5001 telephone number*	<p>Program memory M1</p> <p>Factory setting: empty</p> <p>Note: This memory must be programmed as empty memory if automatic dialing is not required. M1 is cleared with *5001**</p>
5002 telephone number*	<p>Program memory M2</p> <p>Factory setting: empty</p> <p>Note: Only M1 is dialed if this memory is empty. M2 is cleared with *5002**</p>
5003 telephone number*	<p>Program memory M3</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M2 if memory M3 is empty. M3 is cleared with *5003**</p>
5004 telephone number*	<p>Program memory M4</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M3 if memory M4 is empty. M4 is cleared with *5004**</p>

5005 telephone number*	<p>Program memory M5</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M4 if memory M5 is empty. M5 is cleared with *5005**</p>
5006 telephone number*	<p>Program memory M6</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M5 if memory M6 is empty. M6 is cleared with *5006**</p>
5007 telephone number*	<p>Program memory M7</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M6 if memory M7 is empty. M7 is cleared with *5007**</p>
5008 telephone number*	<p>Program memory M8</p> <p>Factory setting: empty</p> <p>Note: Number chaining ends with memory M7 if memory M8 is empty otherwise it ends with memory M8. M8 is cleared with *5008**</p>
980factory_settings_option	<p>Return to factory settings / Erase Memories</p> <p><i>factory_settings_option=0 Factory Settings</i> <i>factory_settings_option=1 Factory Settings,accesscode and relaycode unchanged</i> <i>factory_settings_option=2 Erase memories M1-M8</i></p>
5100 pstn_prefix*	<p>Program PSTN_PREFIX</p> <p>Factory setting: empty</p>
9900	Disconnect
9901	Reactivate loudspeaker

Defining Call Procedures

To Define a Call from the Speed Dial Telephone Number List

You can define this call scenario by programming a maximum of 8 desired telephone numbers in the number list memory M1-M8. After pressing the on/off button, the station then attempts to connect to the programmed numbers beginning with M1 in ascending sequence. The process ends when a connection has been established to one of the programmed numbers or when the station shuts off after all connection attempts have failed.

Example:

- | | |
|------------|---|
| #1234# | Receive programming authorization. |
| *5001*100* | 1. Program the memory of the speed dial list, to define party no. 100, for example. |
| *5002*101* | 2. Program the memory of the speed dial list, to define party no. 101, for example. |
| *5003** | 3. Delete contents of the speed dial memory to terminate the speed dial number list. |
| *2015* | Set minimum ringing duration to e.g. 15 sec, to determine how long IntellyCom should wait for a currently dialed connection to be established before it moves on to dial the next number on the dial list or shuts off when the end of the list has been reached. |

To Define a Call through Private Branch System

You can define this call scenario by deleting the M1 speed dial number list memory. After pressing the on/off button, the station occupies the line and waits for the connection that the private branch device has dialed. The process ends when the connection has been established or when the minimum programmed call duration *20xx* (15 sec) has expired and the station shuts off.

Example:

- | | |
|---------|--|
| #1234# | Receive programming authorization. |
| *5001** | 1. Delete contents of the speed dial number list memory, to set an empty list. |

- *2015*** Set minimum ringing duration to 15 sec, for example, to define how long IntellyCom should wait for the line dialed to the private branch exchange before it considers the connection failed and shuts off. Set the minimum ringing duration to “unending” by entering *2000*, if you want to determine yourself when the connection has failed by shutting it off manually.

Defining Call Acceptance Procedures

To Define Automatic, Mute Call Acceptance with the First Ring/Signal

You can define this call acceptance scenario by setting the programmed ring/signal counter *11xx* (3) at the value “00”. Incoming calls to the station will then be signaled optically and accepted automatically with the first signal. In contrast to the other call acceptance scenarios, the speaker and the microphone are muted.

Example:

#1234# Receive programming authorization.

- *1100*** Set ring/signal counter to the value “00”, to define automatic call acceptance after the first signal.

To Define Automatic Call Acceptance after “n” Rings

You can define this call acceptance scenario by setting the programmed ring/signal counter *11xx* (3) to the desired value within a range of 1 - 98. Incoming calls will then be acoustically¹⁾ and optically signaled by the station and automatically accepted, when the set number of rings/signals has been reached.

Example:

#1234# Receive programming authorization.

- *1103*** Set ring/signal counter to the value “3”, to set the automatic call acceptance at 3 rings.

1) With a programmed ring volume of *1600*, the speaker is muted when the call is being signaled.

To Define Manual Call Acceptance

You can define this call acceptance scenario by setting the programmed ring/signal counter *11xx* (3) to the value "99". Incoming calls will then be acoustically¹⁾ and optically signaled, and only accepted when the on/off button is pressed.

Example:

- #1234# Receive programming authorization.
- *1199* Set call counter to the value "99", to shut off automatic call acceptance.

1) With a programmed ring volume of *1600*, the speaker is muted when the call is being signaled.

Problem handling:

Unexpected disabling of any communications (call/call reception)

You start a call or receive a call and the communication is more or less immediately disabled.

This problem may occur, if the IntellyCom or set of your interlocutor is installed in a noisy environment. If those ambient noises hit the busy tone schema of the IntellyCom, it considers the connection as disabled by the interlocutor and switches off.

You can switch off the operation mode „disable in case of busy tone“ by setting the option *101x* (0) to the value 1. Please note, that in a noisy environment the operation mode "Disable in case of continuous silence *13xx* (28 s)" will also be affected. To guarantee an automatic disabling of the IntellyCom, the maximum call duration, which in the delivery condition is adjusted to infinite *12xx* (0 infinite), should be limited to a convenient value.

Example:

- #1234# Obtain the programming authorization.
- *1011* Set option "disable in case of busy tone" to the value 1, to deactivate the disabling in case of identified busy tone.
- *1205* Determine the maximum call duration to e.g. 5 min., to guarantee that the IntellyCom switches off automatically.

Unexpected muting at the beginning of outgoing communications (call)

You start a call; your interlocutor answers the call and does not hear you at the beginning.

This problem may occur, if the IntellyCom does not understand the message of your interlocutor and continues the supervision of the calling phase with muted microphone and flashing loop current display.

You can manually stop the muting function by a short activation of the activation button and/or by selecting that IntellyCom ring back schema, which is able to distinguish earliest language and ring back tones. A reliable identification of the call begin cannot be guaranteed with none of the ring back schemas, schema 2 offers the lowest error rate.

Example:

#1234#

Obtain the programming authorization.

1020

Set option "Ring back schema" to the value 0, to select schema 2.

Connection information	
Input terminal voltage	24 V _{DC} to 66 V _{DC} from the telephone connection
Power supply current	28 mA _{DC} to 100 mA _{DC}
Call signal voltage	35 V _{AC} to 90 V _{AC} (23...54 Hz)
Call signal impedance	Larger 5.5 kW at 25 Hz and 30...90 V _{AC} Larger 4.0 kW at 50 Hz and 30...90 V _{AC}
Dialling method	Dual-tone multi-frequency signalling (DTMF) Pip-tone dialling; pip-tone interval ratio 1.5:1 or 2:1.
Connecting terminals	Max. 2.5 mm ²
Relay contact points	Max. 30V _{AC} Max. 60V _{DC} Max. 1 A _{eff} Max. 30 W
Tamper contact	Max. 30V _{AC} Max. 60V _{DC} Max. 30 W

Dimensions	With casing	Built-in unit
Material	VA	Front Panel VA
Height x Breadth x Depth	Approx. 205 x 110 x 60 mm	Approx. 205 x 110 x 55 mm
Weight	Approx. 1.2 kg	Approx. 0,65 kg
Scanner	Metal scanner made of VA with integrated red LED	

Environmental conditions	With casing	Built-in unit
Protection type:	IP 66 as per EN60529	IP 66 (frontal)
Operating temperature:	-40°C to +60°C	
Storage temperature:	-40°C to +70°C	

Other features	
Call volume	- 7 levels and silent - Maximum approx. 80 dB(A) at a distance of 1 m at 50 VAC / 50Hz
Call melodies	9 melodies
Minimum call duration until automatically engaged	≥ 800 ms without interruption (call diversion not permitted)
Call pause duration for call pause bypass	2 ... 6 s
Speaker	- Maximum volume approx. 68 dB(A) at a distance of 1 m - Volume 7 levels

Directives and regulations	
Conformity with the following directives and regulations:	- R&TTE directive 1999/5 EC - Low voltage directive 73/23/EEC - EMC directive 89/336/EEC for residential and industrial zones

Subject to alterations
or errors



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