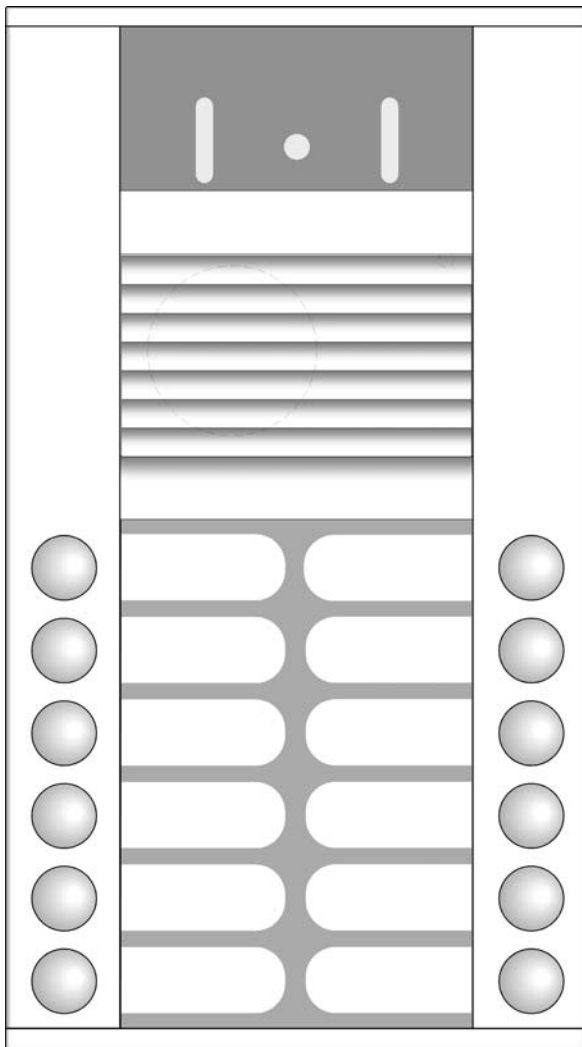


Product information

Front-door station series with video for surface-mount

series VPES



series VPDS

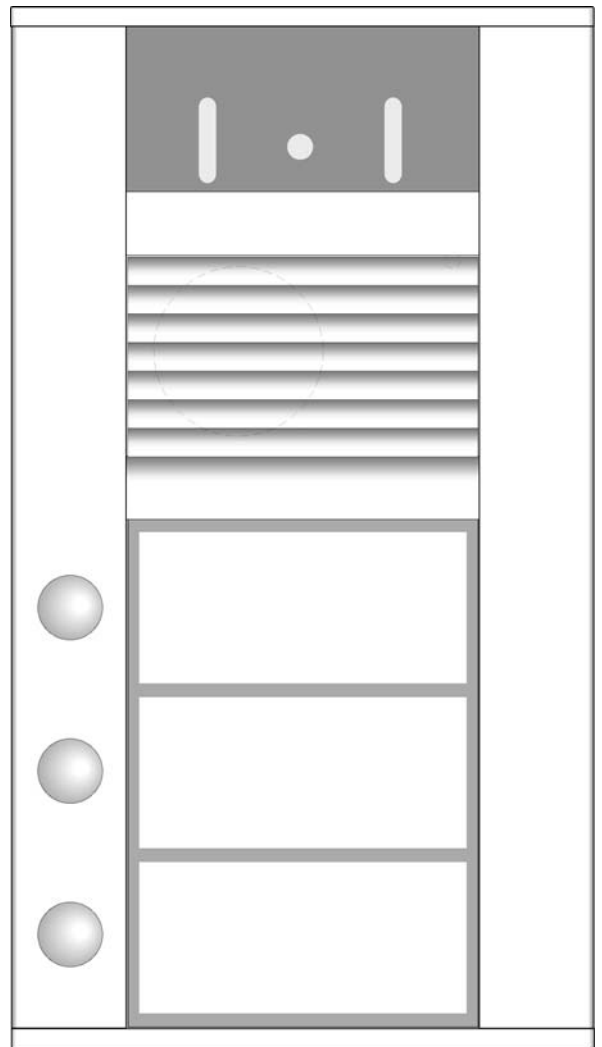


Table of contents

Scope of delivery	3
Safety notices	3
General notes on the cabling in TCS video systems	4
Terms for 5 wire and 6 wire operation	4
6 wire operation	4
5 wire operation	4
Device overview	5
Technical data	6
Application	6
Brief description	6
Basic functions	6
Additional functions	7
Assembly	7
Installing the video front-door station	7
Installation location	7
Installation height	7
Opening and closing the case	8
Cable connection	8
General notes	8
Connection	9
Wiring example	9
Connection diagram	9
Video commissioning	10
Microphone and loudspeaker volume setup	10
Nameplate labelling	10
Programming of bell buttons	11
Basic principle	11
Programming with the Service Device	11
Programming steps legend	11
Programming state of a bell button	12
Testing	12
Deleting the programming	12
Programming a bell button	13
Method 1: In-house station not accessible	13
Programming the other bell buttons:	13
Method 2: In-house station accessible	14
Programming the other bell buttons:	14
Programming an already programmed bell button	15
Basic principle	15
Method 1: In-house station not accessible	15
Programming the other already programmed bell buttons	15
Method 2: In-house station accessible	16
Programming the other already programmed bell buttons	16
Repair	17
Replacing the EEPROM memory	17
Cleaning	17
Service	17

Scope of delivery

- 1 x VPES / VPDS
- 1 x key for hexagon socket screws
- 1 x screwdriver with round handle
- name plates, empty and with light symbol
- product information

Safety notices



Assembly, installation and commissioning must only be carried out by a qualified electrician!

For work on systems with 230 V AC mains voltage the safety requirements of DIN VDE 0100 must be observed.

When installing TCS:BUS systems the general safety rules for telecommunication systems in accordance with VDE 0800 must be observed:

- separate cabling for high and low voltage lines,
- minimum distance of 10 cm for joint cabling arrangements,
- use of separators between high and low voltage lines in joint cable ducts,
- use of standard telecommunication cables, e. g. J-Y (St) Y with 0.8 mm² cross section,
- existing cables (modernisation) with different cross sections may be used whilst taking account of the loop resistance.



Suitable lightning protection must ensure that a voltage of 32 V DC will not be exceeded at the TCS:BUS wires a and b.

General notes on the cabling in TCS video systems

Terms for 5 wire and 6 wire operation

6 wire operation	standard operating mode. Video operation where two separate earths (b and M) are being used.
5 wire operation	special operating mode. Video operation where b and M are joined to a single earth.

6 wire operation

The cabling depends on the building situation and is only limited by its length.

- When selecting the cable length consider: the loop resistance M-P must be max. 8 Ω (table 1).
- For loop resistance > 8 Ω : provide for multiple wiring of the lines (twisted pairs).
- choice of line or star wiring
- Do not use more than 6 video in-house stations per line. For systems with more video in-house stations provide for the use of video distributors (VT02, VT04).
- up to 64 front-door stations and an almost unlimited number of in-house stations can be connected polarity-free (a/b) to a system. (use suitable power supply and control unit.)

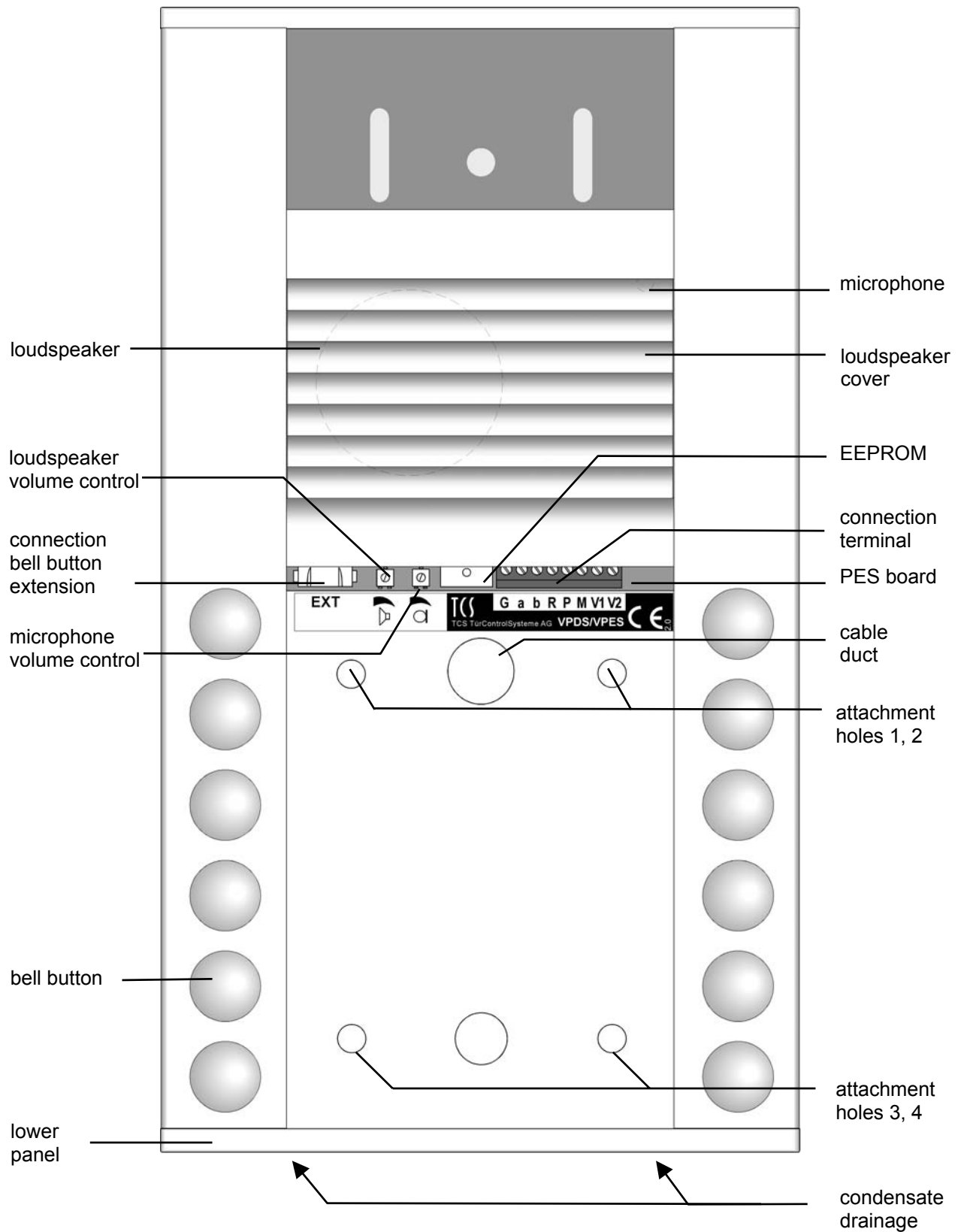
Table 1: Loop resistances

Line length M-P in m	Line diameter	
	0.6 mm	0.8 mm
	Loop resistance in Ω	
10	1.22	0.69
20	2.45	1.38
30	3.67	2.07
40	4.90	2.76
50	6.12	3.44
60	7.35	4.13
70		4.82
80		5.51
90		6.20
100		6.89

5 wire operation

Number of monitor in the system	max. permissible loop resistance in Ω
24	4,8
12	6,3
6	8

Device overview



Shown is the VPES12,
without name plate glass

Technical data

Supply voltage:	24 V \pm 8 % (via power supply and control unit)
Case:	aluminium, anodised
Name plate glass:	plexiglass
Operating temperature range:	-20°C to 50°C
Input current:	I(a) = 2.8 mA, I(P) = 200 mA standby
Maximum input current:	I(Pmax) = 240 mA

camera features bw-camera:	CCD-sensor 380 TVL
photo sensitivity:	0.2 Lux
IR-LED-Illumination:	for short distance
focal length:	f = 3.7
diagonal capture:	90°
video output	1 Vpp composite video balanced
based on the TCS-video system in a 6-wire technique	

Application

VPDS, VPES are front-door station series with video for surface mounting for external use.

Brief description

Basic functions

Bell buttons	<ul style="list-style-type: none"> Operating a programmed bell button triggers a ringing tone at the in-house station. Operating an unprogrammed bell button triggers the light switch function in the power supply and control unit. When operating a bell button an acknowledgement tone sounds.
Saving the bell button allocations in the front-door station	All programmed data (serial numbers and parameters) are stored in the EEPROM. If the front-door station requires replacement, the EEPROM board can be removed from the programmed front-door station and inserted into the new front-door station of identical design.
Camera	black/white-camera, image activation constantly enabled (video signal always connected)
Image activation	<ul style="list-style-type: none"> with operation of a bell button or operation of the function key (to switch on monitor / between cameras) on the video in-house station
Image deactivation	replacing the handset or automatic (preset time)

Additional functions

Name plate illumination	Via LED, P-wire connection required.
Connection	<ul style="list-style-type: none"> • for Service Device • for connection for bell button extension PET/PDT • for protection ground
Allocation of serial number to bell buttons	2
additional switching signal	Use a combining device BRE2.

Assembly

Installing the video front-door station

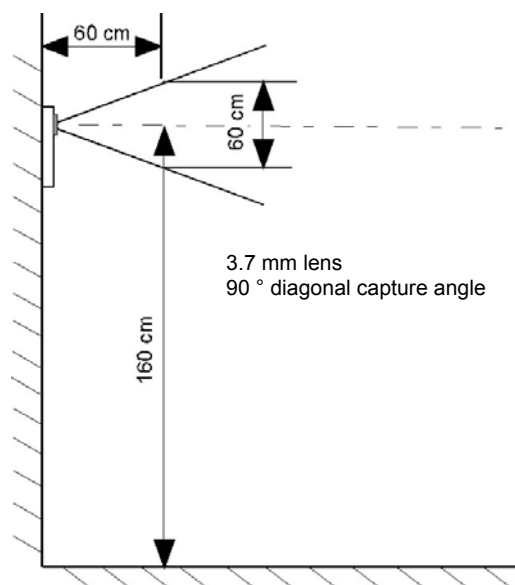
Installation location

To achieve a good video quality the camera must not point directly at:

- sunlight,
- strong sources of light,
- bright or strongly reflecting walls.

Installation height

The installation height for the video front-door station must be selected under consideration of the field of capture of the camera (see figure). Persons with average body height are best captured with an installation height of 160 cm above floor level.



Opening and closing the case

1. Opening the case

The lower panel is attached to the aluminium profile by two hexagon socket screws.

(1) Unscrew both screws using a key for hexagon socket screws only half way:

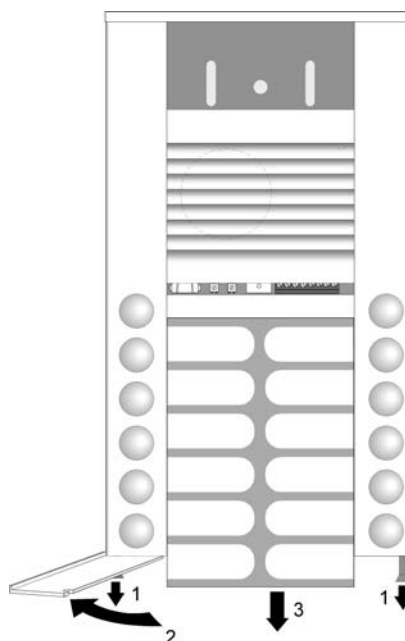
(2) Turn the lower panel to the left, without removing it completely.

(3) Slide the name plate glass fully down.

2. Feed the cables through the cable duct.

3. Attach the device safely to the wall from the attachment holes (see overview) using suitable screws.

Take care not to pinch the cables under the spacers on the device back.



4. Closing the case

Slide the name plate glass upwards under the front panel.

Turn the lower panel to the right until the recess fits over the screw.

Tighten the screws.

! When sliding the name plate glass upwards take care not to damage the rubber seals in the guide grooves.

When fitting additional devices make sure that you can slide the name plate glass of the device downwards out of the profile. Do not fit a device below the device.

! Never seal the device using silicon! Condensate must be allowed to drain and evaporate.

Cable connection

General notes

Use the small screwdriver supplied to connect the lines and prevent damage to the device.

! Please note

- the lines should not be run in front of the LED to prevent obstruction of the name-plate illumination
- the lines must not be squeezed below the spacers on the back of the front-station.

1. Strip the insulation from the line ends.

- Option grounding: If there are interferences in specific surroundings, the shielding can be connected with G and PE on the distribution side.

Diagram illustrating a network topology for a security exercise:

- Host 2 (8V AC) is connected to a switch 6 (a, b, P, M, V1, V2).
- Switch 6 is connected to a box labeled VPDS and VPES.

Video commissioning



First fully install the system, then connect power!

- V1 and V2 must never - not even temporarily - be connected to the P, a or b wires. Such a connection would destroy the device.
- When connecting the video wires V1 (+) and V2 (-) the polarity must be observed. If the image is distorted after commissioning, switch off the device and replace the wires for the video signal.

Microphone and loudspeaker volume setup

! For adjustments use the small screwdriver supplied!

The volumes have been set to an average value at factory. A modification may not always be necessary.

When adjusting please note:

The amplification of loudspeaker and microphone cannot be set independently from each other. Too great volume will cause a feedback effect (whistling).

Volume control

microphone	loudspeaker
In-house station	Front-door station
volume	volume
adjustment	adjustment

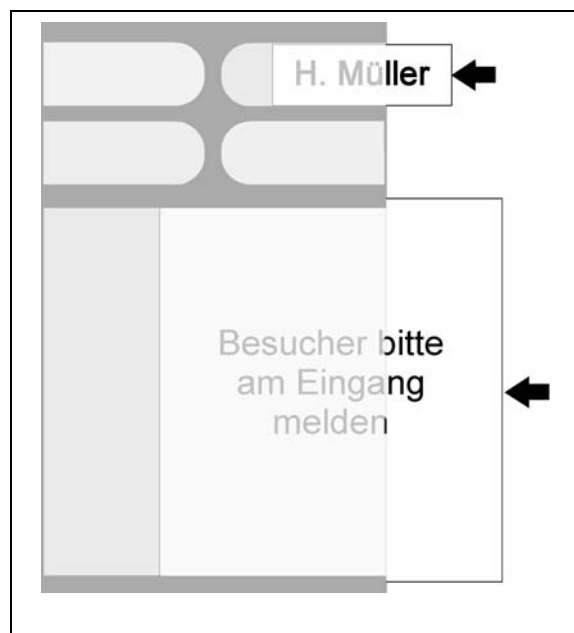


Nameplate labelling

The templates are available on our website www.tcs-germany.com \ English\ Downloads \ System and technology basics\ Product installation and use \ labelling of the nameplate

1. Enter the desired name into the template.
2. Print the name plate on the special film* and cut it to size.
3. Insert the cut plates from the side into the pockets on the name plate glass.

* We recommend to print the name plates on a durable special film. The film can be ordered directly from TCS: Writable polyester film for name plates DIN A4.



Programming of bell buttons

Basic principle




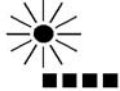






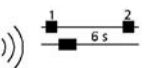

All devices at the TCS:BUS have a unique serial number. During programming this serial number is transferred to the front-door station and linked to the bell button.

Programming with the Service Device

Utilise the simple 1 person programming with the TCS Service Device. You will not need access to the in-house stations in the flats. The voltage supply is provided by connecting the Service Device to the TCS:BUS. For more on the TCS Service Device see: www.tcs-germany.de

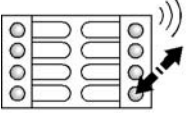


If you do not have the Service Device, you can also program manually.

Programming steps legend

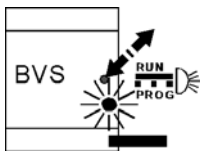
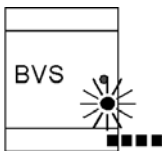
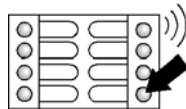

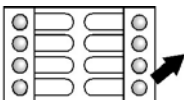
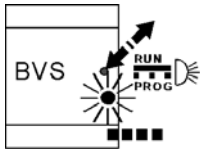
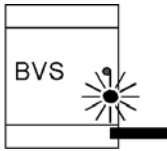
briefly press key		LED flashes slowly	
press key until		LED flashes rapidly	
release key		NoProg tone	
continue		ring tone	
wait until		Prog2 tone	
Delation tone		Progsper tone	

Programming state of a bell button

The front-door stations are supplied un-programmed.
The programming state can be checked as follows:

Testing		
 <p>press briefly</p>	 <p>Noprogram tone</p>	bell button un-programmed
	 <p>ring tone</p>	bell button programmed

Before a pre-programmed bell button can be re-programmed, the programming must be deleted.

Deleting the programming			
1			
			programming mode of system switched on
Press briefly	LED flashes		
2			
			bell button deleted
Press until	deletion tone sounds ¹⁾ ,	release	
3			
			programming mode of system switched off
Press briefly	LED flashes no more		

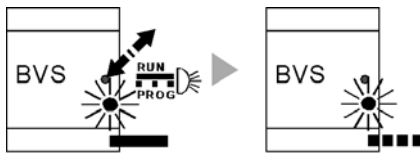
1) If Progsper ton sounds the programming block is active. It can be removed by the service device TCSK-01 only.

Programming a bell button

Connect the in-house station to the TCS:BUS.
Use one of these two methods.

Method 1: In-house station not accessible

1 LED illuminates

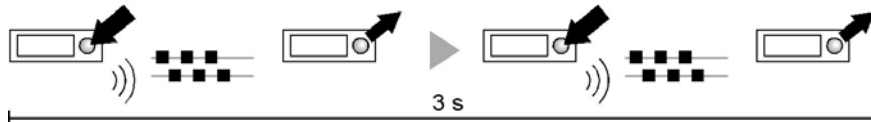


programming
mode
of system
switched on

Press briefly

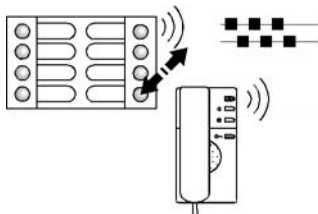
LED flashes

2



Floor-switch button within 3 sec:
press 1 sec, until bell rings - release - press 1 sec until bell rings - release.

3

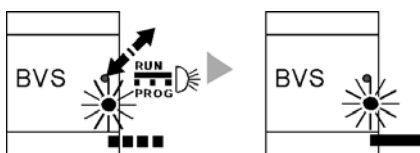


bell button
programmed

Press briefly

ring tone sounds at front-door and in-house station¹⁾

4



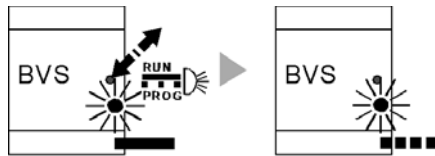
programming
mode
of system
switched off

Press briefly

LED illuminates

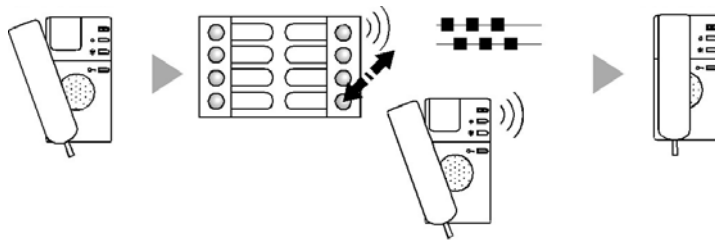
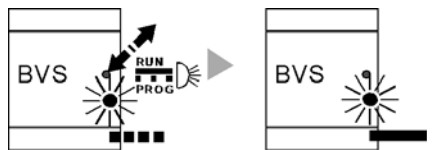
Programming the other bell buttons:

- Step 1
- repeat steps 2 and 3 each time
- complete the programming of all buttons with step 4

Method 2: In-house station accessible**1** LED illuminatesprogramming
mode
of system
switched on

Press briefly

LED flashes

2bell button
programmedLift handset ²⁾
at in-house stationpress briefly,
ring tone sounds
at front-door and in-house station ¹⁾.replace handset
at in-house station**3**programming
mode
of system
switched off

Press briefly

LED illuminates

Programming the other bell buttons:

- Step 1
- repeat step 2 each time for additional bell buttons where necessary
- complete the programming of all buttons with step 3

2) In-house stations without handset: to establish a voice communication press the speak button (resp. switch button speak / listen).

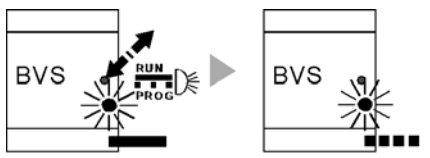
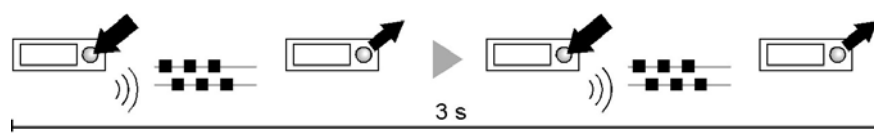
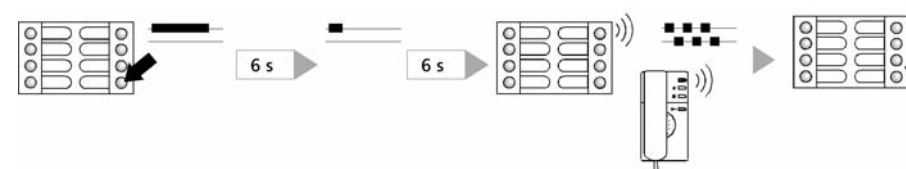
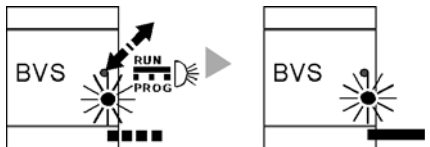
Programming an already programmed bell button

Basic principle

A bell button can be linked to two serial numbers (of two in-house stations). It is then possible to have two different in-house stations ring at the same time.

Connect the in-house stations to the TCS:BUS.
Use one of these two methods.

Method 1: In-house station not accessible

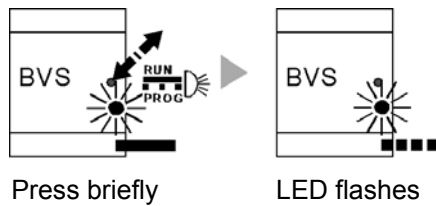
1	<p>LED illuminates</p>  <p>Press briefly LED flashes</p>	<p>programming mode of system switched on</p>
2	 <p>3 s</p>	
<p>Floor-switch button within 3 sec: press 1 sec, until bell rings - release - press 1 sec until bell rings - release.</p>		
3	 <p>6 s 6 s</p>	<p>bell button programmed</p>
<p>Press until Prog2 tone sounds¹⁾... ... and Noprogram tone sounds ... and ring tone sounds at front-door and in-house station. release</p>		
4	 <p>Press briefly LED illuminates</p>	<p>programming mode of system switched off</p>

Programming the other already programmed bell buttons

- Step 1
- repeat steps 2 and 3 each time
- complete the programming of all buttons with step 4

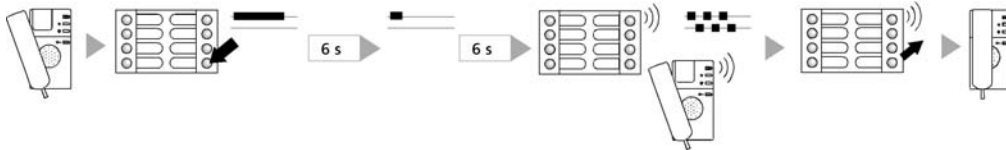
Method 2: In-house station accessible

1 LED illuminates



programming
mode
of system
switched on

2



Lift handset⁽²⁾
at the
in-house
station.

Press until
Prog2 tone
sounds⁽¹⁾
...

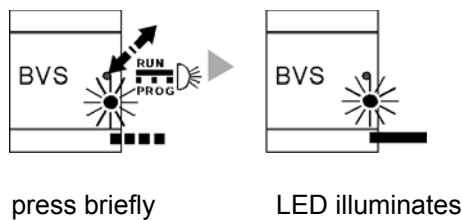
...and
Noprogram tone
sounds

... and ring tone
sounds at
front-door and
in-house station.

release
replace
handset
at in-house
station.

bell button
programmed

3



programming
mode
of system
switched off

Programming the other already programmed bell buttons

- Step 1
- repeat step 2 each time for additional bell buttons where necessary
- complete the programming of all buttons with step 3

Note

Repeated programming of an already programmed bell button always only changes the second serial number. If you want to change the first programmed serial number, you have to delete both serial numbers and then re-program both serial numbers.

Repair

Replacing the EEPROM memory

All programmed data, like serial numbers and parameters, are stored in the EEPROM. If the front-door station requires replacement, the EEPROM board can be removed from the programmed front-door station and inserted into the new front-door station of identical design.

- Open the case.
- Pull the small PCB off the electronic board.
- Plug the EEPROM board onto the pins in the new un-programmed front-door station. Take care that all four poles of the plug are inserted into the jack of the small PCB and that the component side is visible.
- After replacement all programming is available again.

Cleaning

! Avoid water entering the device!
Do not use any aggressive or abrasive cleaning agents!

Clean the device using a dry or slightly moist cloth.
More persistent dirt can be removed using a mild household cleaner.

Service

Contact your local sales representative or
www.tcs-germany.com