



Product information

Indoor station for hands-free talking ISW3030

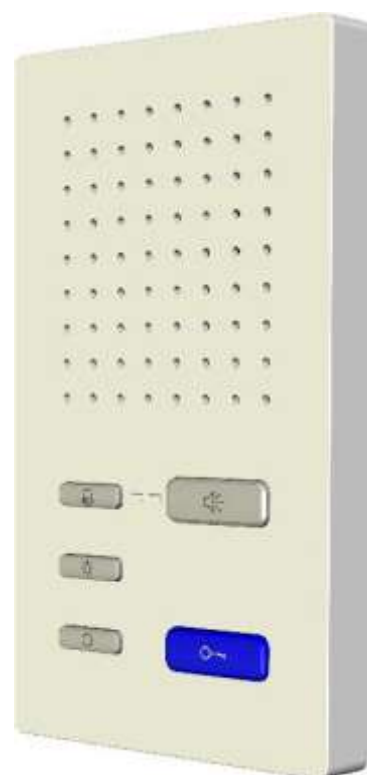


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Scope of delivery

1 x indoor station ISW3030: upper cover, lower cover
product information
instruction manual

Safety instructions



Notice! Mounting, installation, commissioning and repair of electrical devices have to be carried out only by qualified electricians! Thus the standards and rules for the installation of systems must be observed!

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

- separated guidance of heavy and low current lines,
- minimum distance of 10 cm in case of common cable routing,
- use of separator between heavy and low current lines in case of cable channels which are used in common,
- use of standard telecommunication lines, e.g. J-Y (St) Y with 0.8 mm diameter,
- already existing lines (modernisation) with differing cross sections can be used with considering the loop resistance.

Installation – protection measures



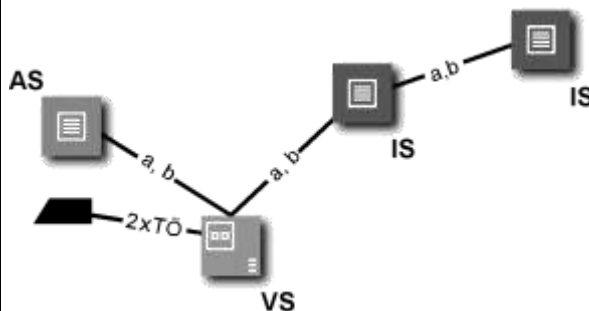
By suitable requirements to protect against lightning it is imperative that the electric tension of each 32 V DC is not exceeded at the connections a, b, P, E.

Intended use

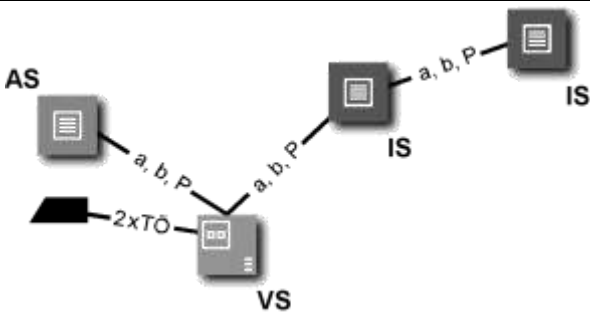
- ISW3030 are indoor stations for hands-free talking for the object area.
- They can be used for the operation within TCS audio systems and combined audio / video systems.
- They are suitable for surface-mount.

Max. number ISW3030 in 2-wire operation









In case of using powers supply and control unit	max. number ISW3030
BVS20 or NBV1000, 1 line	20
BVS100, distributed on 3 lines	80
VBVS05, 1 line	30



Max. number ISW3030 in 3-wire operation

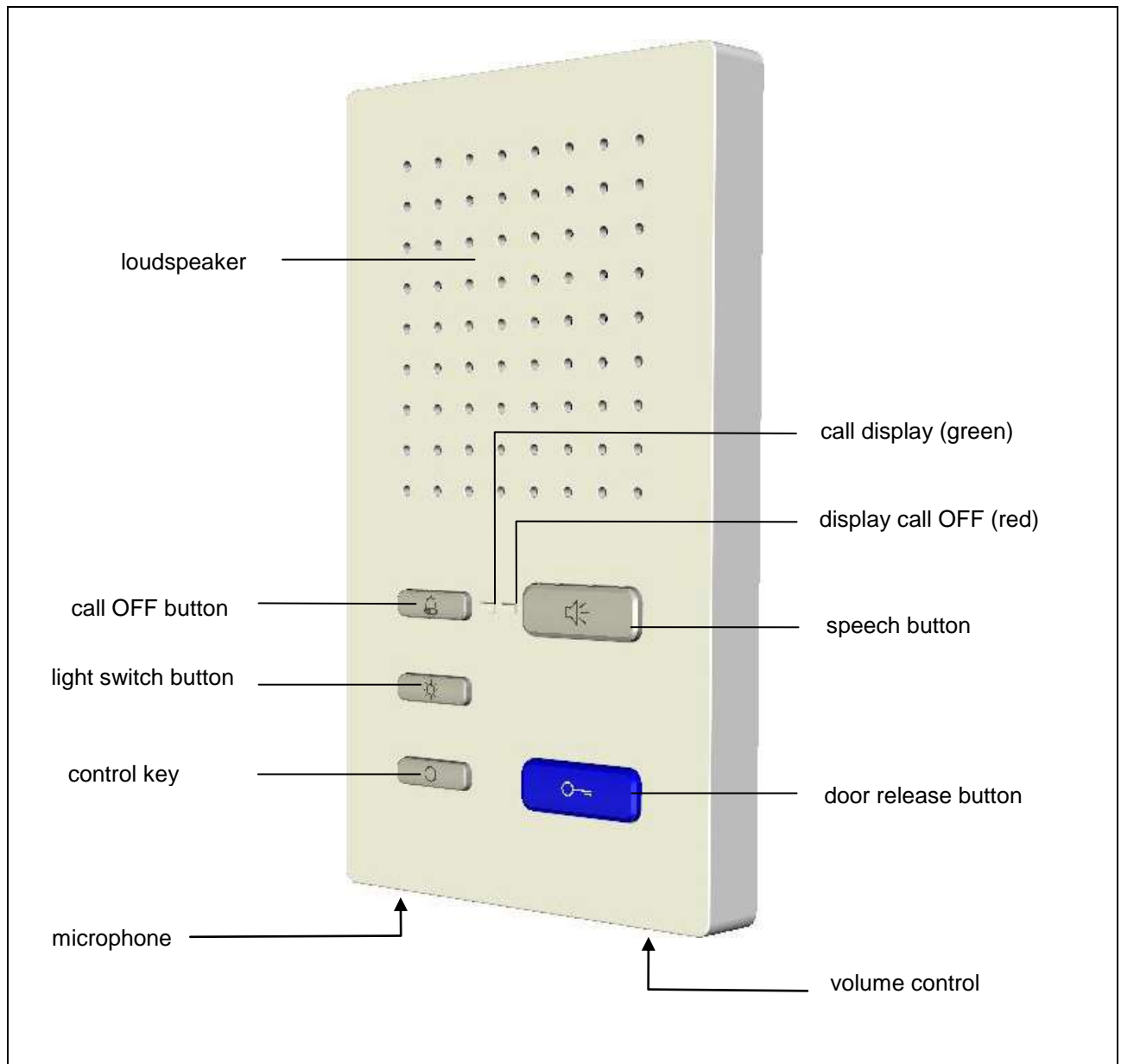
in case of using power supply and control unit	Max. Anzahl ISH3030	 <p>AS front-door station VS power supply and control unit IS indoor station note: The max. number of front-door stations which can be connected is limited. Details are described in their product information!</p>
BVS20 or NBV1000, 1 line	20	
BVS100, distributed on 3 lines	80	
VBVS05, 1 line	90	
BVS20 + NGV1011, 1 line	90	
BVS100 + NGV1011, 3 lines	270	

Indication and operating elements

	speech button	<ul style="list-style-type: none"> accepting a call, activate communication, manually controlled duplex communication end communication
	call OFF button	<ul style="list-style-type: none"> press short: ring tone stopper press for 8 sec: initiate ring tone selection
	display call OFF (red)	<ul style="list-style-type: none"> ON: call OFF is activated error indication: both LEDs are flashing ring tone selection: both LEDs are ON
	control key	<ul style="list-style-type: none"> control function 8 ring tone selection internal call
	Call display (green)	<ul style="list-style-type: none"> ON: call, communication is activated Blinks 3 x: speech channel is busy error indication: both LEDs are flashing ring tone selection: both LEDs are ON
	light switch button	<ul style="list-style-type: none"> switching lights ring tone selection floor call (from the flat door)
	door release button	<ul style="list-style-type: none"> open the door trigger light switch function* ring tone selection door call from front-door station
	volume control for <ul style="list-style-type: none"> voice output ring tone 	adjustable in 8 steps: <ul style="list-style-type: none"> when voice communication is established when no voice communication is established

* if light switch function is activated in the front-door station

Device overview



Technical data

supply voltage:	+24 V \pm 8 % (power supply and control unit)
housing:	plastics (colors as listed in catalogue)
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) = 0.8 mA
max. input current:	I(Pmax) = 75 mA

Short description

- hands-free talking, manually controlled duplex communication can be activated
- large, detached, blue door release button
- large speech button
- light switch button
- control key (ex works with control function 8)
- call OFF-button for ring tone mute with optical display
- optical display of door calls via LED (green)
- optical display of a busy line when voice communication is established (LED green)
- ring tones can be adjusted by the resident, selection of 13 ring tones in improved quality
- voice volume and ring tone volume can be adjusted manually
- acoustic call distinction between 2 front-door stations (via configuration software configo™), flat door (floor door) and internal call
- one parallel call can be activated (via Service Device TCSK-01 or configo™)
- audio privacy function and automatic call cut-off (after 2 min)
- lower cover with plugged-in screw terminal can be pre-installed and equipped alternatively with a door telephone
- optical and acoustic error indication
- can be functional extended by mounting place for call relays and a radio signal device can be activated/controlled
- energy efficient with a low standby consumption of only 0.025 W
- automatic hands-free talking (call acceptance) after internal call can be activated / deactivated

Installation

Installation site

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

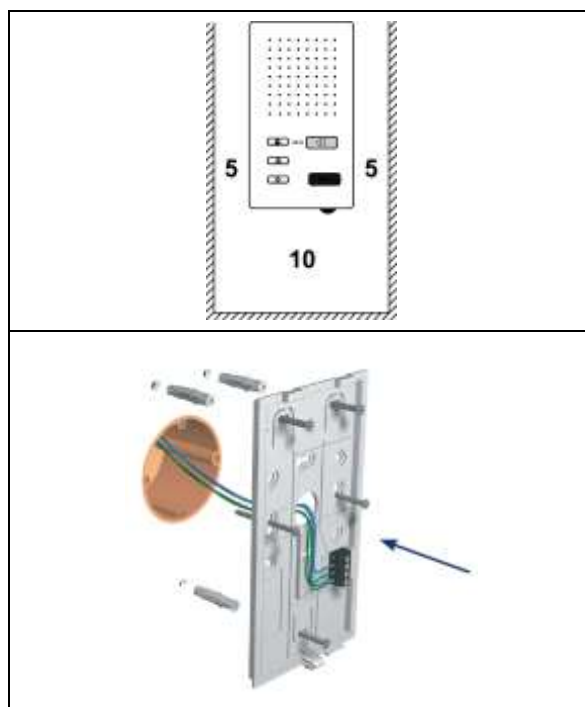
- aside 5 cm and below 10 cm.

Install the lower cover

- For placing 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:

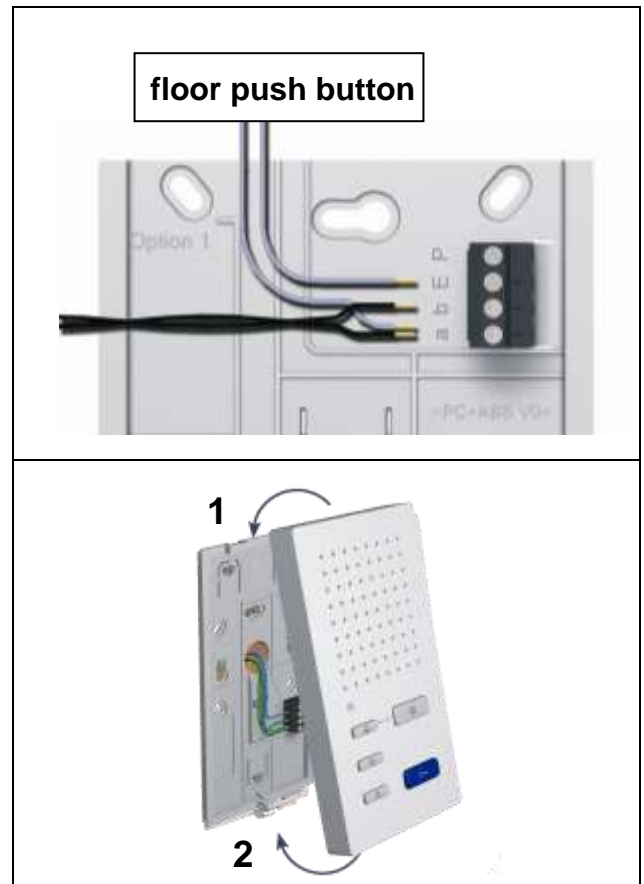
For fixing the straps do not use counter-head screws or flat washers!



Connect the lines (2-wire technique)

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

See wiring diagram on page 9.

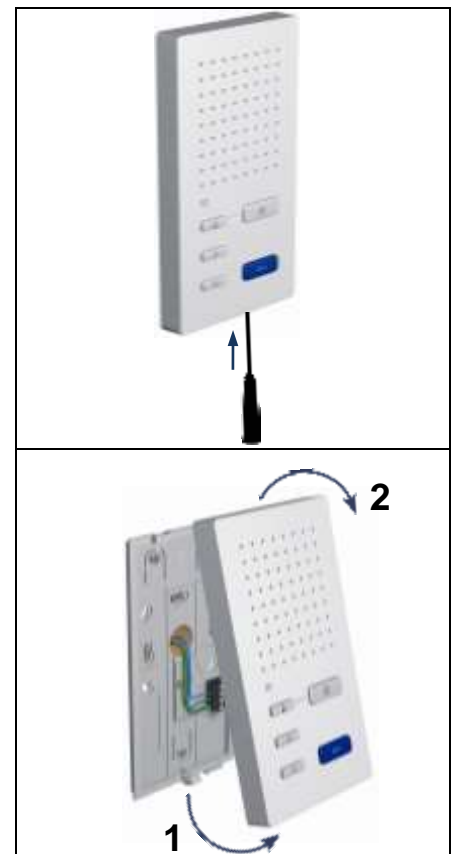


Snapping-on the upper cover

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

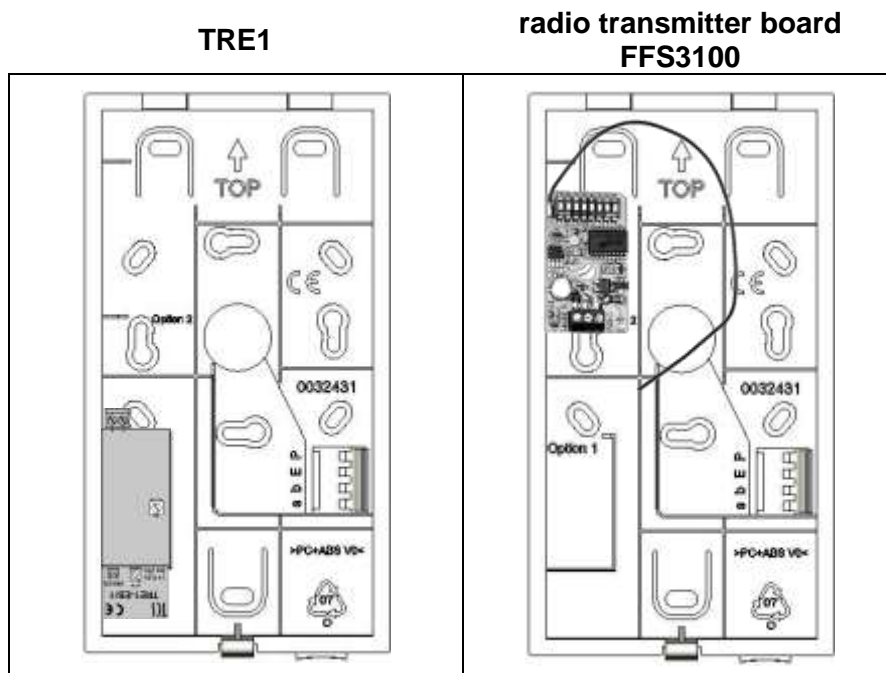
Open the device

- 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 out of the two upper adjustment increments (2).

Installation of extended functions



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

Connecting the lines

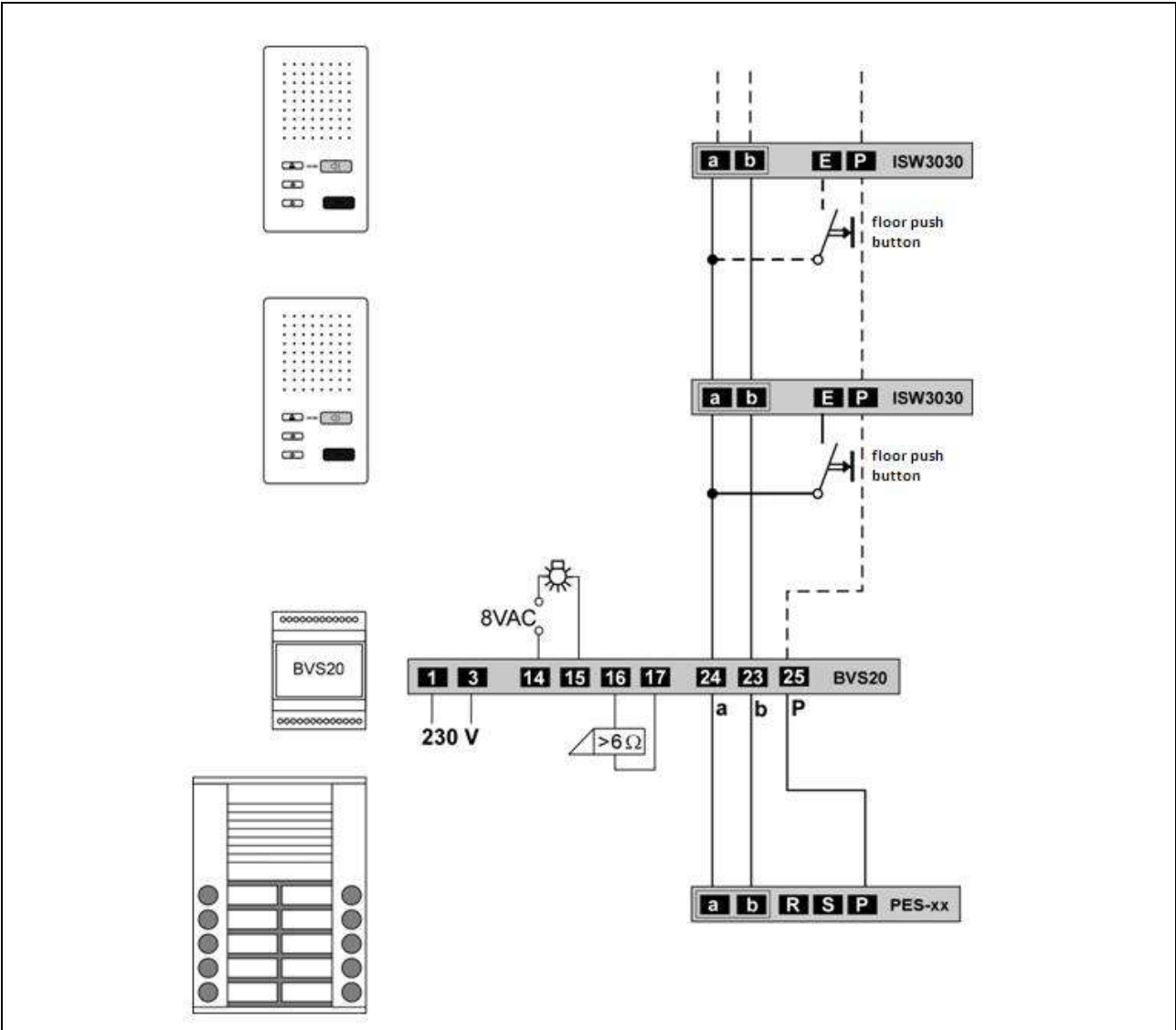
Connecting lines

permitted 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

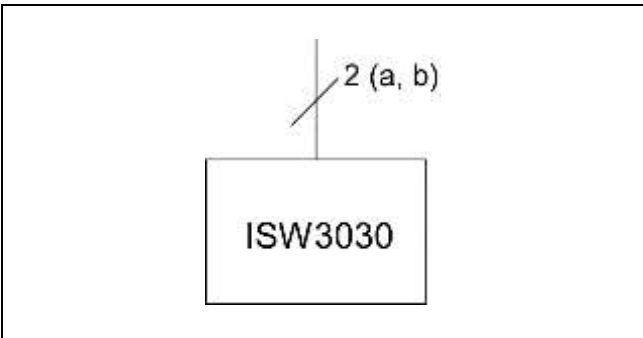
! Further wires have to be connected via auxiliar terminals!

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

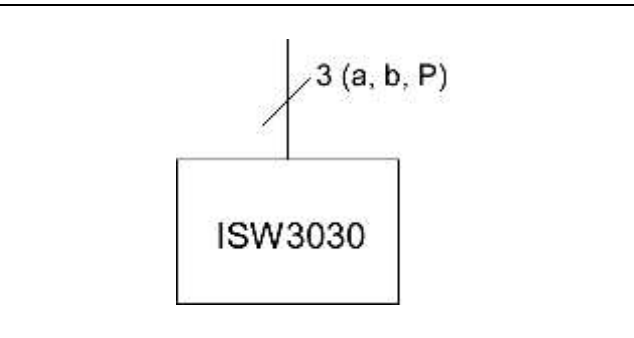
Wiring diagram



Connection diagram 2-wire technique



Connection diagram 3-wire technique



Commissioning

- Install the devices of the system voltage-free and completely.
- Proof the a-, b- and P-wire against each other on short-circuit.
- Switch on the main voltage.

Hint:

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

Settings

Pre-adjusted times

communication time	max. 2 min	
flashing period of the green LED, if the voice channel is busy after the voice communication is established	2 sec	3 x flashing
internal standby time, if the device is calling or is called	around 30 sec	

2-wire/3-wire operation

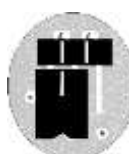
The jumper J1 is adjusted for the 2-wire operation in delivered state.

2-wire operation (delivered state)

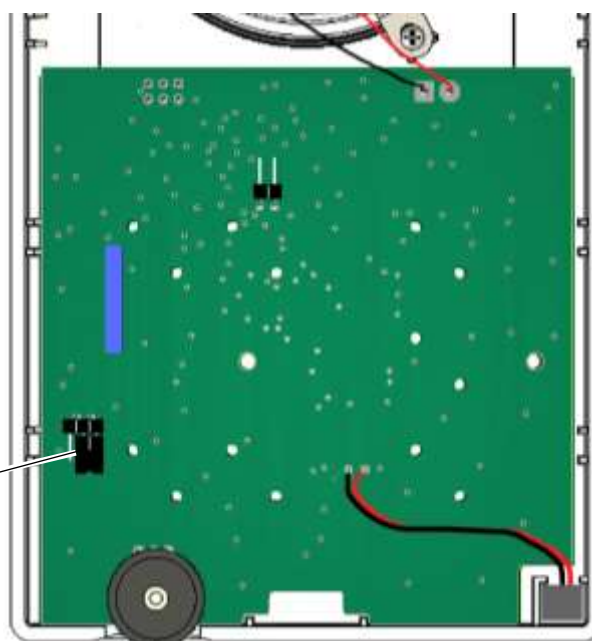


- Put the jumper J1 at both contacts for the 3-wire operation.

3-wire operation



J1



Ring tone selection

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

1	End voice communication. Press call OFF button for around 8 sec. 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 chose between 13 tones.	
2a	select door ring tone of the front-door station*	Press the <i>door release button</i> as often as the required ring tone sounds. The ring tone selected last, will be stored.
2b	select door ring tone of the floor door	Press the <i>light switch button</i> as often as the required ring tone sounds. The ring tone selected last, will be stored.
2c	select internal call tone	Press the <i>control key</i> as often as the required ring tone sounds. The ring tone selected last, will be stored.
3	Press call OFF button short. In case that no button is pressed for around. 8 sec, the device ends 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 only possible with the configuration software *configo*™.

Adjust volumes

Each adjustable in 8 steps

volume of voice	Turn ring tone volume control when a voice communication is established (adjustment ex works: volume step 4 from 8)
volume ring tone	Turn the ring tone volume control when there is no voice connection (adjustment ex works: volume step 6 from 8)

- A signal tone is reflecting the adjusted volume when turning the volume control of the ring tone.
- If the setting is finished, the adjusted ring tone will be reflected in the adjusted volume.

Configuration options

function	manually	TCSK-01	configo™ from version 1.3.3
ring tone volume	x	–	–
voice volume	x	–	–
selecting ring tones for door calls, internal calls and floor calls	x	–	x
ring tone for door call 2	–	–	x
parallel allocation	–	x	x
change audio AS border	–	–	x
block ring tone output	x	–	–
block ring tone selection			x
reset to factory settings	–	–	x

Programming with the Service Device TCSK-01

- The indoor station is acting like a device for manually controlled duplex communication.
- Use the commands „8“ for configuring (see *product information Service Device TCSK-01*).

search telephones	* 52 #
activate parallel call	* 99 # ser. no. # ParSNo #
deactivate parallel call	* 99 # ser. no. # 0 #

Ser. no. = the serial number of the new indoor station that should be configured

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

General information on the conduit in TCS audio systems

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

- Note when choosing the cables: the loop resistance can amount max. 20 Ω (table)
- In compliance to the max. permitted loop resistance the wire cross-section can be doubled, that means, that for one wire two lines can be used (illustration). The lines have to be twisted.
- In case of 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

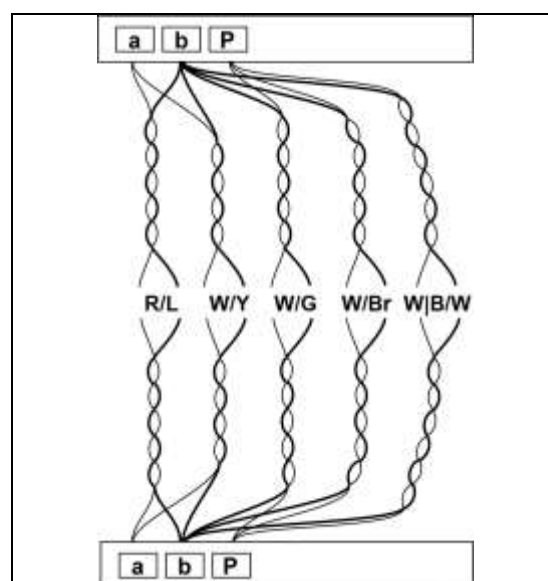
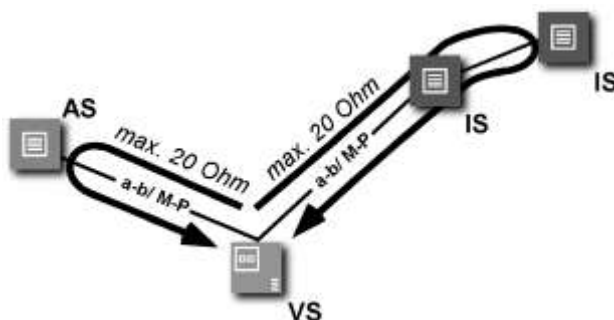


Table: loop resistances

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	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 never be located more than 20 Ohm away from the power supply and control unit (VS).

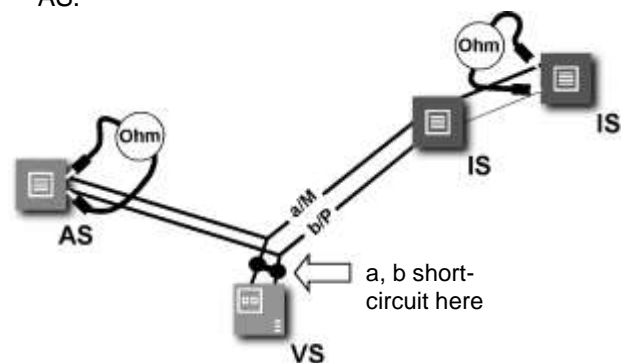


20 Ohm:

max. 160 m distance AS/IS-VS by 0.6 mm diameter
max. 300 m distance AS/IS-VS by 0.8 mm diameter

Measurement loop resistance

- Switch off the 230 V / 50 Hz of the VS.
- Install the a-b short-circuit at VS.
- Other devices do not disturb the measurement, they can be connected.
- Measure the resistance at a/b of the last IS or AS.

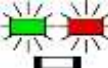
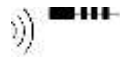




AS front-door station
VS power supply and control unit
IS indoor station
FE extended function

Repair

Error detection and indication

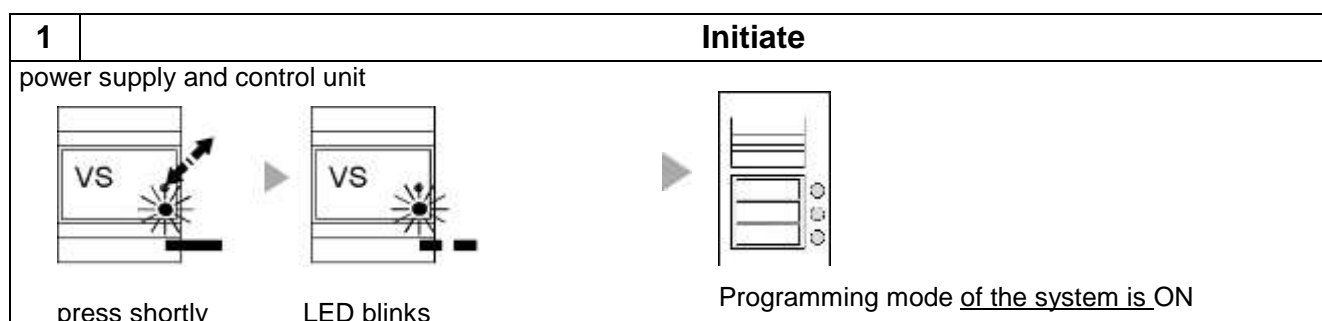
Errors will be indicated optical and acoustic: error tone for one time and constant flashing of the operation indication. When pressing any button, the error tone sounds again. The optical error indication stays active until the error is resolved.


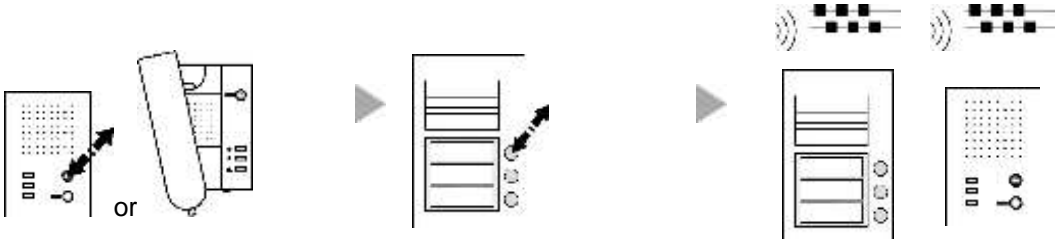
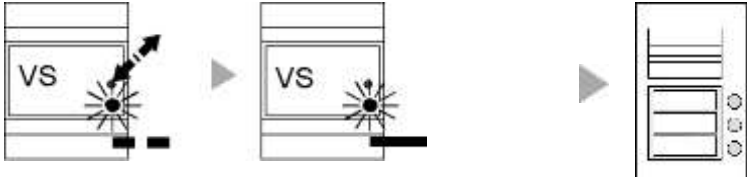
error causes	display error mode	error tone	elimintaion
a- and P-wire interchanged or short-circuited	 both LEDs are flashing		change a- and P-wire or eliminate short-circuit, device is going into sleep mode again
a-wire: not connected or not supplied			connect the a-wire or proof power supply, device is going into sleep mode again
Button sticks (press longer than 15 sec)			remove button at the device or floor push button, device is going into sleep mode again

Exchange of an indoor station – programming bell buttons

Basic principle

- 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 the new indoor station 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 a bell button and no programming lock is set. To deactivate a programming lock you need a Service Device TCSK-01 or the configuration software configo™.



2	Delete a button^{a)}
 <p>Press until the delete melody sounds ¹⁾ release</p>	
3	Programming via voice communication
 <p>establish voice communication to the front-door station ²⁾ press button shortly. ... until a ring tone sounds at the front-door and indoor station ¹⁾</p>	
4	End programming
 <p>press shortly LED is ON Programming of the system is OFF ^{*)}</p>	

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

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

The programming lock can be deactivated only with the Service Device TCSK-01 or the configuration software configTM.

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

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

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



Download the declarations of conformity from 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 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 electrician.

- Note our **conditions of sale and delivery**, a www.tcsag.de, Downloads, trade information and also included in our actually price list.
- Please contact us: **hotline@tcsag.de**.

Service

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

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