



Product information

Indoor station for hands-free talking with special functions ISW3330

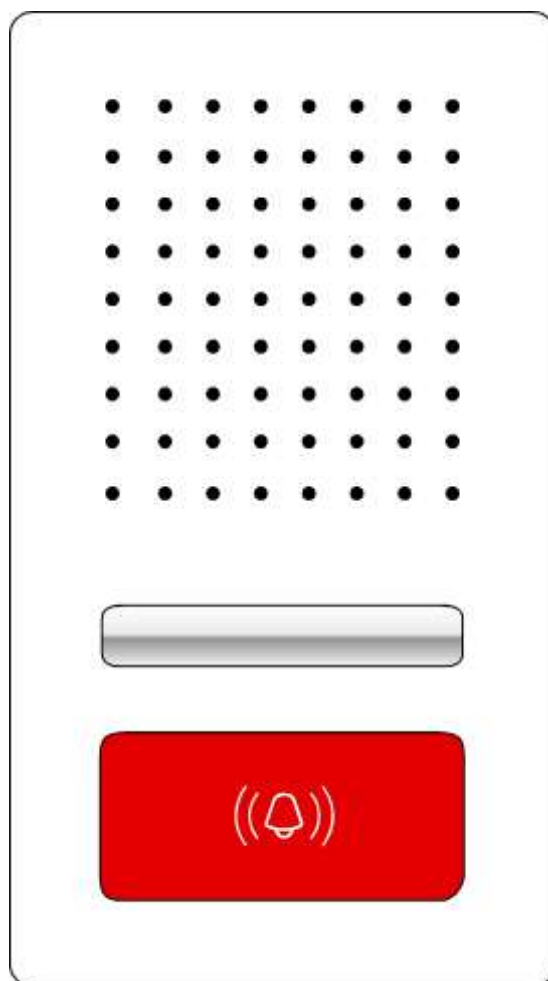


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Scope of delivery

- 1 x indoor station ISW3330 (S-11912): upper cover, lower cover
- 1 x desktop accessory (with connection cable 3 m)
 - product information
 - instruction manual

Safety regulations

! Attention! Mounting, installation, commissioning and repair of electronic devices have to be carried out only by qualified electricians. Thus, the standards and instructions for the installation of systems have to be observed!

When installing TCS: BUS[®] systems, the general safety regulations for telecommunication systems according to VDE 0800 must be observed. Inter alia:

- separated conduit of heavy and low current lines,
- minimum distance of 10 cm in case of a common conduit,
- use of separators between heavy and low current lines within shared cable ducts,
- use of standard communication lines, e.g. J-Y (St) Y with 0.8 mm diameter,
- existing lines (modernisation) with deviating cross-sections can be used in compliance with the loop resistance.

Installation – protective measures

! With suitable measures to protect against lightning, it has to be ensured that a voltage of each 32 V DC is not exceeded at the connections a, b, P, E.

Intended use

- The ISW3330 are indoor stations for hands-free talking (manually controlled duplex communication).
- They are intended to be operated exclusively in TCS systems with call center!
- They are suitable for surface-mount (installation over flush-mount socket) or for desktop installation with desktop accessory ZIT3030-0010.
- 3-wire technique necessary!

!

- The indoor station ISW3330 must not be used in call systems according to DIN VDE 0834 and EN50134. According to DIN 77800, a separate safeguard for emergency calls has to be installed.
- A system equipped with an indoor station ISW3330 is not an emergency call system according to the above mentioned standards.
- The indoor station ISW3330 must not be used in life-saving or life-sustaining systems.
- Further, the combination of system parts which fulfill the above mentioned standards is not permitted.

Max. number ISW3330 (only 3-wire operation possible)

When using the power supply and control unit	max. number of ISW3330	
NBV3210, 3 strands	30	
VBVS05 (PSG02), 1 strand	10	

AS front-door station

VS power supply and control unit

IS indoor station

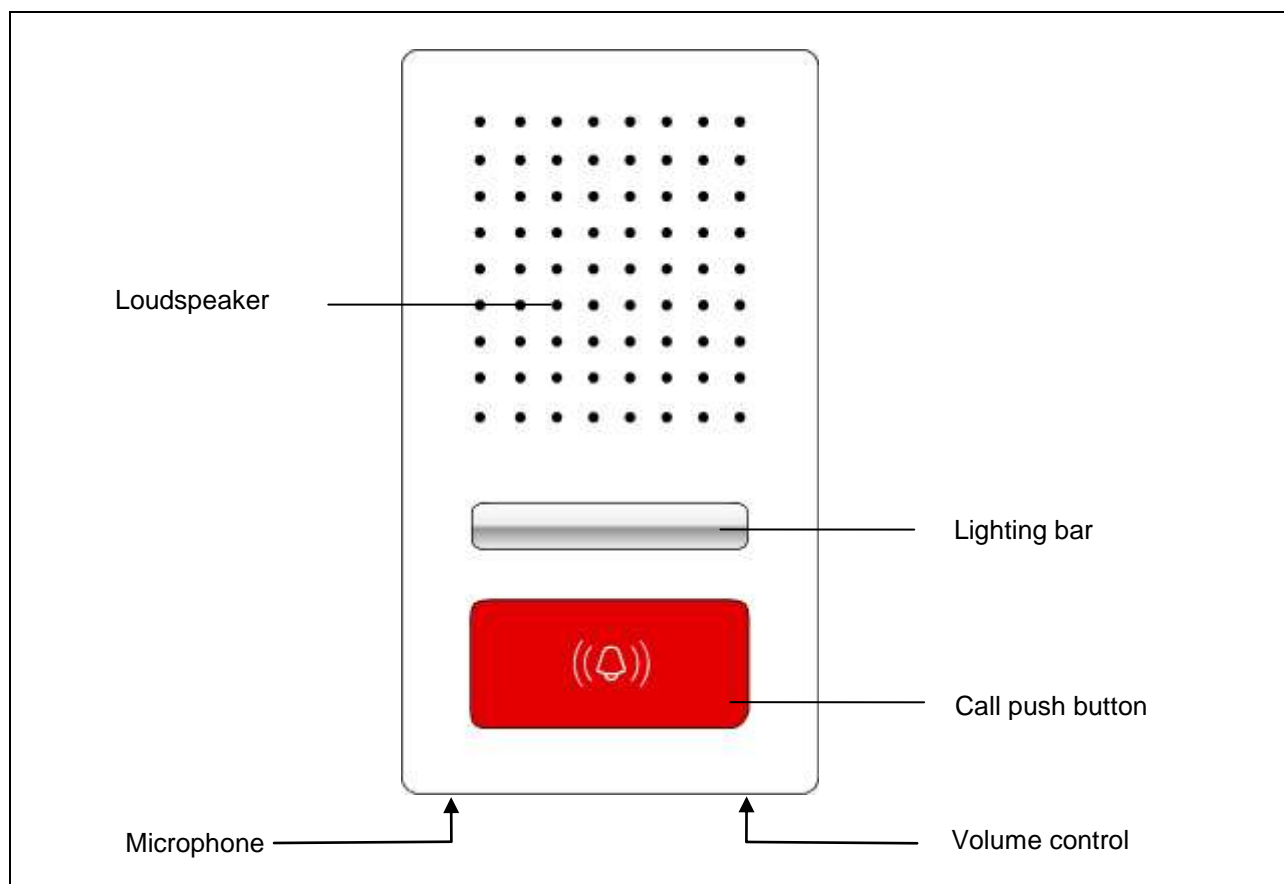
Note: The max. number of AS which can be connected is limited and is described in their respective product information!

Technical data

supply voltage:	+24 V \pm 8 % (power supply and control unit)
housing:	plastics, white
dimensions (in mm):	H 180 x W 100 x D 23
weight	180 g
acceptable ambient temperature:	-5 ...+ 40 °C
degree of protection:	IP30
input current, stand-by	I(a) = 0.2 mA, I(P) = 0.8 mA
max. input current:	I(Pmax) = 75 mA

3-wire technique necessary!





Device overview



Indication and operating elements

((🔔))	Call push button	<p>Press: (acknowledgement signal or floor call tone when pressing the button)</p> <ul style="list-style-type: none"> • call acceptance, manually controlled duplex communication after an incoming door call or internal call • calling the central • allow to listen-in into rooms* • end the communication
■	Lighting bar	<p>Is ON red:</p> <ul style="list-style-type: none"> • indication of a sent call to the central (expirces when the central reacts or a door or internal call comes in) • indication of a received group call and during a grouped announcement

* The central can use the control function 8 resp. the floor call to allow the listen-in into rooms again.

		<p>Is ON green:</p> <ul style="list-style-type: none"> • indication of an incoming door call or internal call (ex-pices at the start of a BW (assisted living) action or grouped announcement, timeout 30 sec) • indication of a voice connection (with central or hands-free talking to a front-door or indoor station)
		<p>flashes orange: device or connection error</p>
	<p>Volume control for voice output and ring tone</p>	<p>Adjustability is deactivated; the volume is set to maximum. The volume can only be set at the central (via the user program call central).</p>
	<p>Floor push button</p>	<p>Shortly press: Calling</p> <ul style="list-style-type: none"> • Sending of a floor call (also sending a control function 8, which can be configured with an own unique serial number). Acknowledgement signal (or floor ring tone depending on the configuration) and lighting bar shortly lights up red. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>! The floor push button cannot be used for call acceptance and to allow listen-in into rooms.</p> </div>

Short description

- manually controlled duplex communication, speech direction is determined by central
- large call button
- no door release button and no call-OFF button
- optical indication by lightning bar
- connection option for a floor push button and built-in option for a radio receiver board
- up to 5 radio sensors can be trained

! When planning the system, please observe that a radio transmission can be limited geographically or can also be disturbed.

- listen-in into rooms can be implemented when a resident calls the central
- allocation of the device to 3 announcement groups possible
- ring tone can be selected out of a pool of 16 ring tones, only with configuration software configo™
- voice volume and ring tone volume are deactivated, always max. volume
- optical and acoustic error signaling (can be switched ON / OFF)
- programming with configuration software configo™ or user program call central
- reproduction of loud tones followed by an announcement
- indication of a busy line during a voice connection
- audio privacy function and automatic call cut-OFF (after 2 min)
- can be functional extended due to installation locations for call relays

Function description

To listen-in into rooms

It must be guaranteed that there is no way to listen-in into the room, in which the ISW3330 is installed, without the permission from the resident via keystroke at the call button. Listen-in into the room is only possible, if the resident has called the central (by pressing the call button, the floor push button or the radio sensor button) or if he presses the call button or the radio sensor once when the connection is being established (accept voice connection or in case of a single announcement from the central).

To speak into rooms

After a call from the indoor station, a person at the central can speak-in the room via an announcement (single announcement).

Resident calls the central

- The resident presses the call button at the indoor station, the floor push button, configured with floor call (see *Floor push button*, page 8) or the button of a trained radio sender.
- An acknowledgement tone sounds and the lighting bar lights red.
- The person in the central calls the resident. A ring tone sounds at the indoor station, the lighting bar lights green. To communicate with the central, no further action by the resident is required.
- The person at the central can speak into and listen-in into the room. (The central can change the speech direction. Thus, the resident could talk to the central, if he is within earshot of the indoor station.)

Floor push button

- Pressing the floor push button creates a floor call (= factory setting), which is recognized by the central.
At the ISW3330 sounds the configured floor ring tone as confirmation for the resident. The central can analyse these signals: and allows these signals and can return the call and allow to listen-in into rooms.
- The floor push button can be used as opening or closing contact. The indoor station can be configured accordingly with the configuration software configo™.

! The floor push button cannot be used to accept calls!

Radio module

- A radio receiver board (article no. 0022930) can be built-in. Thus, it is possible to trigger the call also via radio push button, which are available as necklace and bracelet (article no. 0022931, article no. 00229310022932)

! When planning the system, please observe that a radio transmission can be limited geographically or can be disturbed.

Grouped announcement from the central to several residents

The indoor station supports the protocols for grouped announcements. Each device can be allocated to three different groups via the configuration software config™. The group can be called and an announcement can be made to the group.

- During a grouped announcement, hands-free talking cannot be realised.
- Pressing the call button, a radio sensor or a floor push button is not accepted. Listen-in into rooms is not possible.

Functionality: assisted living

The device supports the protocols for assisted living (AL).

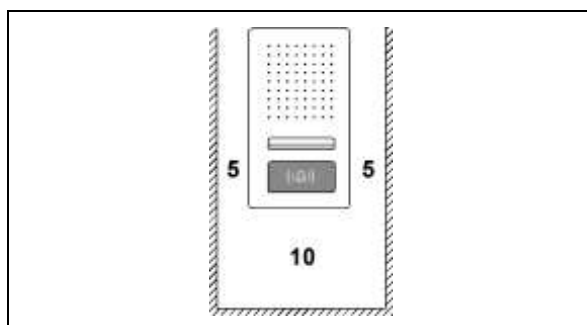
- During the AL phase, manually controlled duplex communication cannot be implemented.
- An established voice connection is ended by the AL protocol.
- By pressing the call button during the AL phase a control function 8 is sent. Thus, to listen-in into rooms, can be implemented.

Installation

Installation site

The indoor station must be installed with a minimum distance to walls or other obstacles:

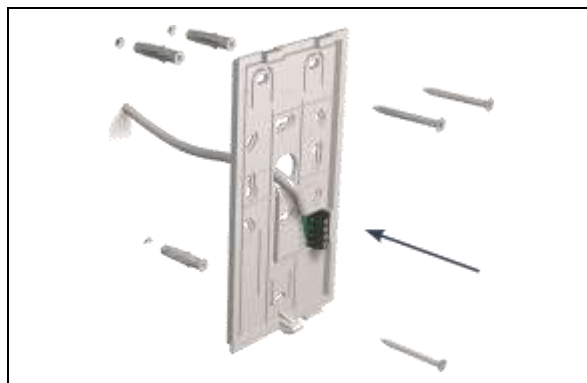
- 5 cm to the side and 10 cm below.



Install the lower cover

- To place the connection cables without any problems, a flush-mounted socket must be installed behind the device. Position the flush-mounted socket below the cable conduit.
- Install the lower cover with three screws.

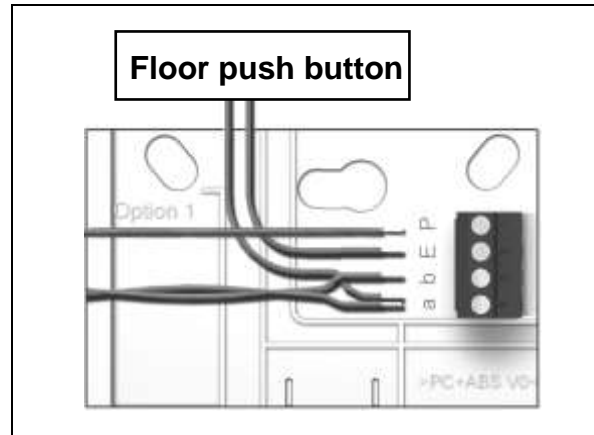
*TIPP: Avoid tearing of the straps:
To fix the cover at the straps, do not use counter-head screws without flat washers!*



Connect the lines

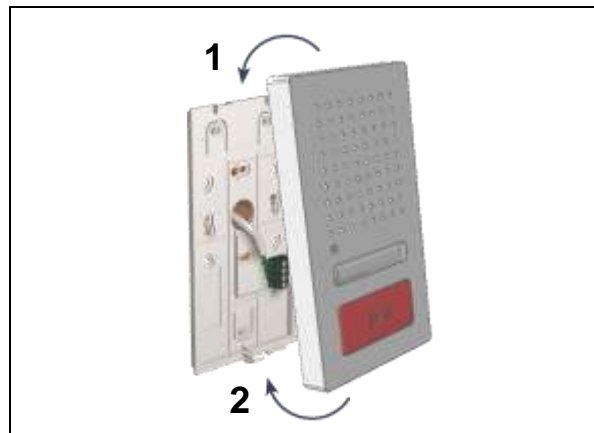
- Minimise the length of the lines above the lower cover in order to place the lines without any problems and to prevent clamping the lines when snapping-on the upper cover.
- Connect the lines according to the labelling: a b E P (from the bottom to the top), floor push button at a – E.

Wiring example see page 12.



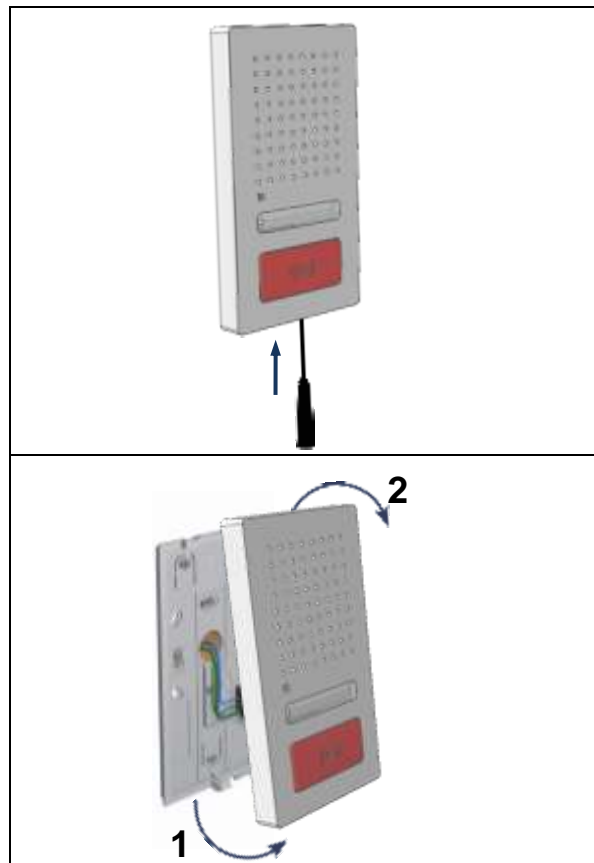
Snap-on the upper cover

- Place the upper cover at both adjustment increments of the lower cover (1).
- Snap-on the upper cover below with slight pressure (2).



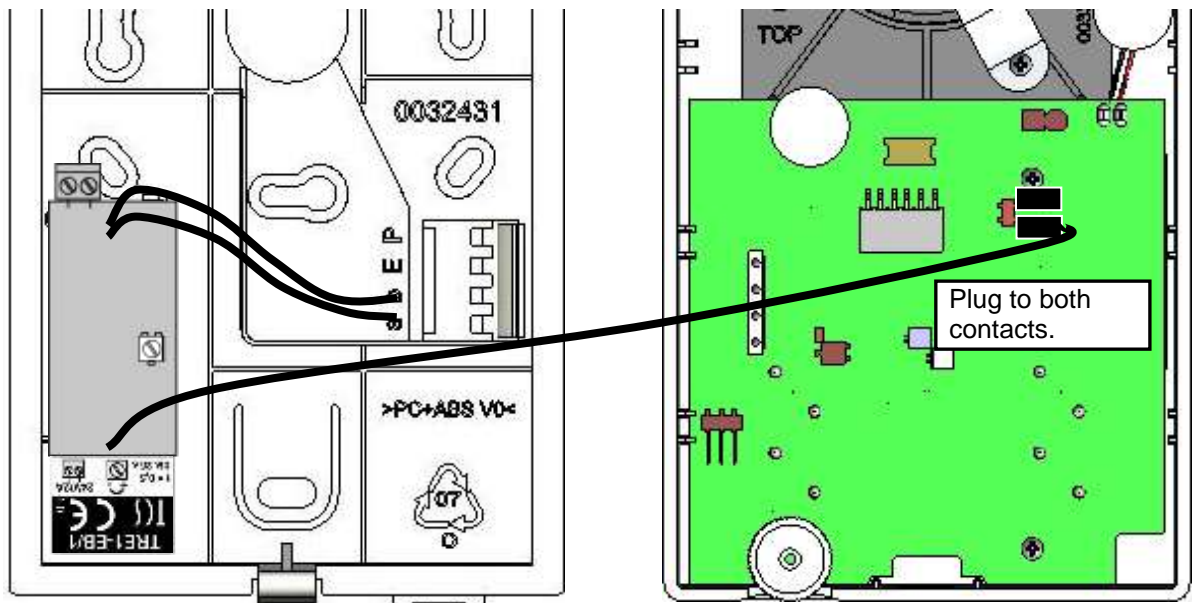
Open the device

- There is a rectangular release opening at the underside of the device. Insert a small screwdriver straight and with slight pressure into this opening.
- The upper cover can be removed at the underside (1).
- Lift the upper cover off the two upper adjustment increments (2).



Installation of extended functions

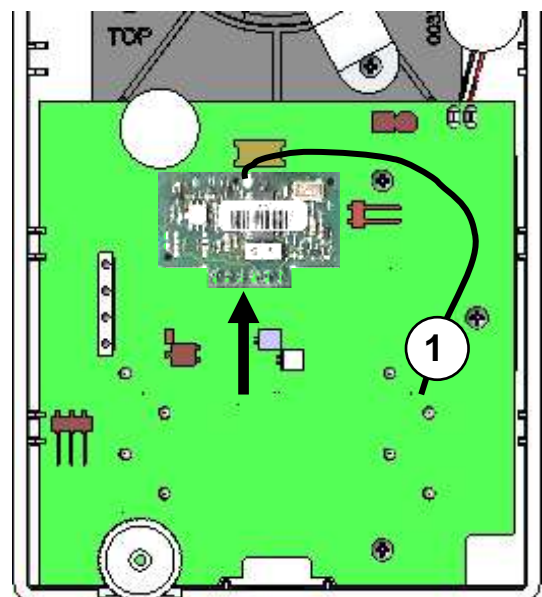
Built-in call relay TRE1-EB/1



Radio receiver board 0022930

The plug for the radio receiver board is located on the PCB in the upper cover of the special function module.

- Push the contact pins of the radio receiver board into the designated socket (position see adjoining illustration). Ensure that all six pins of the plug of the small PCB are plugged into the socket.
- Position the cable antenna that it is not clamped when snapping-on the upper cover and fix it with the adhesive pad (1).



- Please observe the product information of each extended function.

Train radio sensors

Training radio sensors can be implemented currently only with the configuration software configo™ (as of version 1.7.x).

Connect the lines

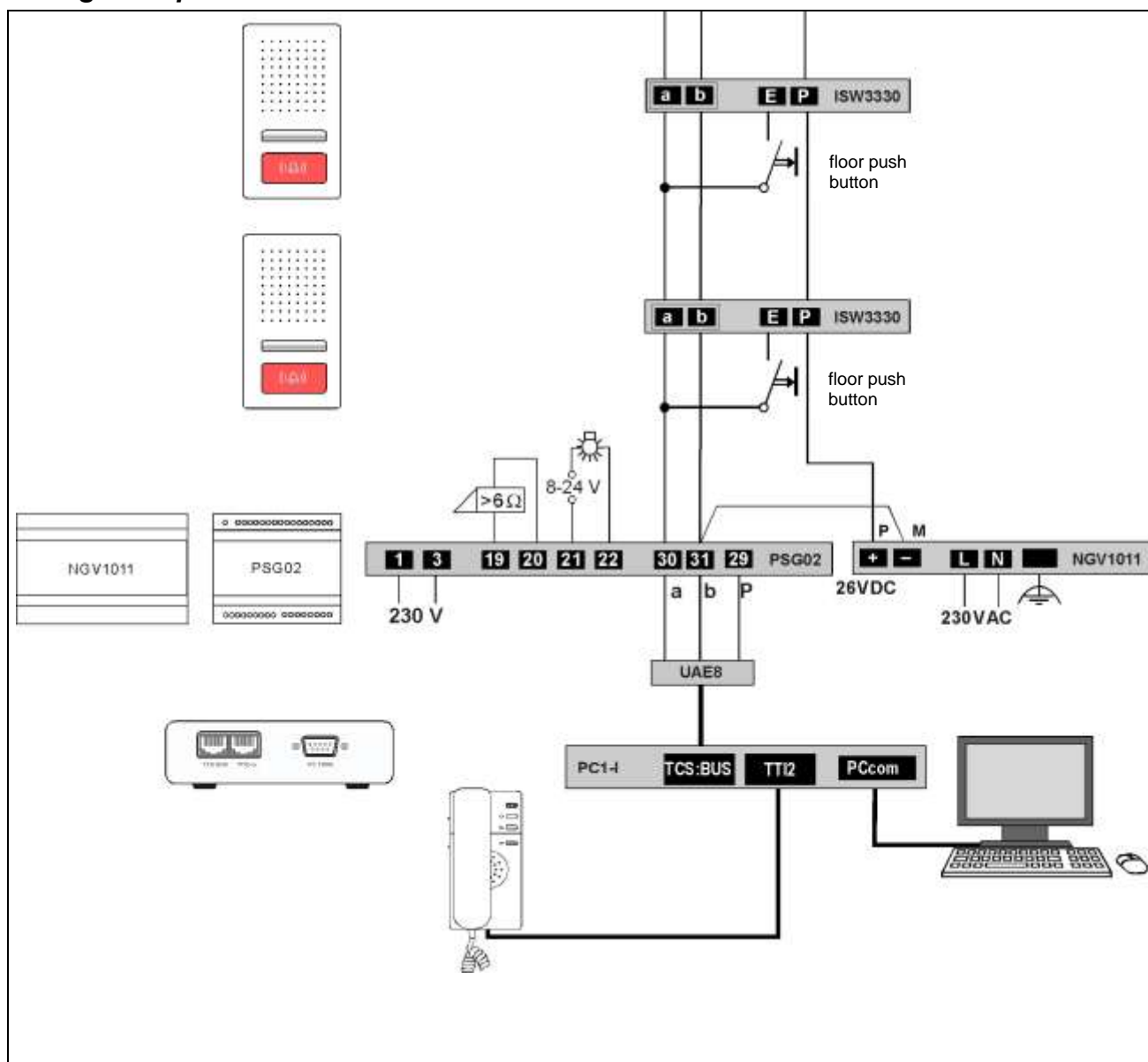
Connection lines

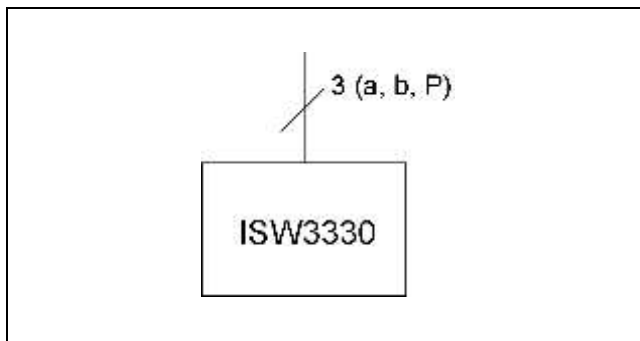
acceptable cross-section (diameter)	0.08 ... 0.82 mm ² (Ø 0.32 ... 1.0 mm)
max. number of wires per terminal contact	each 2 x 0.8 mm, 3 x 0.6 mm

! Connect further wires with auxiliary terminals!

! Use only connection lines with identical diameter in one terminal contact.

Wiring example



Connection diagram 3-wire technique**Commissioning**

- Install the devices of the system voltage-free and completely.
- Check the a-, b- and P-wire against each other for short-circuits.
- Switch ON the mains voltage.

Note (floor push button)

If the floor push button does not work, check if it is connected to the a-wire of the power supply and control unit.

Error detection and indication

The optical and acoustic error indication is deactivated ex works. It can be activated for service purposes with the configuration software configo™ (see also *Information*, page 18).

Settings

Pre-settings ex works

group membership (3 groups)	all 63
serial numbers of up to 5 radio senders	All not assigned
audio AS-border	0 (no call distinction)
ring tones	different for door call, internal call, floor call
function floor push button (floor call / control function 8)	floor call
volume control	OFF (always max. volume)
floor push button as opener / closing contact	opener
optical and acoustic error indication (ON/OFF)	OFF

Pre-set times

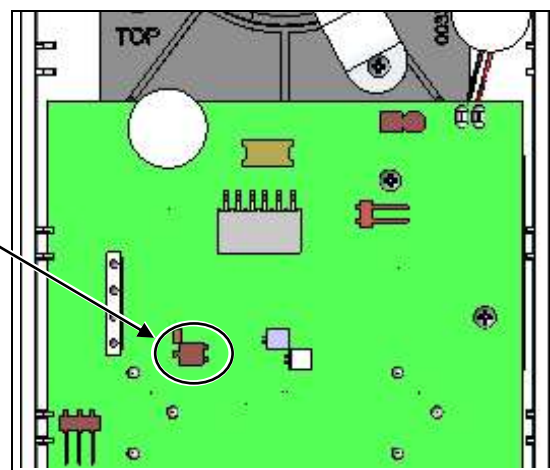
communication time	max. 2 min
call standby time	2 min, if the device is calling 30 s, if the device is called
timeout group call	2 min
timeout announcement (group and single)	
internal standby time, if the device is calling or is called	around 30 sec

Set up microphone sensitivity

Can be continuously adjusted at the control microphone sensitivity.

- This setting influences only the sensitivity of the microphone when listen-in into rooms.

Note: During hands-free talking, the microphone sensitivity does not change.



Configuration options

Function	manually	configo™ as of vers. 1.7.x
ring tone volume	x	–
conversation volume	x	–
microphone sensitivity	x	–
select ring tones for door call 1, internal call and floor calls	–	x
ring tone for door call 2	–	x
change audio AS-border	–	x
ring tone for BW protocol	–	x
tone for group call protocol	–	x
determine the function of the floor push button (floor call / control function 8, opener / closing contact)	–	x
always max. volume, volume control is deactivated (ON / OFF)	–	x
optical and acoustic error indication ON / OFF	–	x
allocate to 3 groups	–	x
allocate serial numbers of up to 5 radio sensors	–	x

Configure groups

- Each indoor station can be allocated to three different groups. Thus, an **announcement** can be implemented e.g. at the floor and alternatively in a staircase.
Factory setting: all three with value 0, can be changed to 1 ... 63.
- The functions can be configured with the configuration software configo™.

! During an announcement or during the loud tone output, the device is blocked for the user. Also door calls, internal calls and floor calls are blocked.

Configure floor push button as call push button

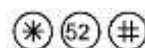
- Push button with a minimum switch time of 1 sec can be connected.
- The configuration can be implemented only with the configuration software configo™

! The floor push button cannot be used for call acceptance and to allow the listen-in into rooms.

Programming with Service Device TCSK-01

- The indoor station is acting as a manually controlled duplex communication device. Only searching for the device can be implemented

search for **manually controlled duplex communication devices**



- Configuration is implemented with the configuration software configo™.

General information on the conduit in TCS audio systems

The conduit is determined by structural conditions and is limited only by its length.

- Observe when selecting the cable length: the loop resistance must not exceed 8Ω (table).
- To keep the max. permitted loop resistance, the cross-section of the wire can be doubled, that means, for one wire two lines are used (illustration). The lines must be twisted.
- When using shielded lines: connect the shields with each other and connect one side to ground (b-wire) at the power supply
- optional strand or star shaped wiring

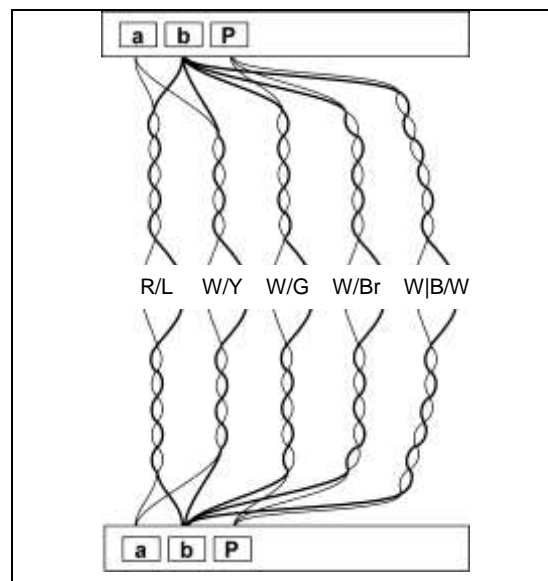
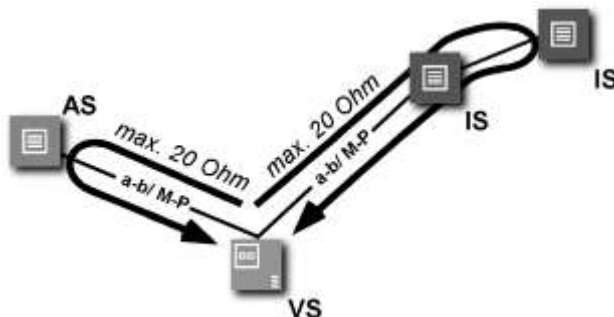


Table: loop resistances

cable length in m	cable diameter	
	0.6 mm	0.8 mm
	loop resistance in Ω	
10	1.28	0.71
20	2.55	1.43
30	3.83	2.14
40	5.10	2.86
50	6.38	3.57
60	7.65	4.29
70	8.93	5.00
80		5.71
90		6.43
100		7.14
150		10.71

Principle loop resistance

None of the devices (AS, IS or FE) should be further than 20 Ohm away from the power supply and control unit (VS).

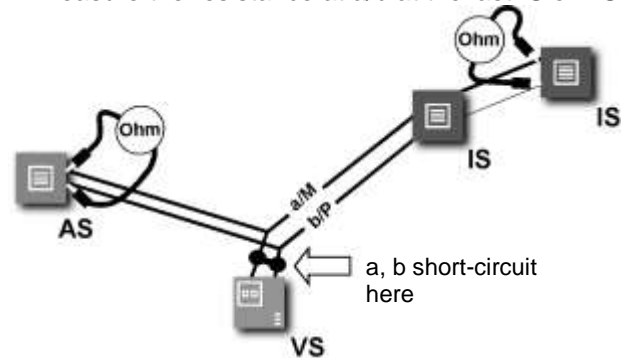


8 Ohm:

max. 62 m distance AS/IS-VS by 0.6 mm diameter
max. 112 m distance AS/IS-VS by 0.8 mm diameter

Measure loop resistance

- Switch OFF the 230 V / 50 Hz of the VS.
- Install a-b short-circuit at the VS.
- Other devices are not disturbing the measurement, they can stay connected.
- Measure the resistance at a/b at the last IS or AS.



AS front-door station
VS power supply and control unit
IS indoor station
FE extended function

Cleaning

- ! Avoid water from entering the device!
- Do not use any abrasive detergents!

Clean the device with a dry or slightly wet cloth.
Remove stronger stains with a standard plastic cleaner.

Conformity

CE The declarations of conformity are available under www.tcsag.de, downloads, trade information.

Information on disposal



The adjoining symbol shows, that the device has to be disposed separately from domestic waste. The material used are recycable. Please do help protecting our environment and dispose the device via a collection point for electronic scrap.



Dispose the parts of the packaging in collecting tanks for cardboard and paper resp. plastics.

Warranty

We offer a **simplified processing** in case of warranty for electricians.

- Please note our **conditions of sale and delivery**, download from www.tcsag.de, downloads, trade information.
- Please contact the **TCS HOTLINE**.

Spare parts, accessory

Short text	Article number
10 x lower cover ISx3xxx-x140	E32431
10 pieces cover panels white 120 x 250 x 2 mm	E24340
radio receiver board	0022930
radio sensor, wristband	0022931
radio sensor, necklace	0022932

Information

The indoor station can be configured to the customer's requirements by configuring the user software call central ex works.

Operation

The resident calls the central by pressing the call button or radio sensor. An acknowledgement tone sounds and the lighting bar is lighting up red. By pressing the call button or radio sensor, the resident accepts, that from this moment on until the end of the communication, the central is allowed to listen-in into the room.

The person in the central can select single residents and call them. This internal call from the central triggers a call at the indoor station ISW3330. A ring tone sounds, the lighting bar is lighting up green. After accepting the call by pressing the call button at the indoor station or radio sensor, a manually controlled duplex communication is established. The person at the central can change the speech direction and is able to listen-in into the room.

If the call is not accepted, a single announcement can be implemented by the person in the central ("Help is on the way.").

The resident calls the central by pressing the floor push button. An acknowledgement tone sounds. The person in the central can select single residents and call them. This internal call from the central triggers a call at the indoor station ISW3330. A ring tone sounds, the lighting bar is lighting up green. If the resident is able to accept the call (by pressing the call button at the indoor station or the radio sensor), a manually controlled duplex communication is established. The person at the central can change the speech direction and is able to listen-in into the room.

If the call is not accepted, a single announcement can be implemented by the person in the central ("Help is on the way.").

The resident is called by the central and a single announcement is started immediately. (Listen-in into rooms is not possible at that point). If the resident presses the call button, the radio sensor or the floor push button during this phase, the standard control function is sent. This is the signal for the central, which allows the listen-in into rooms.



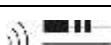

Note: In contrast to the TTN30 and IMMx500 devices, it is not possible to establish a bidirectional voice connection in this phase. The control of the speech direction always stays at the central.

Error detection and indication

When in delivery state, the optical and acoustic error indication can be activate.

It can be deactivated after a successful commissioning with the configuration software configo™.

Errors are signaled optically and acoustically: single error tone and permanent flashing of the lighting bar. When pressing any button, the error tone sounds again. The optical error indication stays active until the error is corrected.

error causes	indicati-on error mode	error tone	solution
a- and P-wire are inter-changed or short-circuited	 Lighting bar flas-hes orange		Exchange a- and P-wire or eliminate short-circuit, device is in standby mode again
a-wire: not connected or not supplied			Connect the a-wire or check the power supply, device is in standby mode again
call button (or floor push button, opener) is stuck (pres longer than 25 sec)			Loosen button at the device (or floor push button, if it configured as opener). device is in standby mode again

Service

Please send your questions and inquiries to
hotline@tcsag.de

Headquarters

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