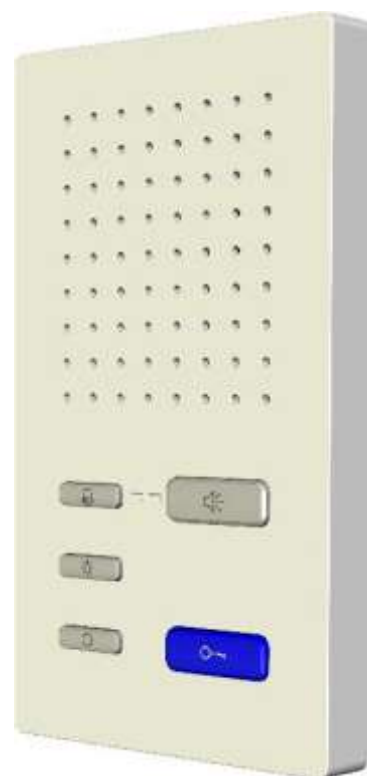




# Product information

## Comfort indoor station for hands-free talking ISW3130



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## Scope of delivery

- 1 x comfort indoor station ISW3130: upper cover, lower cover
- product information
- instruction manual

## Safety instructions



Attention! Mounting, installation, commissioning and repair of electronic devices have to be carried out only by qualified electricians. The current standard for the installation of door communication systems must be observed!

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

- separated cabling of heavy and low current lines,
- minimum distance of 10 cm for common cabling,
- use of separators between heavy and low current lines in shared cable ducts,
- use of standard telecommunication 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



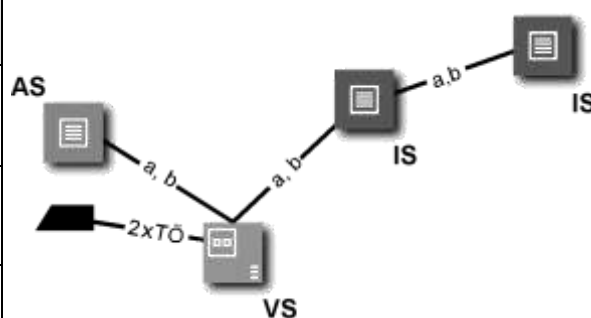
With suitable requirements to protect against lightning, it has to be ensured that a voltage of 32 V DC is not be exceeded at the connections a, b, P, E.

## Intended use

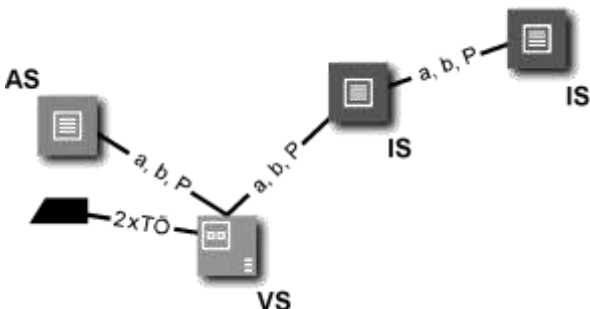
- ISW3130 are indoor stations for hands-free talking for the object area.
- They are suitable for the operation in TCS audio systems and combined audio / video systems.
- They are suitable for surface-mount (installation via flush-mounted socket) or desktop mounting with desktop accessory ZIT3030-0010.

### Max. number of ISW3130 in 2-wire operation









when using power supply and control unit	max. number ISW3130
BVS20 or NBV1000, 1 line	20
BVS100, distributed to 3 lines	80
VBVS05, 1 line	30



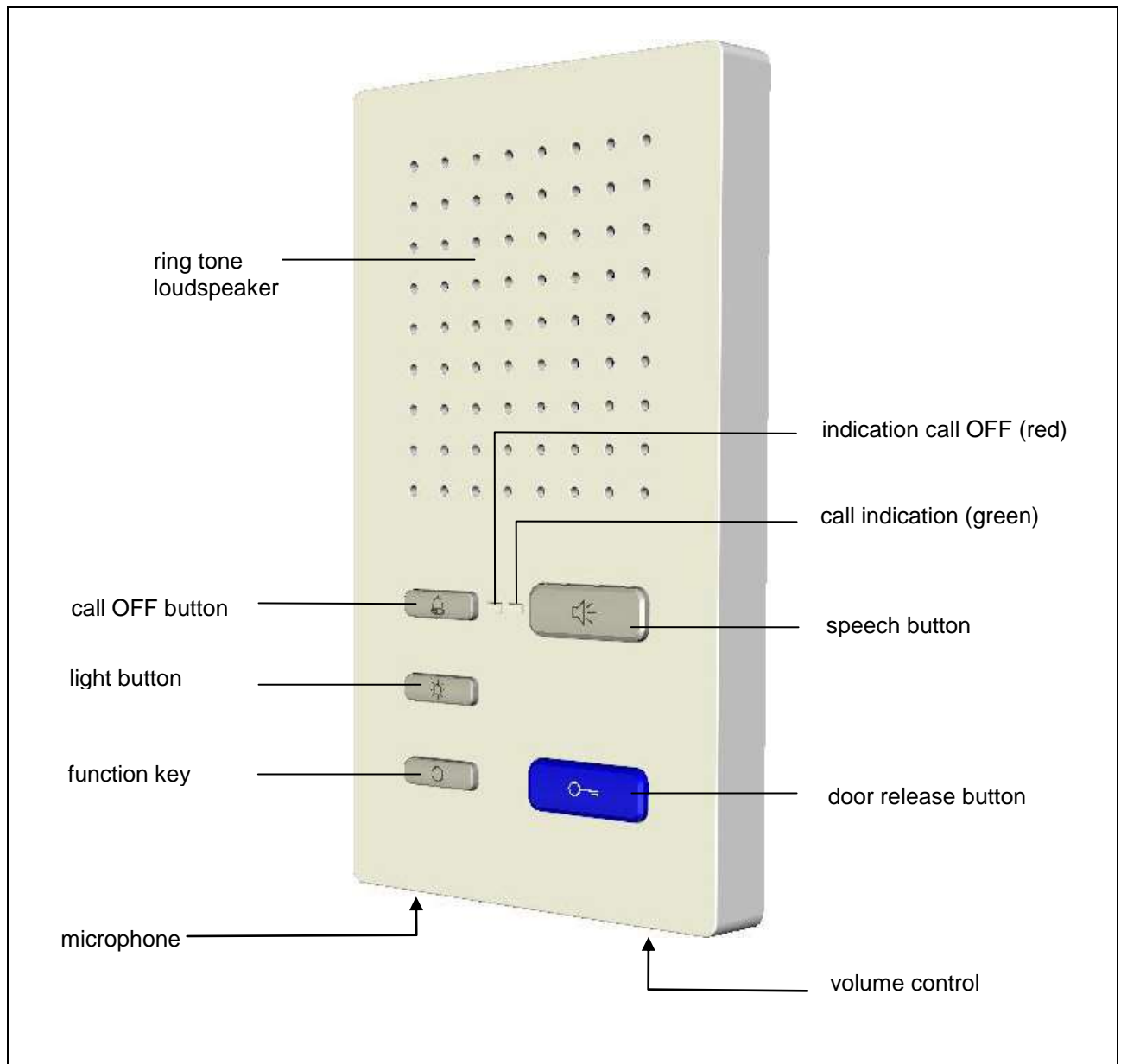
### Max. number of ISW3130 in 3-wire operation

when using power supply and control unit	Max. number ISW3130	
BVS20 or NBV1000, 1 line	20	 <p>AS front-door station VS power supply and control unit IS indoor station</p> <p>Note: The number of the front-door stations which can be connected is limited. Details are described in their product information!</p>
BVS100, distributed to 3 lines	80	
VBVS05, 1 line	90	
BVS20 + NGV1011, 1 line	90	
BVS100 + NGV1011, 3 lines	270	

## Indication and operating elements

	<b>speech button</b>	<ul style="list-style-type: none"> <li>call acceptance, activate speaking, manually controlled duplex communication</li> <li>end conversation</li> </ul>
	<b>call OFF button</b>	<ul style="list-style-type: none"> <li><b>press short:</b> ring tone stopper</li> <li><b>press for 8 sec:</b> initiate ring tone selection</li> </ul>
	<b>indication call OFF (red)</b>	<ul style="list-style-type: none"> <li><b>ON:</b> call OFF is activated</li> <li><b>flashes:</b> ring tone stopper is deactivated, door release automatic or call diversion is activated</li> <li><b>flashes OFF:</b> ring tone stopper is activated, door release automatic or call diversion is activated</li> <li>fault indication: both LEDs flashing</li> <li>ring tone selection: both LEDs are ON</li> </ul>
	<b>function key</b>	<ul style="list-style-type: none"> <li>control function 8, alternate allocation can be activated: internal call, door release automatic, call diversion</li> <li>ring tone selection internal call</li> </ul>
	<b>call indication (green)</b>	<ul style="list-style-type: none"> <li><b>ON:</b> call, speaking activated</li> <li><b>blinks 3 x:</b> voice channel is busy</li> <li>fault indication: both LEDs flash</li> <li>ring tone selection: both LEDs ON</li> </ul>
	<b>light switch button</b>	<ul style="list-style-type: none"> <li>switching lights</li> <li>ring tone selection floor call (from the flat door)</li> </ul>
	<b>door release button</b>	<ul style="list-style-type: none"> <li>open the door</li> <li>to trigger light switch function (if the light switch function is activated in the front-door station)</li> <li>ring tone selection door call from front-door station</li> </ul>
	<b>volume control for voice output and ring tone</b>	adjustable in 8 steps: <ul style="list-style-type: none"> <li>when voice communication is established</li> <li>when no voice communication is established</li> </ul>

## Device overview



## Technical data

supply voltage:	+24 V $\pm$ 8 % (power supply and control unit)
housing:	plastics white (colors like shown in price list)
dimensions (in mm):	H 180 x W 100 x D 23
weight	185 g
acceptable ambient temperature:	-5 ...+40 °C
degree of protection:	IP30
input current (stand-by)	2-wire operation: I(a) = 1 mA 3-wire operation: I(a) = 0.2 mA, I(P) = 1 mA
max. input current:	I(Pmax) = 75 mA

## Short description

- hands-free talking, manually controlled duplex communication can be activated
- large, detatched, blue door release button
- large speech button
- light switch button
- function key (fixed assignment with control function 8, alternate allocation can be activated: internal call, door release automatic, call diversion)
- call OFF button for ring tone mute with optical indication
- optical indication of door calls by LED (green)
- optical display of a business while an established communication by LED (green)
- sending the sender serial number in case of internal calls
- ring tones can be adjusted by the user, selection of 13 ring tones with improved quality
- voice volume and ring tone volume can be adjusted manually
- acoustic call distinction between 2 front-door stations (with the configuration software configo™), flat door (floor door) and internal call
- a parallel call can be activated (with the Service Device TCSK-01 or configo™)
- audio privacy function and automatic call cut-OFF (after 2 min)
- lower cover with plugged pinned screw terminal can be pre-installed and can be equipped alternatively with the door telephone
- optical and acoustic fault indication
- can be functional extended due to mounting places for call relays, control for radio signal device
- energy-efficient due to low stand-by consumption of only 0.025 W
- automatic call acceptance after an internal call can be activated / deactivated

## Installation

### Mounting site

The indoor station has to be installed in accordance to a minimum distance to walls or other obstacles:

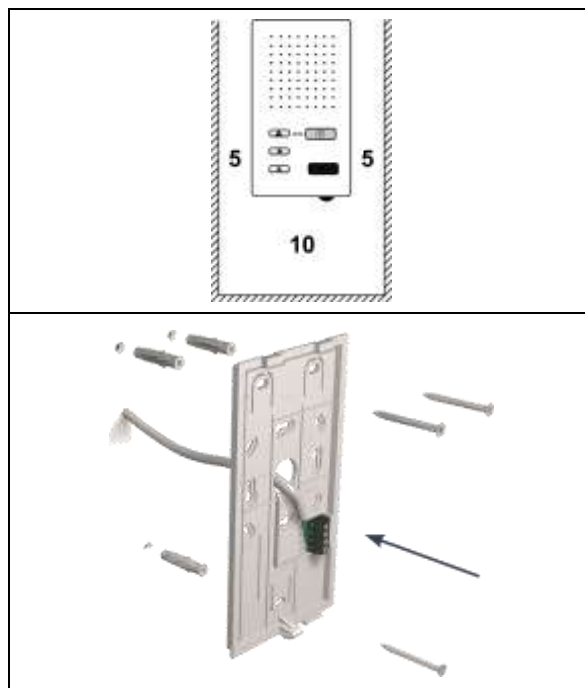
- lateral space 5 cm and below 10 cm.

### Install the lower cover

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

*TIPP: Avoid tearing of the straps:*

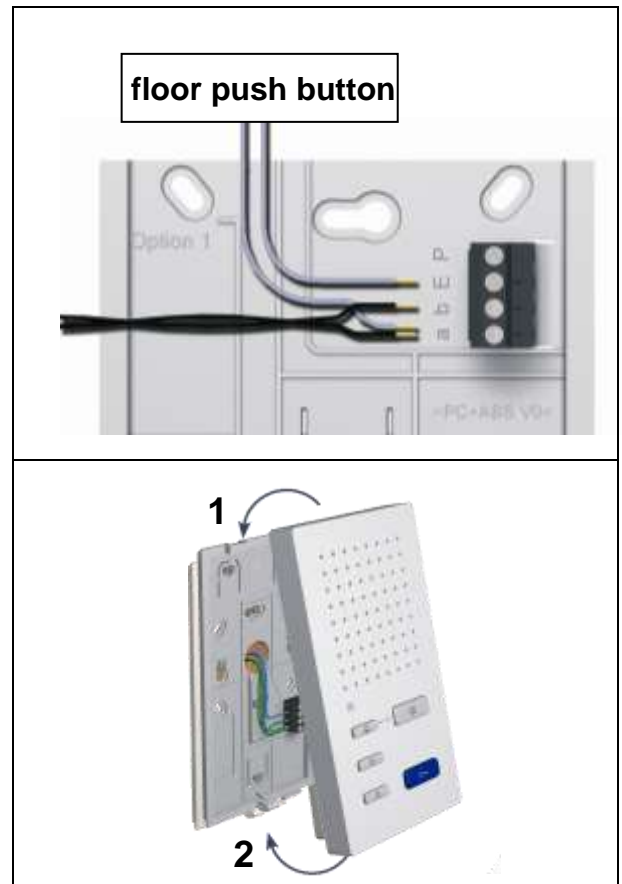
*For fixing the scraps do not use counter-head screws  
Rather use flat washers!*



### **Connect the lines (2-wire technique)**

- Minimize the length of the lines above the lower cover to place without any problems and do not clamp when snapping-on the upper cover.
- Connect the lines according to the labeling: a b E P (from the button to the top), floor push button at a – E.

*Wiring example see page 9.*

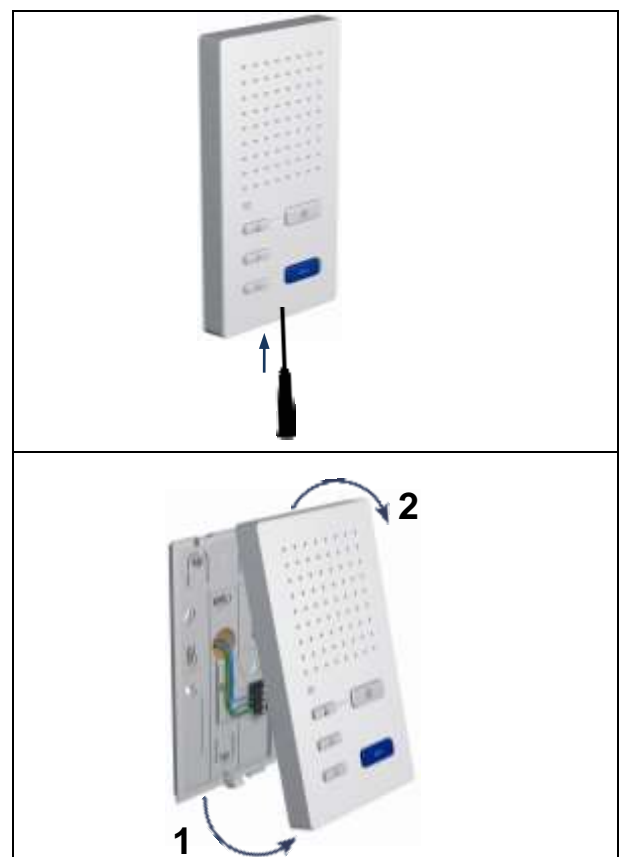


### **Snap-on the upper cover**

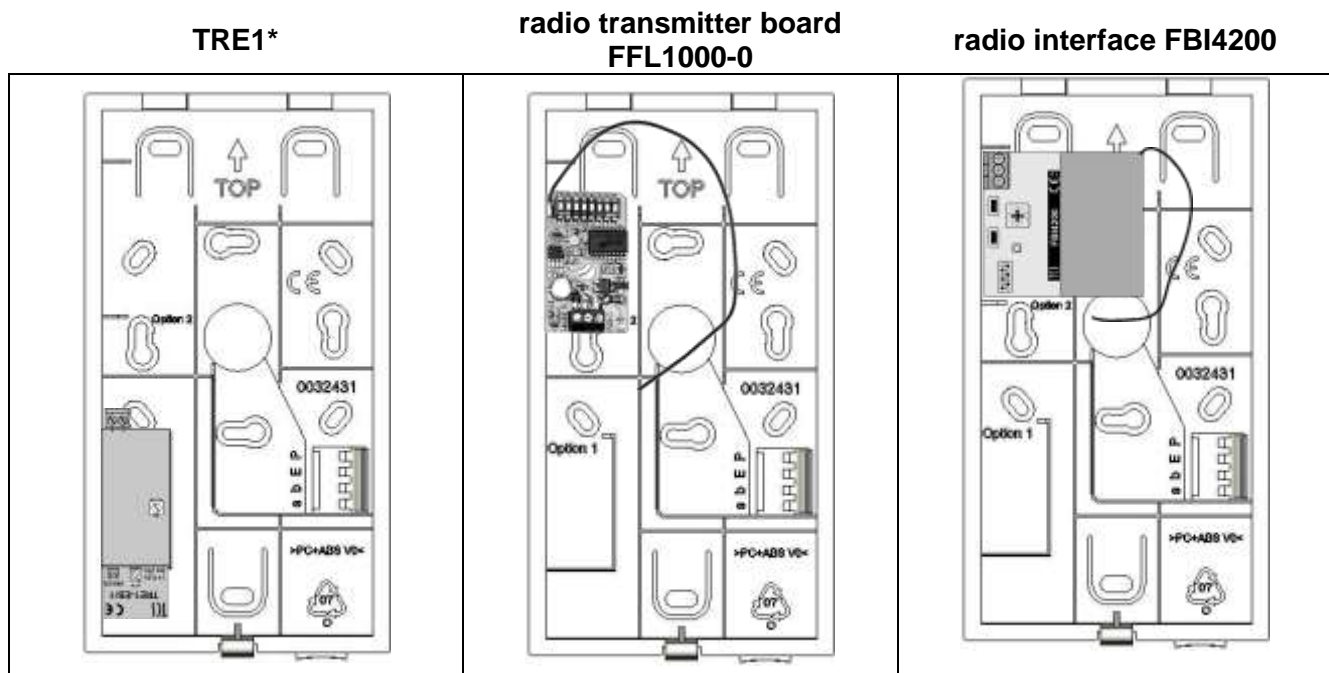
- Set on the upper cover at both adjustment increments of the lower cover (1).
- Snap-on the upper cover below with slight pressure (2)

### **Open the device**

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



## Installation of extended functions



- The extended functions (and the antennas) have to be fixed in the indoor station with adhesive pads (see also product information of each extended function).

\* Connecting the lines is implemented in analog to the ISW3030 (see product information TRE1-EB/1).

## Connect the lines

### Connection lines

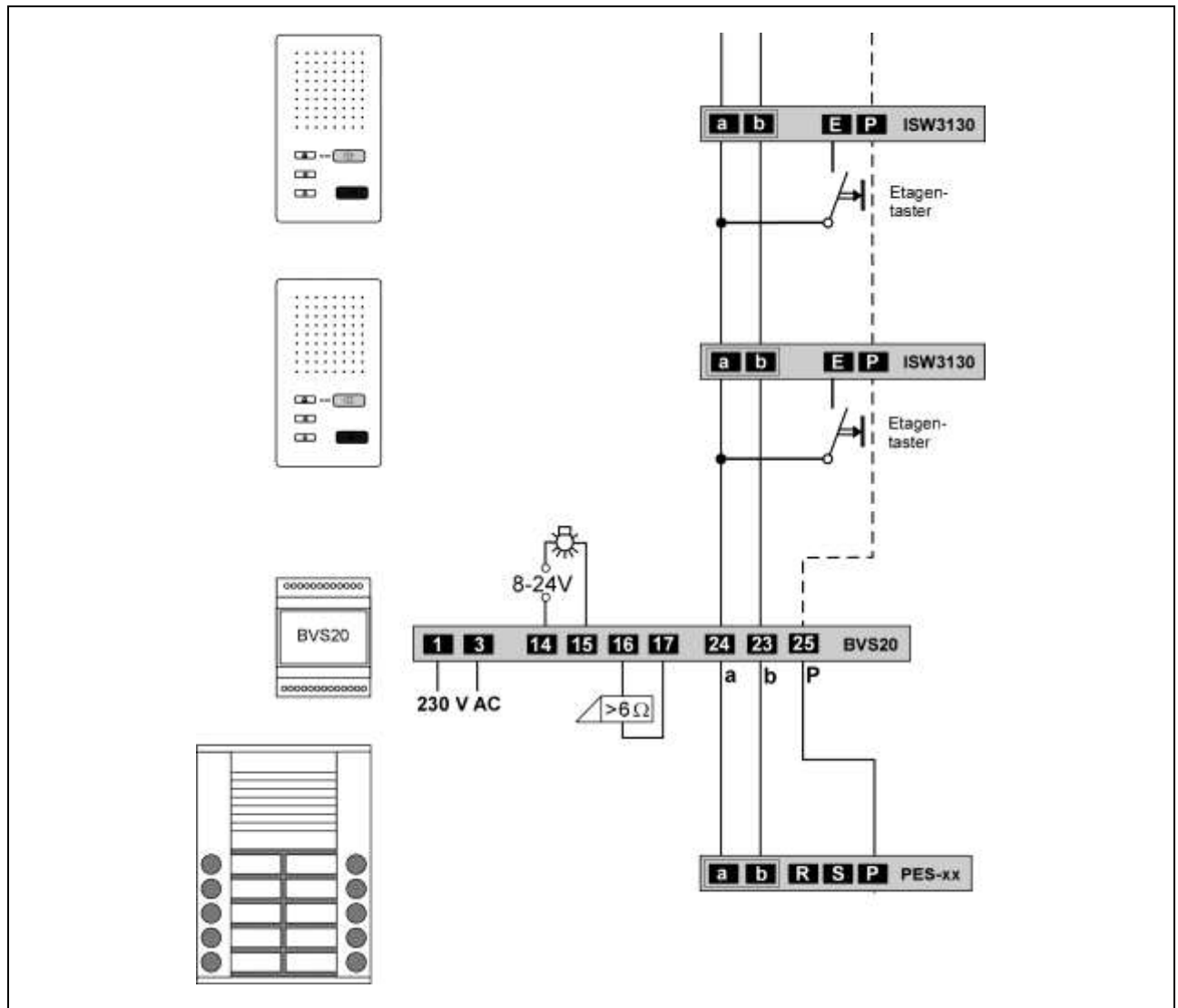
acceptable cross section (diameter)	0.08 ... 0.82 mm <sup>2</sup> (Ø 0.32 ... 1.0 mm)
Max. Anzahl Drähte pro Klemmenkontakt	je 2 x 0.8 mm, 3 x 0.6 mm

! Further wires have to be connected with auxiliar terminals!

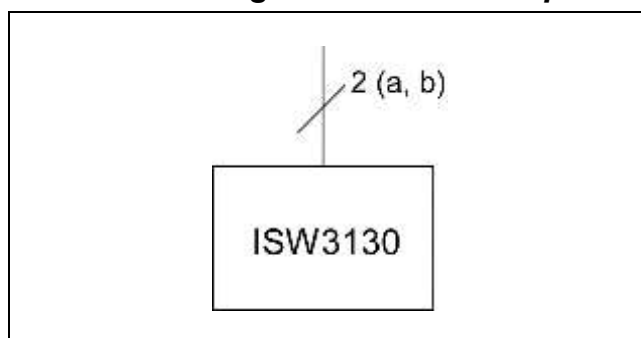
! Use only connecting lines with identical diameter in one terminal contact.



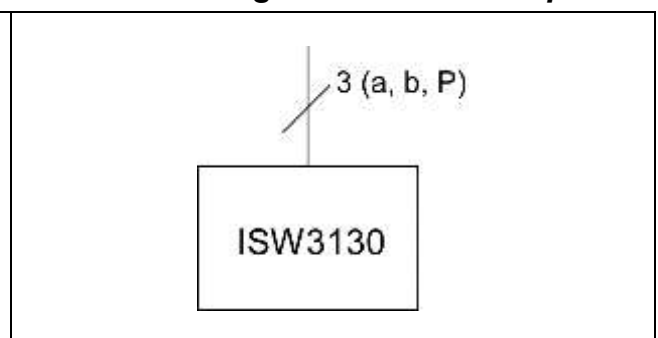
## Wiring example



Connection diagram 2-wire technique



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 main voltage.

Note:

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

## Settings

### Preset times

conversation time	2 min	
flashing period of the green LED, if the voice channel is busy after establishing a voice communication	2 sec	3 x blinking
internal stand-by time, if the device is calling or is called	around 30 sec	

### 2-wire/3-wire operation

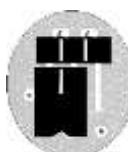
The jumper J1 is adjusted for 2-wire operation in delivery state.

2-wire operation (delivery state)

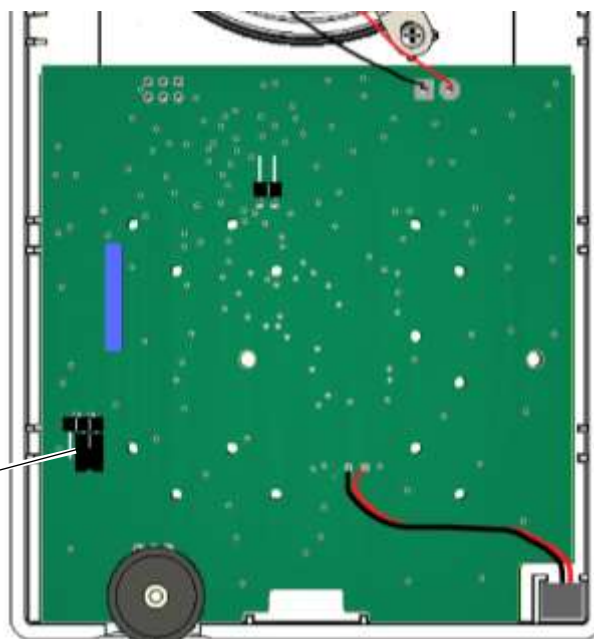


- Install the jumper J1 at both upper contacts for the 3-wire operation.

3-wire operation



J1



### Ring tone selection

For 4 different incoming calls (door calls from 2 different front-door stations, floor call, internal call) different ring tones can be selected.

<b>1</b>	End voice communication. Press call OFF button for around 8 seconds. Both LEDs are ON and an acknowledgement tone sounds, the ring tone selection is activated.	
	By pressing the following buttons, a ring tone can be selected. You can choose between 13 different tones.	
<b>2a</b>	Select door ring tone of the front-door station*	Press the <i>door release button</i> until the required ring tone sounds. The ring tone selected last is stored.
<b>2b</b>	select door ring tone of the floor door	Press the <i>light switch button</i> until the required ring tone sounds. The ring tone selected last is stored.
<b>2c</b>	select internal ring tone	Press the <i>control key</i> until the required ring tone sounds. The ring tone selected last is stored.
<b>3</b>	Short press the call OFF button. Or: If no button is pressed for around 8 sec, the device end the ring tone selection automatically. Both LEDs go out and an acknowledgement tone sounds, the ring tone selection is deactivated.	

\* The ring tone is identical for all front-door stations and can be selected only identically for all.  
To select a second ring tone it is necessary to activate the call distinction by changing the audio AS limit.  
Changing the audio AS limit is possible only with the configuration software *configo*™.

### Adjust the volume

Adjustable in 8 steps. A signal tone reproduces the adjusted ring tone volume when turning the ring tone volume control. If the adjustment is finished, the adjusted ring tone sounds in the adjusted volume.

voice volume	Turn the ring tone volume control when a conversation is established (preset ex works: volume step 4 out of 8)
ring tone volume	Turn the ring tone volume control when no conversation is established (in stand-by; preset ex works: volume step 6 out of 8)

## Configuration options

function	manually	TCSK-01	configo™ as of version 1.6.x
ring tone volume	x	–	–
voice volume	x	–	–
select ring tones for door calls, internal calls and floor calls	x	–	x
ring tone for door call 2	–	–	x
parallel allocation	–	x	x
control function 8 /internal calls / call diversion / door release auto- matic	–	x	x
floor door function* ON/OFF	–	–	x
send sender serial number in case of an internal call ( <i>immer aktiv</i> )	–	–	–
call intrusion after an internal call	–	–	x
change audio AS limit	–	–	x
block ring tone output	x	–	–
block ring tone selection	–	–	x
unlimited communication time	–	–	x
reset to factory settings	–	–	x

\* If the floor door release function in the EEPROM has been activated and the door release automatic function via function key is switched on simultaneously, the control function 11 is send automatically when pressing the floor push button. If the door release automatic is switched off, the standard floor door release function is implemented when pressing the floor push button.

### Programming with the Service Device TCSK-01

- The indoor station is acting as a device for manually controlled duplex communication.
- Use the commands "8" to make configurations (see *product information Service Device TCSK-01*).

Wechselsprechgeräte suchen	* 52 #
Parallelruf einschalten	* 99 # Ser.-Nr. # ParSNr #
Parallelruf ausschalten	* 99 # Ser.-Nr. # 0 #

Ser. no. = the serial number of the indoor station which is to be configured anew

ParSNr. = the serial number of the indoor station, to which the new configured indoor station is allocated to

## General information on the conduit in TCS audio systems

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

- observe when selecting the cables: the loop resistance can amount max. 20  $\Omega$  (see table)
- in compliance to the max. permitted loop resistance the cross section can be doubled, which means, that for one wire two lines can be used (illustration). The lines have to be twisted.
- when using shielded cables: connect the shielding with each other and put it one-sided on mass (b-wire) in the power supply
- optional strand- or star formed wiring

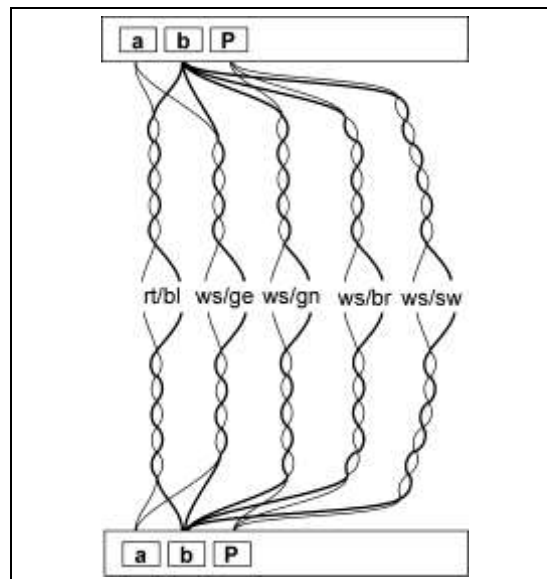


Table: loop resistance

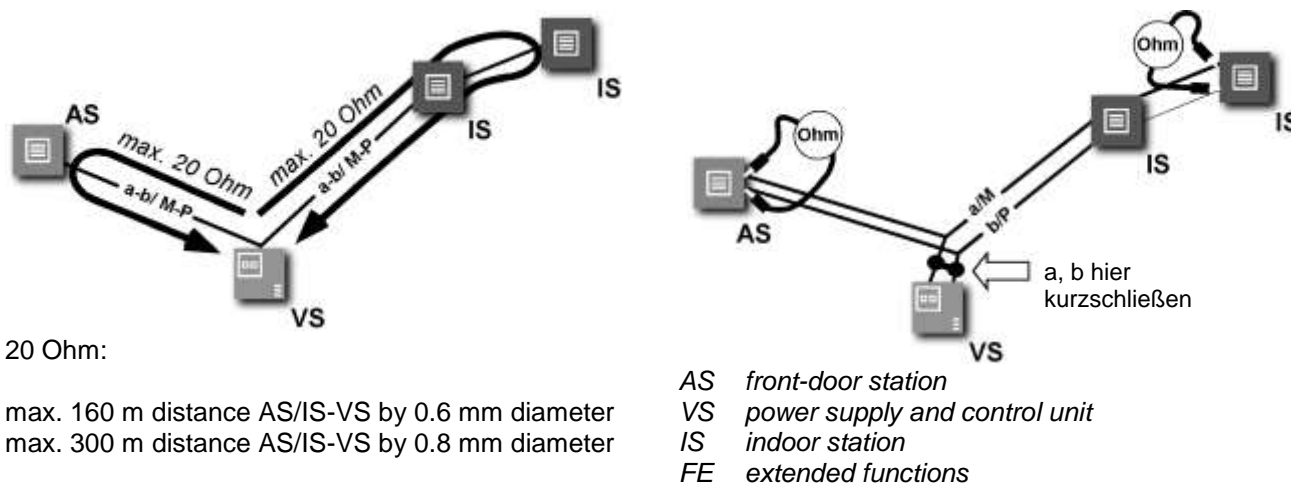
cable length in m	cable diameter	
	0.6 mm	0.8 mm
	loop resistance in $\Omega$	
10	1.28	0.71
20	2.55	1.43
30	3.83	2.14
40	5.10	2.86
50	6.38	3.57
60	7.65	4.29
70	8.93	5.00
80	10.20	5.71
90	11.48	6.43
100	12.76	7.14
150	19.13	10.71
200	25.51	14.29
250		17.86
300		21.43

### principle loop resistance

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

### measurement loop resistance

- Switch off the 230 V / 50 Hz of the VS.
- Install the a-b short-circuit at the VS.
- Other devices do not disturb the measurement, they can stay connected.
- Measure the resistance on a/b IS at the strand of the last indoor or front-door station.



## Repair

### Error detection and indication

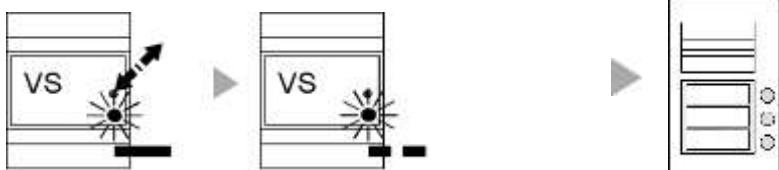

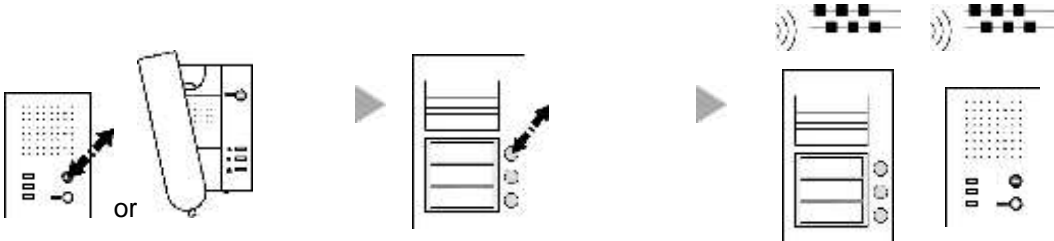
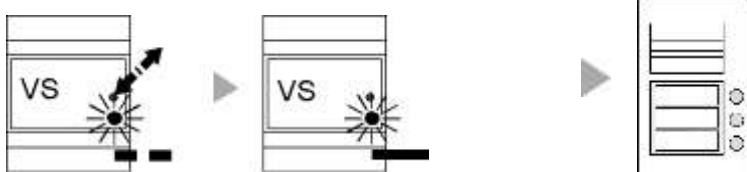
Faults are signalled optically and acoustically: constant fault tone and constant flashing of the operation display. When pressing any button, a fault tone sounds again. The optical fault indication stays active until the fault is corrected.

fault causes	display fault mode	fault tone	elimination
a- and P-wire are inter-changed or short-circuited	 both LEDs flash		change a- and P-wire or eliminate short-circuit, device is in stand-by mode again
a-wire: not connected or not supplied			connect the a-wire or check power supply, device is in stand-by mode again
button sticks (press longer than 15 sec)			remove button at the device or loosen floor push button, device is in stand-by mode again

### Exchange an indoor station – programme bell buttons

#### Basics

- All devices at the TCS:BUS have got an unique serial number.
- Programming a bell button means that the serial number of an indoor station is allocated to the bell button of a front-door station and is stored within the EEPROM of the front-door station.
- Ensure that new the indoor stations is connected to the TCS:BUS and the mains voltage is switched on (the operation LED at the power supply and control unit is ON) and further, that the access to the flat is granted during the programming.
- This instruction describes the case that a serial number is allocated to the bell button without setting a programming lock. To neutralise a programming lock you need a Service Device TCSK-01 or the configuration software configo™.

<b>1</b>	<b>Initiate</b>
<p><b>power supply and control unit</b></p>  <p>RUN/PROG push Button: press short      LED blinks      programming mode of the system is switched on</p>	
<b>2</b>	<b>Delete a button <sup>a)</sup></b>
 <p>press until the delete-tone-melody sounds <sup>1)</sup>      release</p>	
<b>3</b>	<b>Programming via voice connection</b>
 <p>establish voice communication to the front-station <sup>2)</sup>      shortly press the button      ... a ring tone sounds at the front-door and indoor station <sup>1)</sup></p>	
<b>4</b>	<b>End</b>
<p><b>power supply and control unit</b></p>  <p>RUN/PROG-push button: shortly press      LED is ON      programming mode of the system is switched off <sup>*)</sup></p>	

a) Not necessary, if the bell buttons have not been programmed, comp. product information of the front-door station.

1) If there sounds a Progsper tone instead, the front-door station is equipped with a programming lock.

The programming lock can be deactivated only with the Service Device TCSK-01 or the configuration software config<sup>TM</sup>.

2) New developed front-door stations (as of 2009) respond to that with a positive acknowledgement, if the serial number of the indoor station was received (see product information of the front-door station).

\*) for device specific indication modes of the front-door station see product information of the front-door station

## Cleaning



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

Clean the device with a dry or slightly moist cloth.  
Remove stronger stains with a mild plastic cleaner.

## Conformity



Declarations of conformity you can find under [www.tcsag.de](http://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 materials used are recyclable. Please do help protecting our environment and dispose the device via a collecting 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.

- Note our **conditions of sale and delivery**, for download from [www.tcsag.de](http://www.tcsag.de), Downloads, trade information.
- Please contact us: **hotline@tcsag.de**

## Spare parts, accessory

short text	article number
10 x lower cover ISx3xxx-x140	E32431
10 pieces cover panel white 120 x 250 x 2 mm	E24340

## Service

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

### headquarters

TCS TürControlSysteme AG, Geschwister-Scholl-Str. 7, 39307 Genthin, Germany  
[www.tcsag.de](http://www.tcsag.de)