



Product information

Front-door station series with 7-segment display for flush-mount with colour video

ADU14213

for 200 flats

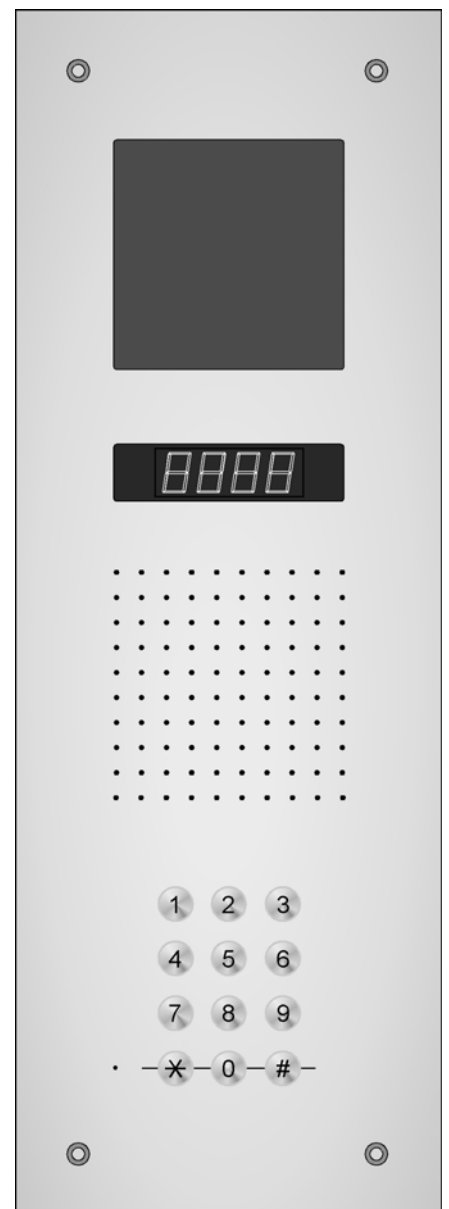


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Scope of delivery

- 1 x front-door station ADU14213
- 1 x key for hexagon socket screws with pin
- 1 x screwdriver with round handle
- 1 x product information
- 4 x hexagon socket screws with pin (DIN 7991)
(for attaching the front-door station in the concealed box)

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 mm 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.

Terms

Basic mode	The system is in normal operation. If changes should be made in the resident data base, the device is to be set into the programming mode.
Programming mode	Operating state of the display front-door station in which change of resident data base is possible.
Master code	4-digit security code for activation of the programming mode of device. As-delivered condition: 1234.
Access code	4-digit security code for activation of the code lock (e.g. direct release of the door opener).

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 (FVY1200, FVY1400).
- 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.)

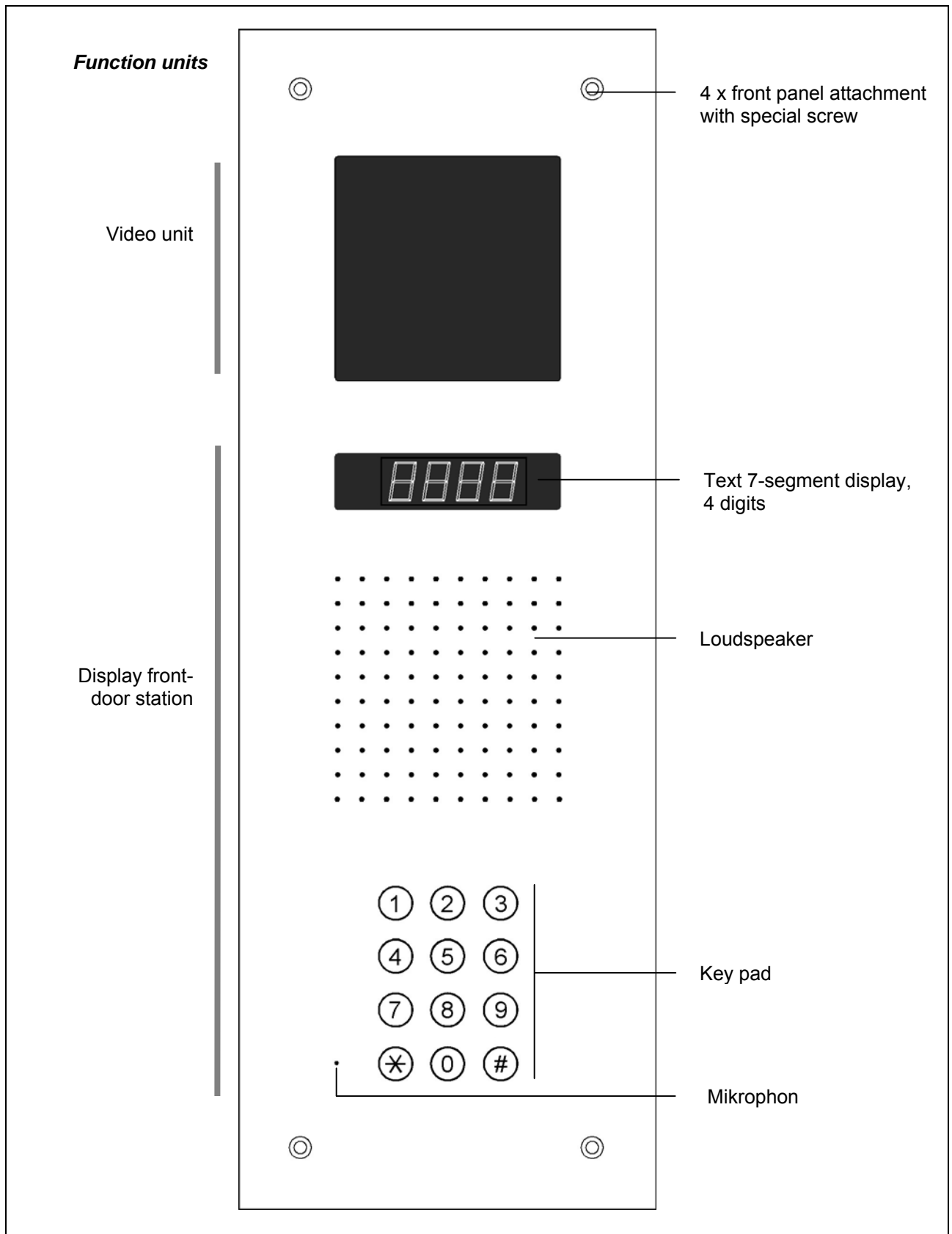
Table 1: Loop resistances

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



Technical data

Supply voltage:	24 V \pm 8 % (via power supply and control unit)
Case:	aluminium, anodised
Dimensions front panel (in mm):	H 425 x W 150 x D 3
flush-mount box (in mm):	H 401 x W 128 x D 40
Weight:	1450 g
Operating temperature range:	- 20 °C ... + 50 °C
Input current, standby:	I(a) = 0.4 mA, I(P) = 239 mA
Maximum input current:	I(Pmax) = 277 mA (by full indication)
3-wire-technology required.	

Video unit: camera features

CCD-sensor:	1/3 Zoll, Sony Super HAD
Resolution:	420 lines (TVL)
photo sensitivity:	5 Lux colour, 0,05 Lux black/wihite
Lens:	board Lens
Focal length:	3.6 mm, 67 ° horizontal, 50° vertical, ca 90° diagonal
Elektronic shutter.	1/50 ... 1/100 000

Application

- AD14213 are front-door stations with a 7-segment display, at witch the call destination is to select via a numeric dial key pad and indicated via LED. They consist of units, witch are fitted in one front panel:
 - display front-door station,
 - video unit (colour),
- They are suitable for use in TCS-systems with up to 200 flats (in-house stations are primary).
- The front panel consists of 3 mm strong aluminium.
- Universal assembly: Flush or in cavity wall.
- They are suitable indoors and outdoors, rain protected.

Brief description

Basic functions

Call destination selection	Entry of 4-digit destination numbers (flat numbers)
Send front-door call, make voice communication	By entry of the flat number.
Terminate voice communication	Putting down the handset on the in-house station.
Number of memory locations	for 200 flats
Serial numbers per flat number	Two serial numbers can be stored for each flat number (in-house station).

Additional functions

Code lock function	<p>By entry of the access code (4-digit) a door opener was activated.</p> <ul style="list-style-type: none"> • 3 different access codes (4-digit) configurable with software ¹⁾ • A door-opener relay FAA1100 must be connected or a door-opener relay TOER2-EB must be broken-in to the AS-address of the device.
Change of data records	Via software configurable, 1 master code. Change of names is possible manually.
EEPROM memory	All programmed data as serial number and parameters are stored in the EPROM memory.
Video unit	<ul style="list-style-type: none"> • Colour camera see <i>Technical data</i> • image activation constantly enabled (video signal always connected) • Automatic day/night switch.

¹⁾ AD1/AD2 Konfigurator is a component of the service pack, not included in scope of delivery.

Assembly

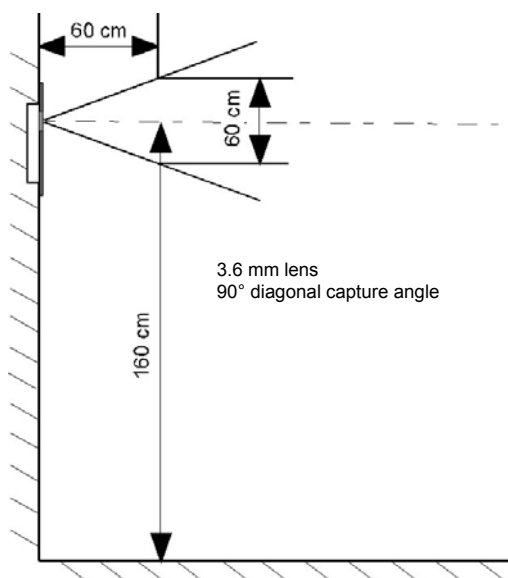
Installation location

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.



Flush-mount box

- Feed the connection cable through the cable duct in the flush-mount box. Attach it to the wall using suitable screws.
- The front-door station profile should complete flush with the base so that the panel lies on the wall.

Front-door station

- Attach the display front-door station with the 4 hexagonal socket screws supplied on the stud bolts in the flush-mount box by using of the attachment holes.

! Never seal the device using silicon completely, but only at the top edge! Condensate must be allowed to drain and evaporate.

Cable connection

Wiring conditions

To be able to ensure a reliable operation it must be made sure that the cable length is not greater than 50 m between the front-door station and the power supply and control unit at a cross section of 0.8 mm².

If this prerequisite should not be in the position to be satisfied then the front-door station must be supplied via an separate power supply NGV1011 locally.

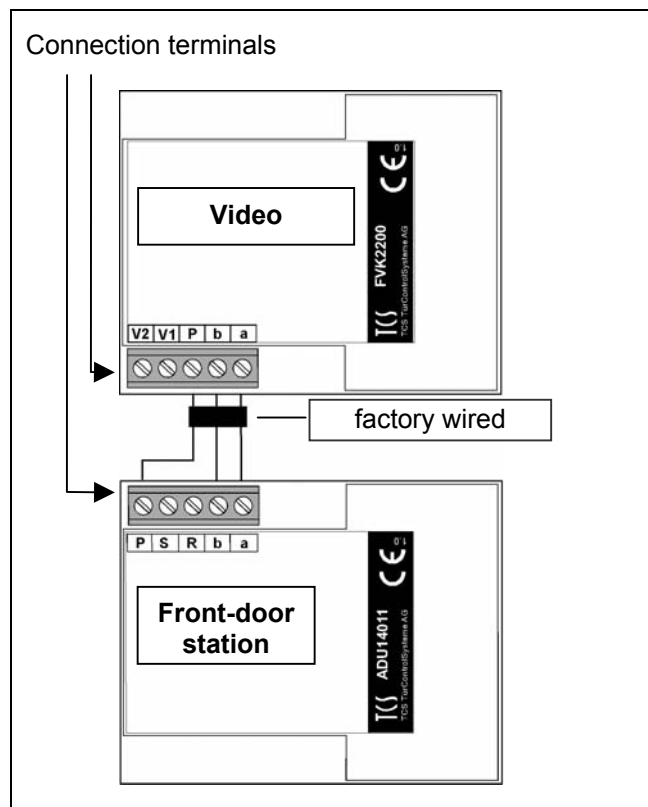
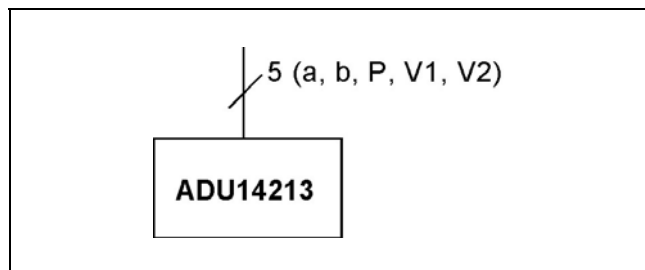
Note

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

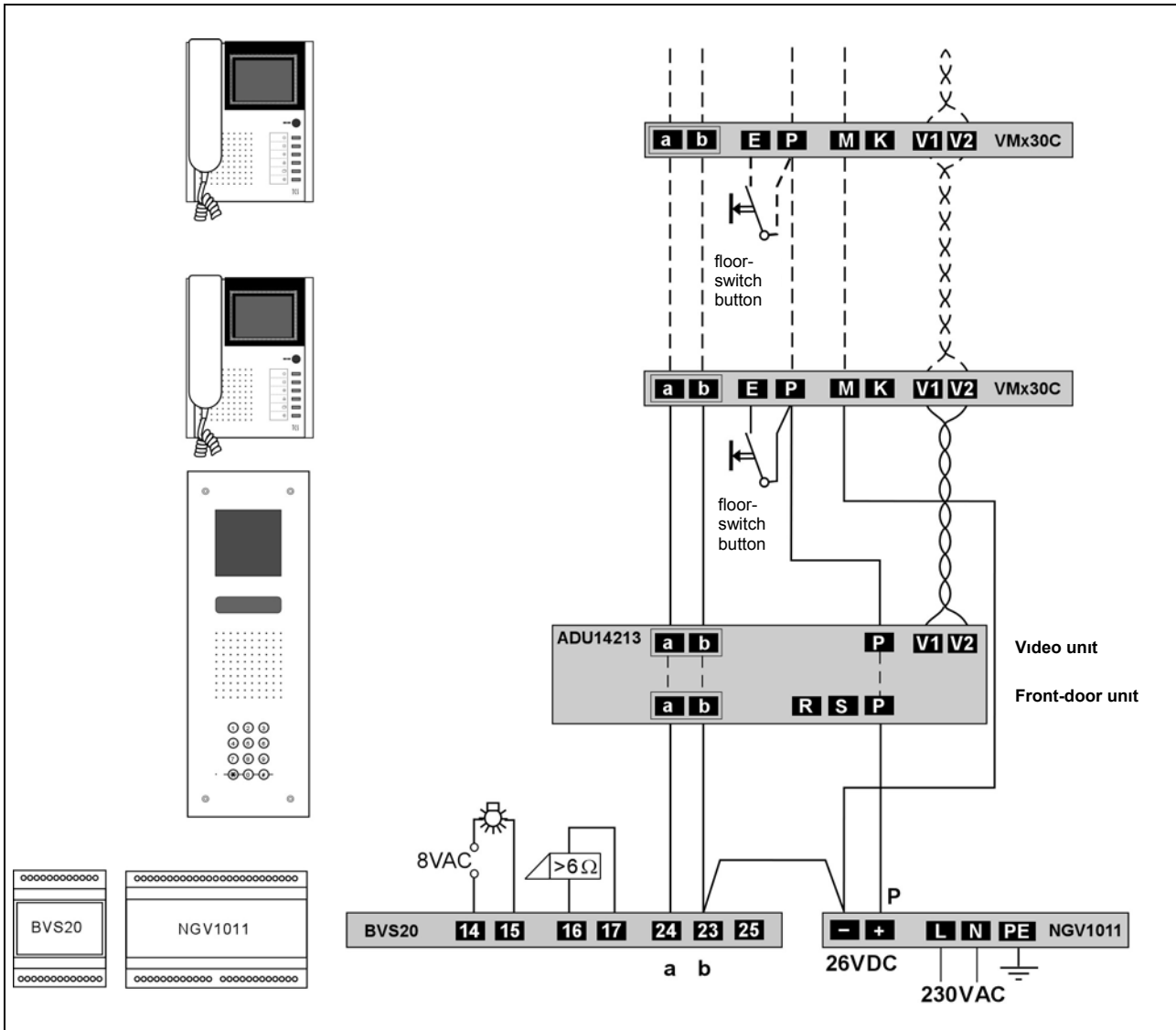
- P-wire connection is required always for:
 - the function of the front-door station,
 - connection of a door release relay.
- For connection of a door release relay use terminals R and P.

Connection

- The units with the connection terminals is on the back of the front-door station.
- Connect the TCS:BUS and video lines. Both connection terminals can be used.
- If there is a door release relay (FAA1100), connect it with terminal R und P.

**Installation****Connection diagram**

Wiring example



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.

After switching on the voltage the software version is displayed for approx. 5 sec. In the basic mode a 0 is displayed at the right digit.

Device start up	After switching on the software version is displayed for 5 sec, e. g. software version 1.7. The device changes into the basic mode automatically.	<table border="1"><tr><td> </td><td>1</td><td>7</td><td> </td></tr></table>		1	7	
	1	7				
Basic mode	Device is ready for entry. Always it returns into the basic mode, • by terminating the mode manually or • after expiry of the timeout time.	<table border="1"><tr><td> </td><td> </td><td> </td><td>0</td></tr></table>				0
			0			

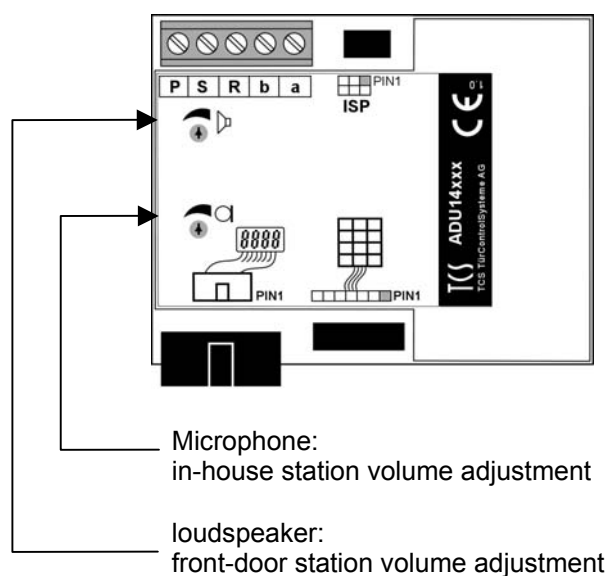
Setup

Microphone and loudspeaker volume setup

! For adjustments use the small screwdriver supplied!

- The volume control is on the back of the front-door station.
- The volumes have been set to an average value at factory. The factory settings are mean values. 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).

TCD unit



Factory settings

Master code	1234	Speaking time	56 s
Access code	0	On-service door release	56 s
AS-address	0	Determined period of time for door release	3 s

Operation

Calling a resident

Basic mode		□ □ □ 0
1 Entering the flat number	<ul style="list-style-type: none"> • via key pad, e. g. flat 126.¹⁾ • Press #-button. 	0 1 2 6
Existing flat number	A flat-door call was sent. A positive acknowledgement tone sounds. Display remains active for 15 sec, it returns into the basic mode if the resident does not answer.	
Unknown flat number	<i>The device returns into the basic mode. The number is not programmed.</i>	□ □ □ 0
Incorrect entry, e. g. in-house station defect or not connected	<i>A negative acknowledgement tone sounds. The device returns into the basic mode.</i>	□ □ □ 0

¹⁾ An entered digit can be canceled by pressing the *-button.

Voice communication

2 Make voice communication	After acceptance of the flat-door call on the called in-house station a voice communication is made. The display is switched off.	□ □ □ □
3 Terminate voice communication	The voice communication is terminated with putting the handset on the in-house station or after expiry of the adjusted speaking time down. The device returns into the basic mode.	□ □ □ 0

Opening the door via code lock

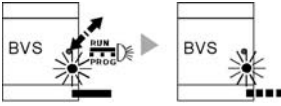
1 Basic mode		□ □ □ 0
2 Enter the access code	<ul style="list-style-type: none"> • Press *-button, display: • Enter access code, e. g. 1111. Display: • Confirm with #-button. 	□ □ □ c
Correct entry	A positive acknowledgement tone sounds. The door opener is enabled.	2 2 2 2
Unknown access code	<i>A negative acknowledgement tone sounds on activation of the #-button. The device returns into the basic mode.</i>	□ □ □ 0
	<i>The code can be entered only 3 times incorrectly, then the code entry is blocked for 128 sec. Start again from step 1.</i>	

Programming

The programming is always done in three steps:

- Start programming
- Initiation of programming
- End programming

Start programming

1	Switch on programming mode of the system	<p>On BVS20-SG:</p> <ul style="list-style-type: none"> • Briefly press RUN/PROG button 																					
2	Switch on programming mode of the device Correct entry <i>Unknown master code</i> <i>No entry</i>	<p>The device displays a menu like basic mode.</p> <p>Press *-button, display:</p> <ul style="list-style-type: none"> • Enter master code. • Confirm with #-button. <p>An alpha tone sounds for 3 sec. Display: The device is ready for programming.</p> <p><i>A negative acknowledgement tone sounds on activation of the #-button</i></p> <p><i>The code can be entered only 3 times incorrectly, then the code entry is blocked for 128 sec. Start again from step 1.</i></p> <p><i>If no command has been entered for 128 sec, the device automatically ends its programming mode.</i></p>	<table border="1" style="margin-bottom: 5px; width: 100%;"> <tr><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;">0</td></tr> </table> <table border="1" style="margin-bottom: 5px; width: 100%;"> <tr><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;">c</td></tr> </table> <table border="1" style="margin-bottom: 5px; width: 100%;"> <tr><td style="width: 25px;">2</td><td style="width: 25px;">2</td><td style="width: 25px;">2</td><td style="width: 25px;">2</td></tr> </table> <table border="1" style="margin-bottom: 5px; width: 100%;"> <tr><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;">c</td></tr> </table> <table border="1" style="width: 100%;"> <tr><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;"> </td><td style="width: 25px;">c</td></tr> </table>				0				c	2	2	2	2				c				c
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Initiation of programming

In-house stations

3a	Programming 1 in-house station on a flat number Programming 2 in-house stations on a flat number	Entry: * 0 # WNr # SNr1 # 0 # Entry: * 0 # WNr # SNr1 # SNr2 #	
3b	Serial numbers programmed on the flat number delete	Entry: * 3 # WNr #	

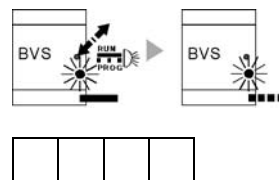
Front-door stations

3c	AS-address of ADU set and lock	Entry: * 4 # AS #
3d	Options	Entry: * 5 # value # value 0 – on factory settings 1 – activate light switching function 2 – long door opener protocol not accept 3 – door release only if activ on-service door release 4 - speaking only if activ on-service door release
3e	Speaking time set Entered value multiplied by 8 sec equals speaking time (value 0 ... 16).	Entry: * 6 # value # (value 0 = unlimited)
3f	On-service door release on set Entered value multiplied by 8 sec equals on-service door release (value 0 ... 16)	Entry: * 7 # value # (value 0 = unlimited)
3g	Door release time set Entered value multiplied by 0.5 sec equals door release time (value 1...16)	Entry: * 8 # value #

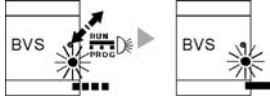
Change codes

3h	New master code set	Entry: * 10 # master code # Mastercodewiederholung#
3i	Enter new access code	
	Enter 1 st access code	Entry: * 11 # acces code # access code repeat#
	Enter 2 nd access code	Entry: * 12 # acces code # access code repeat#
	Enter 3 rd access code	Entry: * 13 # acces code # access code repeat#


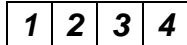
Reset all parameters into factory settings

3j	Reset all parameters into factory settings		
	Enter master code	• Entry: : * 99 # acces code # access code repeat #	

End programming mode

4	Switch off programming mode of the device	Entry: * 9 # or automatically after 128 sec.	
5	Switch off programming mode of the system	On BVS20-SG : • Briefly press RUN/PROG button	

Reset master code into factory setting

1	Switch on programming mode of the system and switch off again	On BVS20-SG : • Briefly press RUN/PROG button, LED flashes. • Briefly press RUN/PROG button, LED illuminates.	
	Reset master code into factory setting	<ul style="list-style-type: none"> • Press *-button. • Press zero button until alpha tone sounds and the master code - is displayed (factory setting). Code is reset. 	

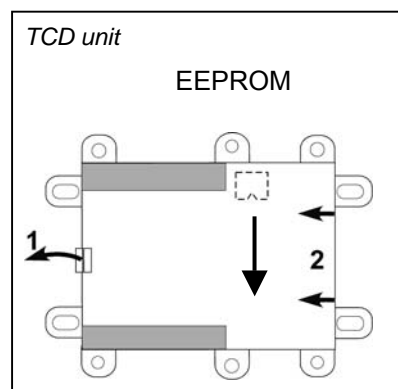
Repair

Replacing the EEPROM memory

All programmed data, like serial numbers and parameters, are stored in the EEPROM. If the front-door station must be replaced, can be the EEPROM removed from the programmed front-door station and put into the new, identically front-door station. After replacement all programmings are available again.

! Disconnect the supply voltages before replacing!

- The EEPROM is on the TCD unit (back of the front-door station).
- Open the front-door station by unscrewing the screws on the front panel using the hexagonal angle screwdriver delivered.
- A rest mechanism is on one short edge of the TCD unit. Push away the rest nose (1) from the case carefully with your thumb and remove the case cap.
- Remove the EEPROM careful out of socket.
- Stick EEPROM into the socket on the new, unprogrammed front-door station.
Take care that the notch is placed in accordance with adjacent drawing.



- Close the case of TCD unit: Place the case cap from outside onto the both noses (2), shut it down carefully, the case cap audibly clicks in to.
- Reattach the front-door station in the flush-mount box.

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