



Product information

Door telephone

ISH3022



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Scope of delivery

1 x Indoor station ISH3022: upper cover, lower cover, handset with handset cord
Product information
Instruction manual

Safety instructions

! Mounting, installation and commissioning have to be carried out only by qualified electricians!

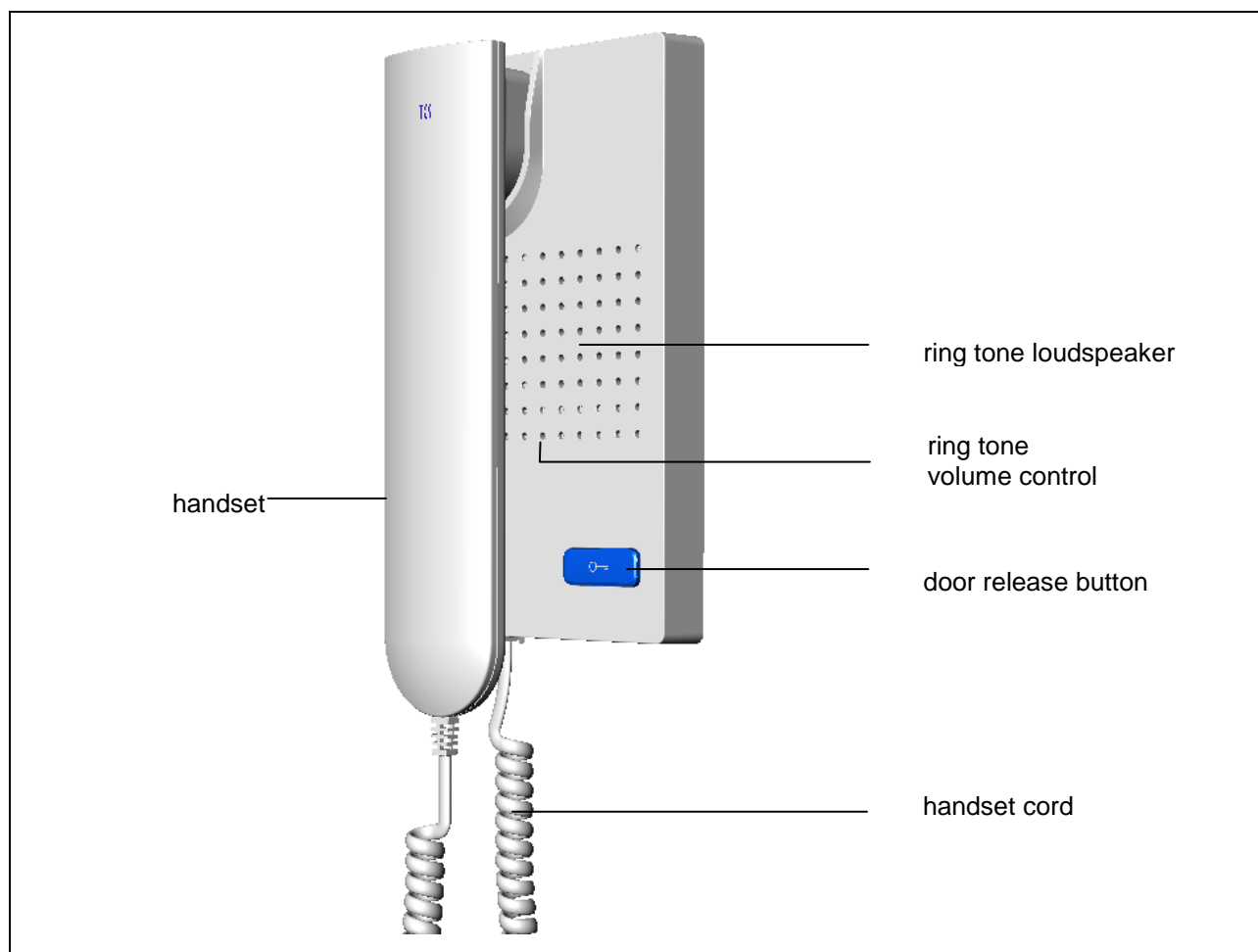
For working on systems with main connection of 230 V alternating voltage, the safety requirements according to DIN VDE 0100 must be observed.

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

- separated conduit of heavy current 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.

! With suitable measures to protect against lightning, it has to be ensured that a voltage of 32 V DC is not to be exceeded at the TCS:BUS wires a and b.

Device overview



Indication and operating elements

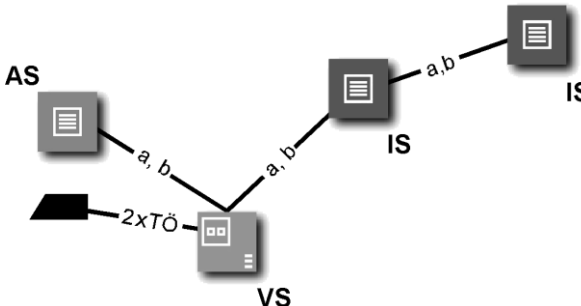
	handset	<ul style="list-style-type: none"> • speaking to the door • end speaking
☰	Türöffnertaste	<ul style="list-style-type: none"> • door release when the handset is lifted • trigger light switch function when the handset is put down*

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

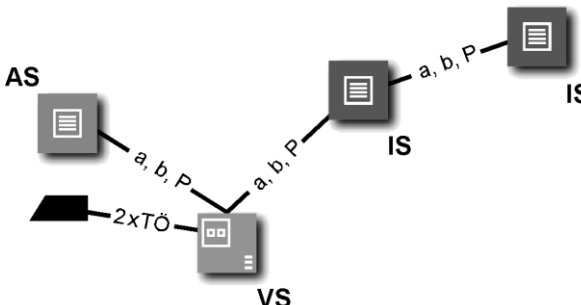
Intended use

- The ISH3022 is an indoor station for duplex communication.
- As door telephone it is suitable for the operation within TCS audio systems and combined audio/video systems. The signal transmission and power supply is realised with a polarity-free and short-circuit protected 2-wire TCS:BUS.
- The ISH3022 are suitable for surface-mount over a flush-mount socket.

Max. number of ISH3022 in 2-wire operation

when using power supply and control unit	max. number ISH3022	
BVS20 or NBV1000, 1 strand	20	
BVS100, distributed on 3 strands	80	
PSG02, 1 strand	30	

Max. number ISH3022 in 3-wire operation

when using power supply and control unit	max. number ISH3022	
BVS20 or NBV1000, 1 strand	20	
BVS100, distributed on 3 strands	80	
PSG02, 1 strand	90	
BVS20 + NGV1011, 1 strand	90	<p>AS front-door station VS power supply and control unit IS indoor station</p> <p><i>Note: The max. number of front-door stations that can be connected is limited. Also described in the respective product information!</i></p>
BVS100 + NGV1011, 3 strands	270	

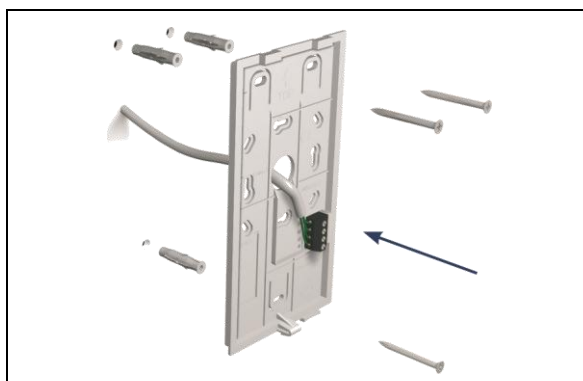
Short description

- large, blue door release button
- ring tone volume can be adjusted continuously by a qualified electrician
- acoustic ring tone distinction: door call from 2 front-door stations, call from the flat door (floor bell) and internal call (ring tones are set)
- one parallel call can be adjusted with the Service Device TCSK-01 or configo™
- audio privacy function
- pluggable handset cord
- lower cover with plugged screw terminal can be pre-installed
- configuration software configo™ can be used for comfortable system configuration at PC with automatic detection of device types and serial number
- extendable with call relay, triggering of radio signal device,
- energy efficient through low standby consumption of only 0.01 W
- 2-wire technique which is easy to modernise, 3-wire technique possible
- tested according to EN 50486
- housing made of antistatic and recycable plastics

Installation

Install the lower cover

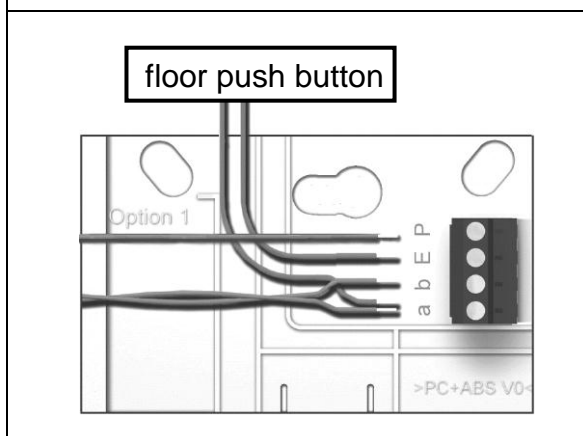
- To place the connection lines without any problems, a flush-mounted socket must be installed behind the device.
Position the flush-mounted socket below the cable conduit.
Install the lower cover on three attachment holes with suitable screws to the wall.



Connect the lines

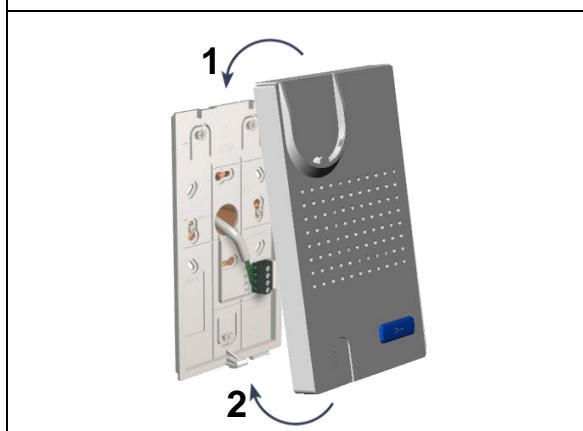
- Minimise the length of the lines above the upper cover to place the lines without any problems and do not clamp the lines when snapping-on the upper cover.
- Connect the lines according to the labeling: a b E P (from the bottom to the top), floor push button at a – E.

Wiring example see page 8.



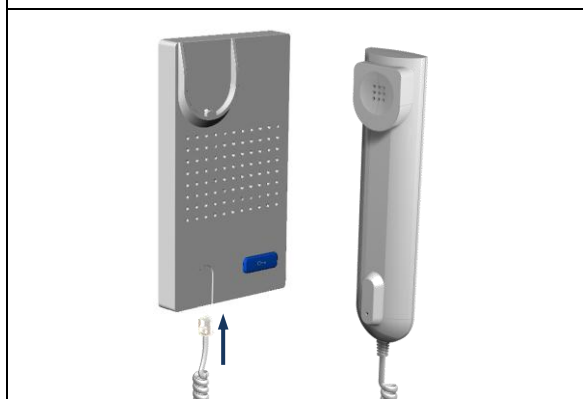
Snap-on the upper cover

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



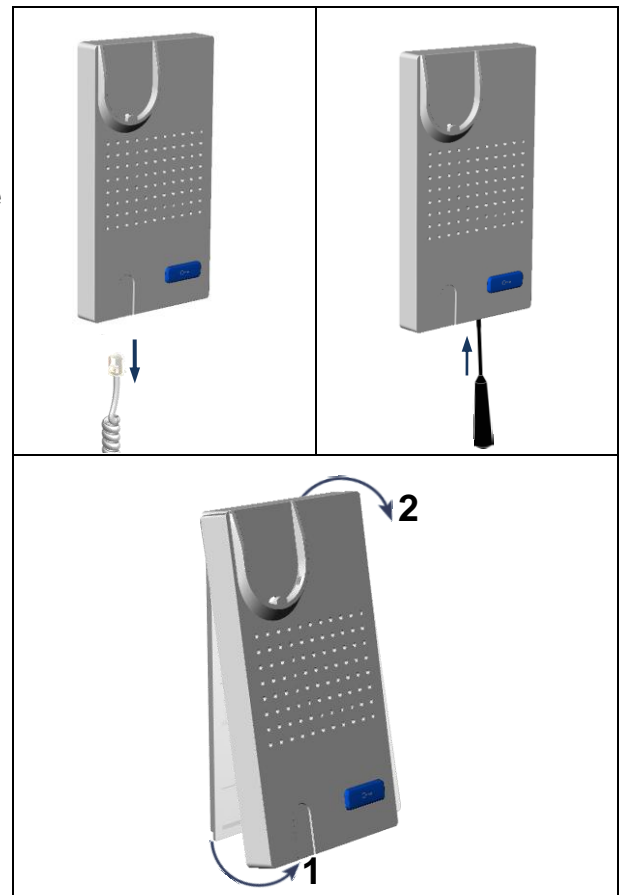
Connect the handset

- Plug in the Western connector of the handset cord into the socket at the underside of the telephone.



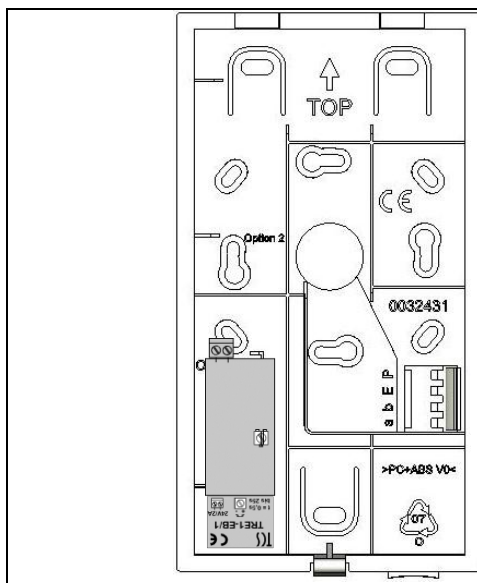
Open the device

- Remove the handset cradle.
- 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).

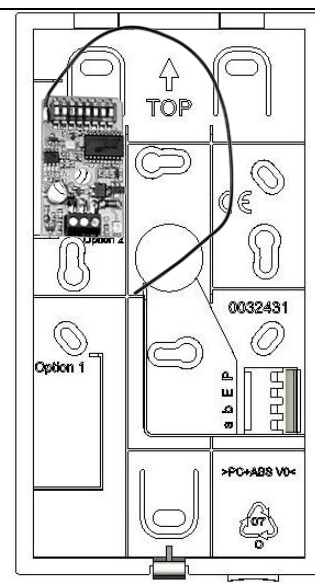


Installation of extended functions

call-relay TRE1



Radio transmitter board (FFL1000-0)



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

Connect the lines

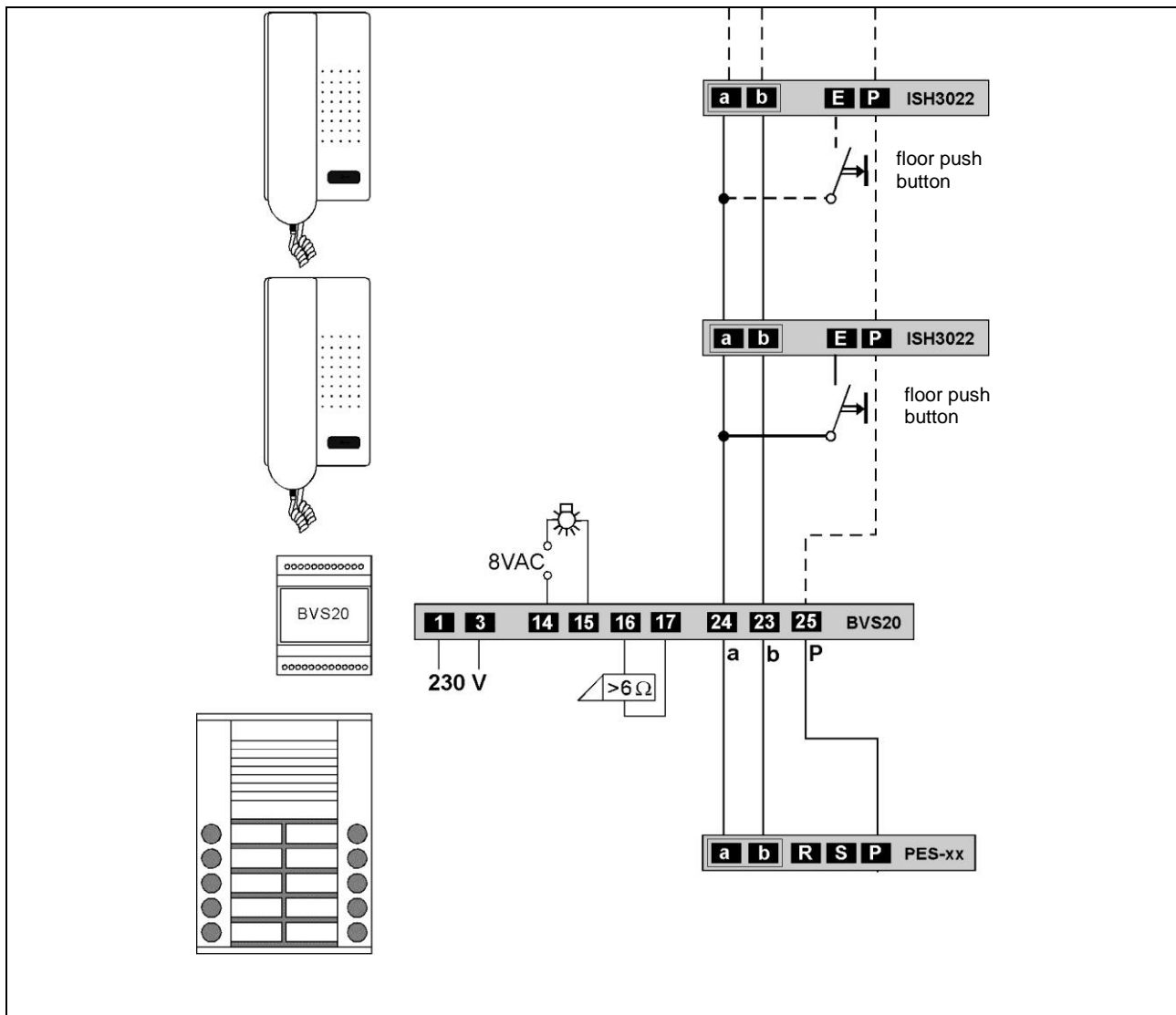
Connection lines

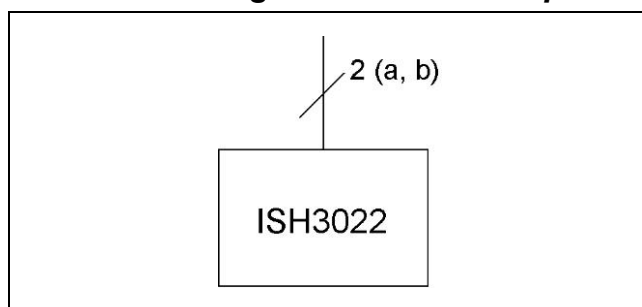
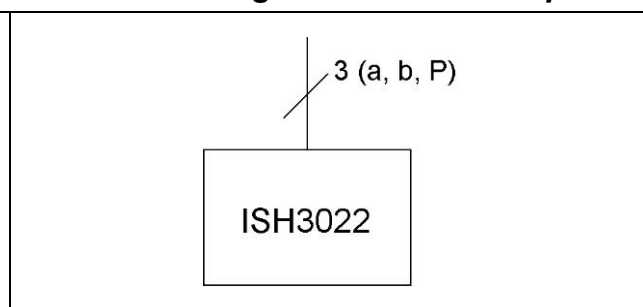
acceptable cross-section (diameter)	0.08 ... 0.82 mm ² (Ø 0.32 ... 1.0 mm)
max. number of wires per terminal contact	each 2 x 0.8 mm, 3 x 0.6 mm

! Further wires have to be connected with auxiliar terminals!

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

Wiring example



Connection diagram 2-wire technique**Connection diagram 3-wire technique****Note: Replace an ISH1030 or TTS1 with an ISH3022**

- The floor push button always has to be connected to the a-wire.
- In case of a parallel connection, both telephones must be replaced with an ISH3022.

Commissioning

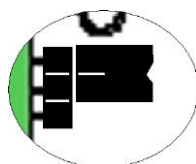
- Install the devices of the system voltage-free and completely.
- Check the a-, b- and P-wire against each other for short-circuits.
- Switch on the mains voltage.

Note:

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

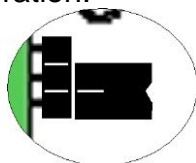
Settings**2-wire/3-wire operation**

Ex works, the jumper J1 is configured for 2-wire operation



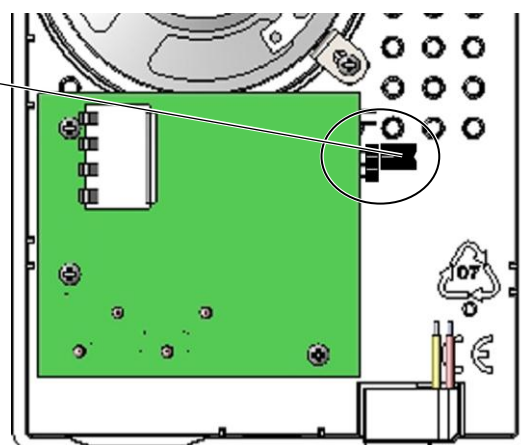
2-wire operation (delivery state)

- Plug the jumper J1 on the two upper contacts for 3-wire operation.



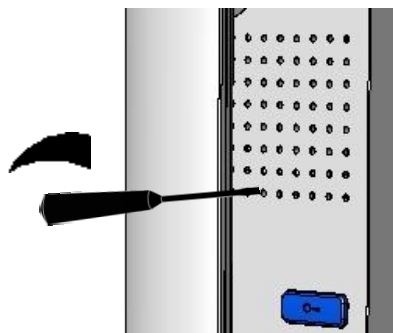
3-wire operation

J1



Adjust the ring tone volume

- Use a small screwdriver to turn the ring tone volume.
- To increase the volume, turn the ring tone volume control (middle hole in the lowest line of the loud-speaker drillings) clockwise.



Configuration

Configuration options

Function	manually	TCSK-01	configo™ as of version 1.3.3
ring tone volume	x	–	–
parallel allocation	–	x	x
reload to factory setting	–	–	x

Programming with the Service Device TCSK-01

- The indoor station is acting as a telephone.
- Use the commands "8" for configurations (see *product information Service Device TCSK-01*).

search telephones	(*) (51) (#)
switch ON parallel call	(*) (89) (#) Ser.-Nr. (#) ParSNr (#)
switch OFF parallel call	(*) (89) (#) Ser.-Nr. (#) 0 (#)

Ser.-Nr. = serial number of the indoor station that is to be configured new

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

Note: block ring tone output

The ring tone output can be blocked with the switch "call OFF" at the Service Device TCSK-01 for 4 min.

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 20 Ω (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 formed wiring

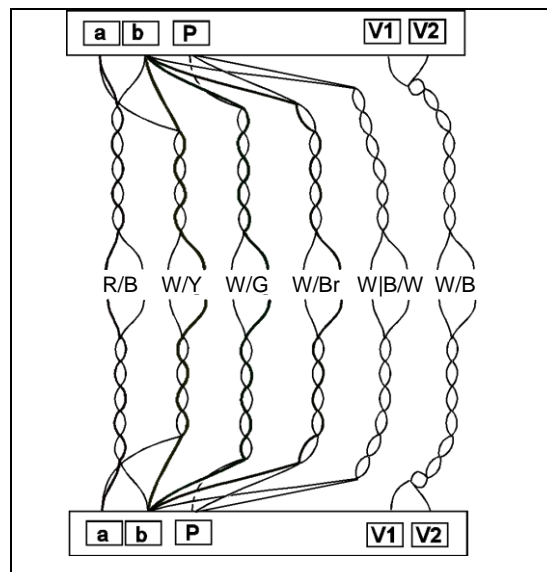


Table: loop resistances

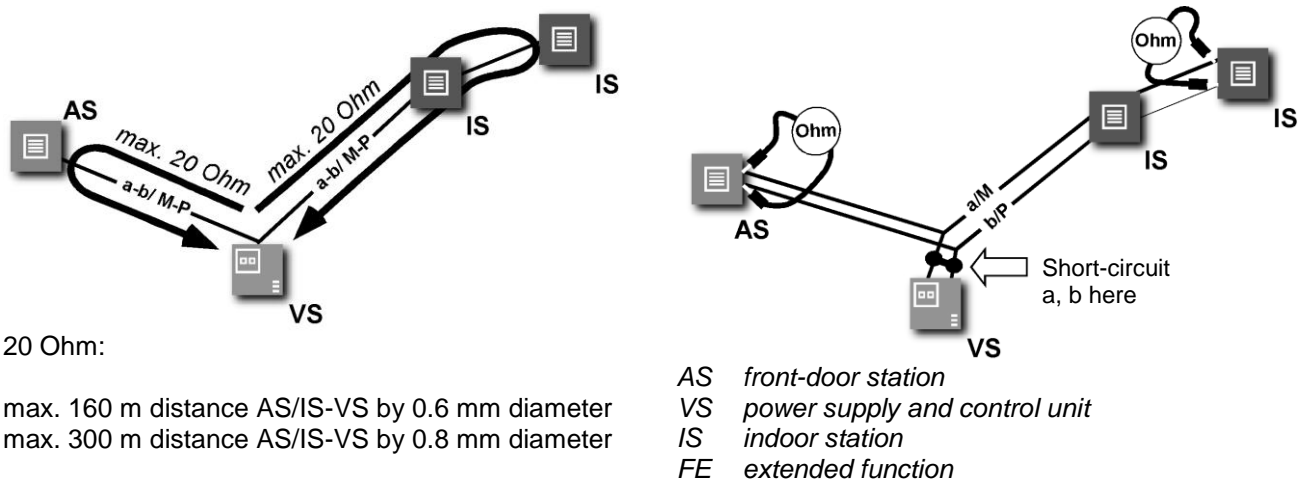
Line length in m	Line diameter	
	0.6 mm	0.8 mm
	loop resistance in Ω	
10	1.28	0.71
20	2.55	1.43
30	3.83	2.14
40	5.10	2.86
50	6.38	3.57
60	7.65	4.29
70	8.93	5.00
80	10.20	5.71
90	11.48	6.43
100	12.76	7.14
150	19.13	10.71
200	25.51	14.29
250	31.89	17.86
300	38.27	21.43

Principle loop resistance

None of the devices (front-door station, indoor station or extended function) should be further than 20 Ohm away from the power supply and control unit(VS).

Measure loop resistance

- Switch off 230 V / 50 Hz of the power supply and control unit.
- Install a-b short-circuit at the power supply and control unit.
- Other devices are not disturbing the measurement, they can stay connected.
- Measure the resistance at a/b on the strand at the last indoor or front-door station.



Technical data

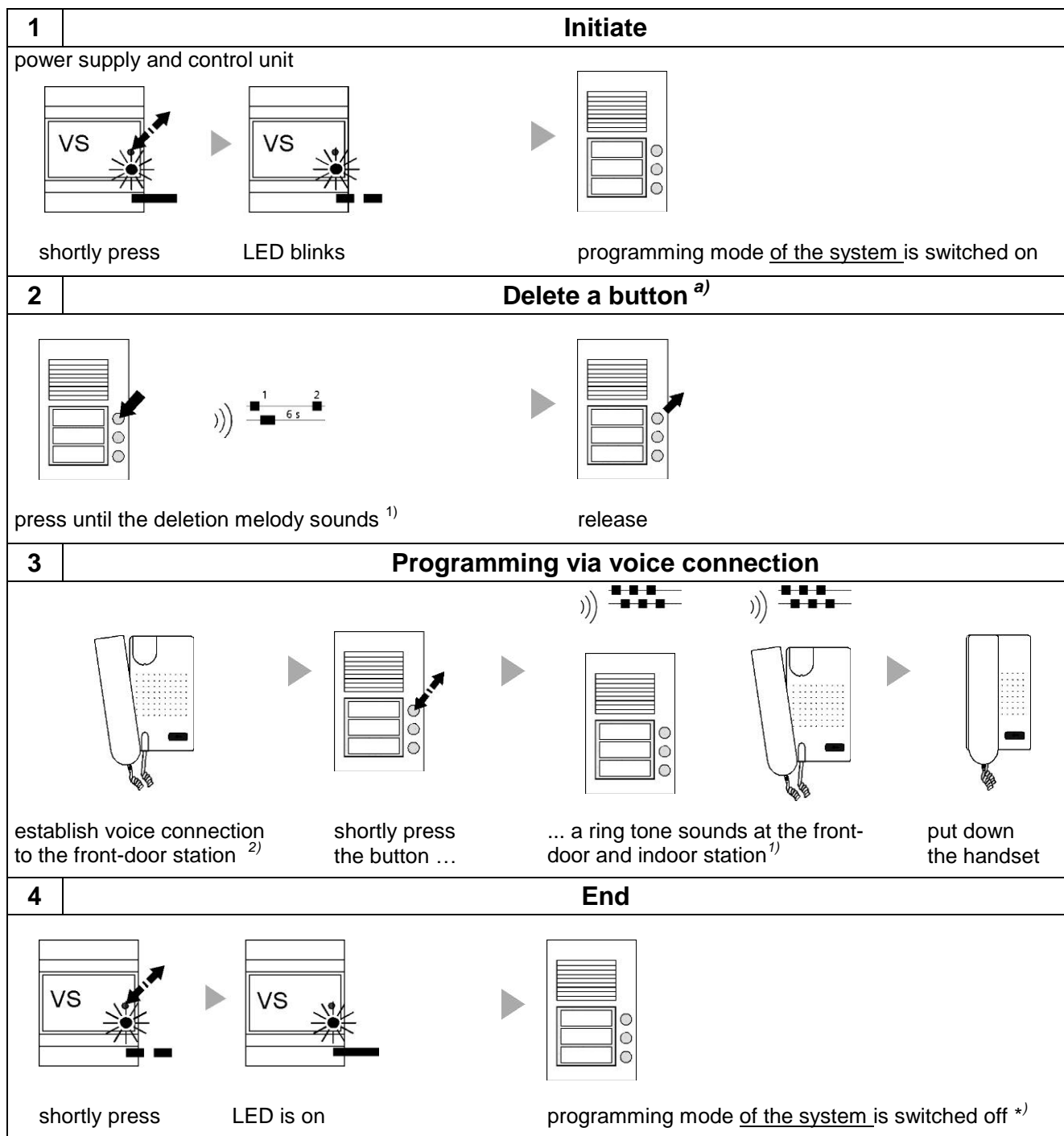
supply voltage:	+24 V \pm 8 % (power supply and control unit)
housing:	plastics (colors as given in catalogue)
dimensions (in mm):	H 204 (without handset cord) x W 100 x D 50
weight	305 g
acceptable ambient temperature:	-5 ...+ 40 °C
degree of protection:	IP30
input current, standby	2-wire operation: I(a) = 0.4 mA 3-wire operation: I(a) = 0.2 mA, I(P) = 0.2 mA
max. input current:	I(Pmax) = 60 mA

Repair

Replace the indoor station – program bell buttons

Basic principle

- All devices at the TCS:BUS have a unique serial number.
- Programming a bell button means to allocate a serial number of an indoor station to the bell button of a front-door station. The number is stored in the EEPROM of the front-door station.
- Ensure that the new indoor station is connected to the TCS:BUS and that the mains voltage is switched on (the operation LED at the power supply and control unit is on). Further ensure that the access to the flat is granted during the programming.
- This instruction describes the case, in which a serial number is allocated to a bell button and no programming lock is set. To deactivate a programming lock, a Service Device TCSK-01 or the configuration software configo™ is needed.



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 configTM.

2) Newly developed front-door stations (as of 2009) respond to that with a positive acknowledgement, when 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 wet cloth.
Remove stronger stains with a mild household cleaner.

Conformity

 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 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 electricians.

- Please note our **conditions of sale and delivery**, available under 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 plate white 120 x 250 x 2 mm	E24340

Service

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

Headquarters

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