



Product information

video indoor station ecoos™
IVW2211-0140

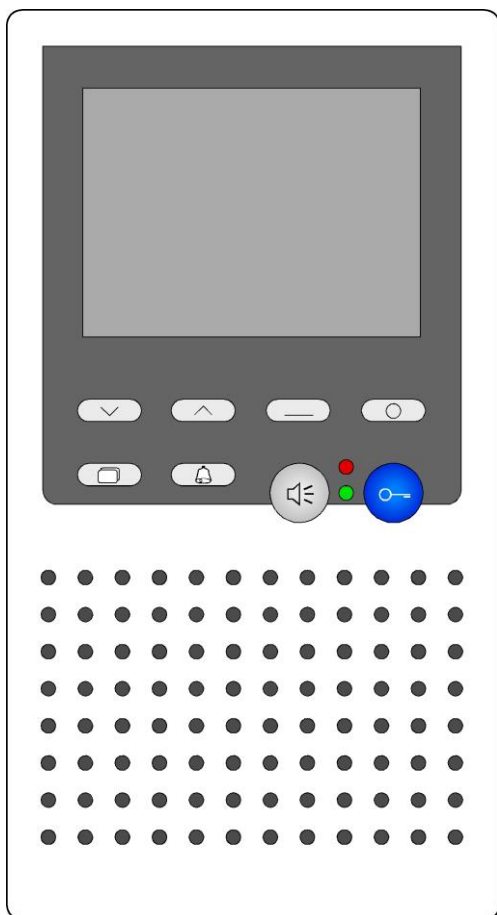


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Scope of delivery

- 1 x IVW2211-014x
- 1 x dimensional drawing
- 1 x product information
- 1 x instruction manual

Safety instructions



Attention! Assembly, installation, commissioning and repair of electronic devices must be carried out by qualified electricians and in compliance with the current standards.

When working on main power connections of 230 V AC, the general and regional installation and safety regulations must be met. i.e. DIN VDE 0100

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

- separated cable routing of high and low voltage lines,
- minimum distance of 10 cm in case of a common cable routing,
- use of separators between high and low voltage lines within shared cable ducts,
- use of standard telecommunication lines, e.g. J-Y (St) Y with 0.8 mm diameter,
- already existing lines (modernisation) with deviating cross-sections can be used in compliance with the loop resistance

Installation – protective 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.

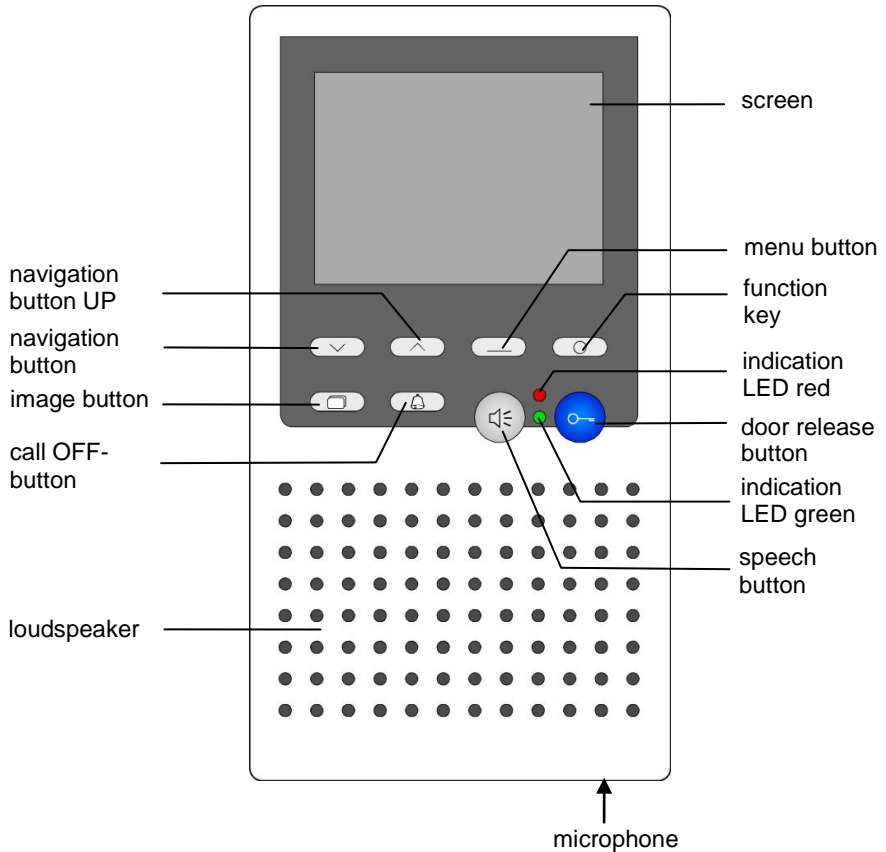
Terms

Main door call	Door call from the door with the main serial number (according to the serial number sticker on the device and the packaging). Two main door calls from front-door stations with AS = 0 and AS > 0 can be distinguished.
Sub door call	<p>Call from a front-door station. Different ring tones can be generated at an indoor station by using different buttons.</p> <p>Thus, the ring tone is distinguished by the used serial number. The indoor station occupies an area of five serial numbers: Main serial number SN (according to serial number sticker), SN+1, SN+2, SN+3, SN+4. Each of these serial numbers generate a different ring tone.</p> <p><i>Programming the bell buttons of the front-door station can be realised with the Service Device TCSK-01 and configTM.</i></p>
On-Screen-Display (OSD)	The menu, which is shown on the screen and activated with the menu button (or image button) of the device.



Technical data







supply voltage:	+24 V ± 8 % (power supply and control unit)
housing:	plastics (colors as listed in catalogue)
dimensions (in mm):	H 186 mm x W 101 mm x D 20 mm
space to operate (in mm):	H 186 mm x W 101 mm x D 22 mm
weight:	230 g
acceptable ambient temperature:	-5 °C to 40 °C
input current (stand-by):	I(a) = 0.04 mA, I(P) = 13.5 mA
max. input current:	I(Pmax) = 130 mA
video module	TFT color module
screen diagonal	8.9 cm (3.5 inch)
resolution:	320 x 240 pixel, RGB
video signal input:	symmetric 1 Vss FBAS,
floor video input:	asymmetric 1 Vss FBAS,
Video 6-wire installation necessary!	




Device overview



Indication and operating elements

Symbol	Term	Function
	screen	<ul style="list-style-type: none"> display the video image display ring tone parameter and image parameter via OSD
	door release button	<ul style="list-style-type: none"> door release (factory setting) end communication trigger light switch function*

	speech button	<ul style="list-style-type: none"> • call acceptance, activate speaking, switch over the speech direction of simplex communication • end communication
	call OFF-button	<ul style="list-style-type: none"> • ring tone stopper • end conversation if the IVW2211 was configured as simplex communication device with the configuration software configo™
	image button	<ul style="list-style-type: none"> • to activate the image resp. • switch over between different cameras
	function key	<p>without menu:</p> <ul style="list-style-type: none"> • light switch function (factory setting) • control function 8 • internal calling • door release automatic • call diversion <p>in all menus: exit the menu</p>
	menu button	<p>shortly press **</p> <ul style="list-style-type: none"> • in standby mode: call up the start menu for image buffer resp. main menu • image, ring tone parameter menu or time setting is activated: select parameter to change it • main call, internal call or control function menu or short message indication is activated: confirm the selection <p>press long ** (longer than 4 sec)</p> <ul style="list-style-type: none"> • activate/deactivate the central image storage
	navigation button UP	<p>shortly press **</p> <ul style="list-style-type: none"> • image or ring tone parameter menu is activated: increase the value of the selected parameter • main menu is activated: one menu point to the right • image storage mode, image reproduction is activated: show next image • displayed video image: store images manually • speaking is activated without video image: increase volume voice output <p>Press longer than 8 sec together with navigation button DOWN</p> <ul style="list-style-type: none"> • reload factory settings

	navigation button DOWN	<p>shortly press **</p> <ul style="list-style-type: none"> • image or ring tone parameter menu is activated: reduce the value of the selected parameter • main menu is activated: one menu point to the left • image storage mode, image reproduction is activated: show previous image • video image is displayed: store images manually • speaking is activated without video image: decrease volume voice output <p>press long ** (longer than 4 sec)</p> <ul style="list-style-type: none"> • image storage button, reproduction is activated: delete an image <p>Press longer than 8 sec together with navigation button UP</p> <ul style="list-style-type: none"> • reload factory settings
	indication LED red	<ul style="list-style-type: none"> • ON: call OFF is activated • flashes, then OFF: door release automatic or call diversion is activated
	indication LED green	<ul style="list-style-type: none"> • ON: incoming door call or internal call, speaking is activated • blinks: new images were stored or un-read short messages are available • blinks 3 x: indication for busy voice/video channel

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

** Button has a different assignment, if the permanent image activation is configured. This performance feature can be activated/deactivated in the EEPROM.

short keystroke: calling up the main menu

long keystroke (> 4 sec): activation/deactivation of the image buffer

long keystroke (> 8 sec): calling up the image setting menu

Intended use

- The IVW2211 are video indoor stations with color display for hands-free talking and simplex communication. They can be used for the operation within building communication systems and combined audio-video systems.
- The stations are operated by pressing the keys and via the On-Screen-Display.
- The IVW2211 are suitable for surface-mount.

! The video indoor station IVW2211 must be installed on a flush-mounted wall outlet socket or flush-mount socket. The space for cabling is limited within the device.

- !
- The indoor station IVW2211 must not be used in call systems according to DIN VDE 0834 and EN50134.
 - According to DIN 77800, a separate safeguard for emergency calls has to be installed.
 - A system equipped with indoor stations IVW2211 is not an emergency call system according to the above mentioned standards.
 - The system equipped with an indoor station IVW2211 must not be used in life-saving or life-sustaining systems.
 - Further, the combination of system parts which fulfil the above mentioned standards is not permitted.

Short description

- hands-free talking, manually controlled simplex communication can be activated
- blue door release button
- button for call acceptance resp. reversing key speak/listen, when simplex communication is activated
- one function key with optical indication, ex works allocated with light switch function; with alternative allocation: internal call, door release automatic, call diversion, control function 8; can be configured with configo™
- image button to activate the image resp. to switch between different cameras
- menu button to activate, control the OSD menu

- two navigation buttons for OSD navigation and adjustment
- 13 polyphonic ring tones can be selected and adjusted via OSD
- acoustic and optical call distinction between front-door, flat door and internal call
- acoustic door call distinction for two doors
4 different ring tones per bell button
- ring tone mute with optical indication
- OSD-based operation of the central image buffer (FVM1000)
- ring tone volume can be adjusted in 4 steps via OSD
- conversation volume can be adjusted in 8 steps via OSD
- brightness, contrast, color saturation can be adjusted via OSD
- one parallel call can be activated via configo™
- max. 10 short messages can be received and displayed
- optical indication for new stored images in central image buffer (FVM1000)
- optical short-term memory of door calls
- optical display of a busy line in case of an established voice connection
- optical indication for unread short messages
- connection for an external camera is available
- the device is equipped with a connection for a floor push button
- audio privacy function and automatic call cut-off
- installation on flush-mount socket necessary
- audio reproduction of loud tones with announcement can be realised (even if the ring tone mute is activated)
- listen-in and speaking into rooms (can be realised only in combination with the user program call central PCSWxxxx or concierge stations PFSxx-EN)

Mounting and installation

mounting height

For an optimum viewing angle we recommend a mounting height of 1.6 meters (upper edge of the device over the ground).

Install the lower cover

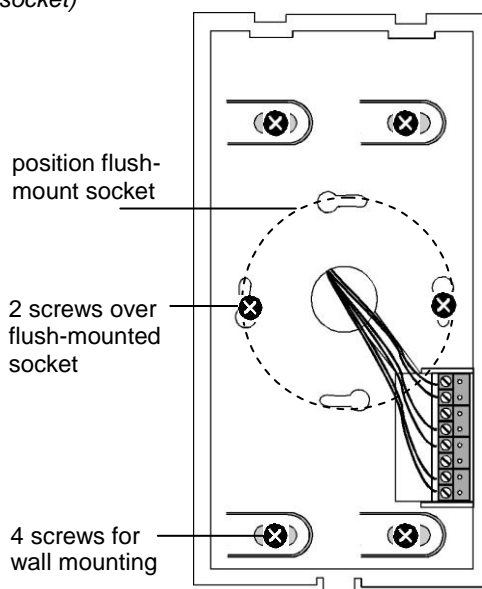
! **Attention!** The video indoor stations have to be (de-)installed only voltage-free!

! Please ensure not to over tighten the screws when installing the lower cover on uneven surfaces. Over tighten the screws might deform the lower cover. As a result the upper cover cannot be snapped-on the lower cover or the save contact between lower and upper cover might be affected.

Installation with flush-mount or wall outlet socket

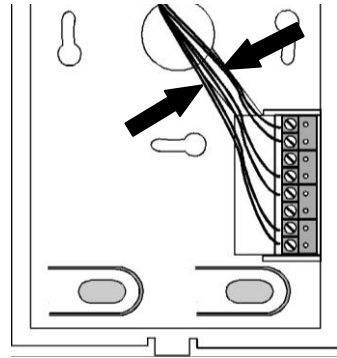
- Always install the indoor station on a flush-mounted socket or wall outlet socket. Position the cable gland over the socket.
- Fix the lower cover via the attachment holes with suitable screws on the flush-mounted socket or to the wall according to the illustration.

Illustration: lower cover (over flush-mounted socket)



Connect the lines

- 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 to the pluggable terminal according to the labeling within the lower cover. (Terminal can be removed from the guide.)
- Put the lines in the designated area.
- Ensure that no uninsulated or not connected wire (e.g. cable shield) is placed in the device as this might cause short-circuits.

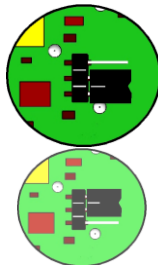


a b E P M C V1 V2

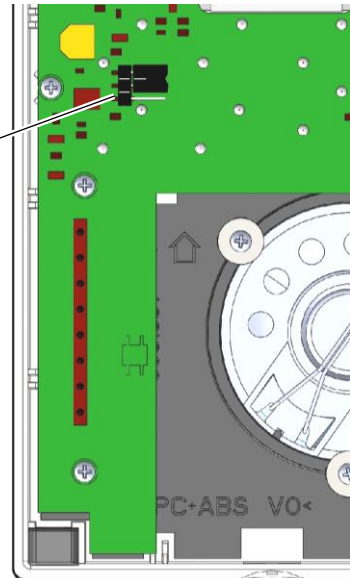
Setup the indoor station as end device

The indoor station is placed at the end of a strand or is the only device at the strand.

- The jumper **J1** bridges the two lower contacts. Thus, the matching resistor is placed.

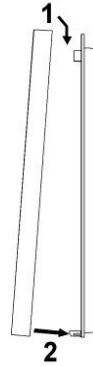


- *scope of delivery state: not plugged*



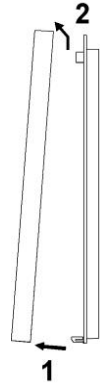
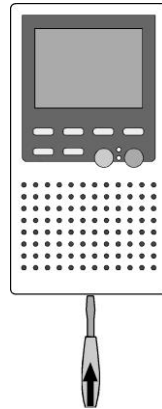
Snapping-on the upper cover

- Position the upper cover at both adjustment brackets of the lower cover (1).
- Snap-in the upper cover (2).

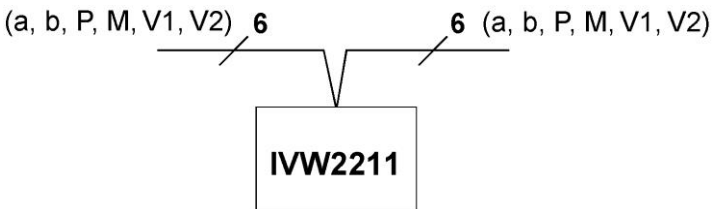


Open the device

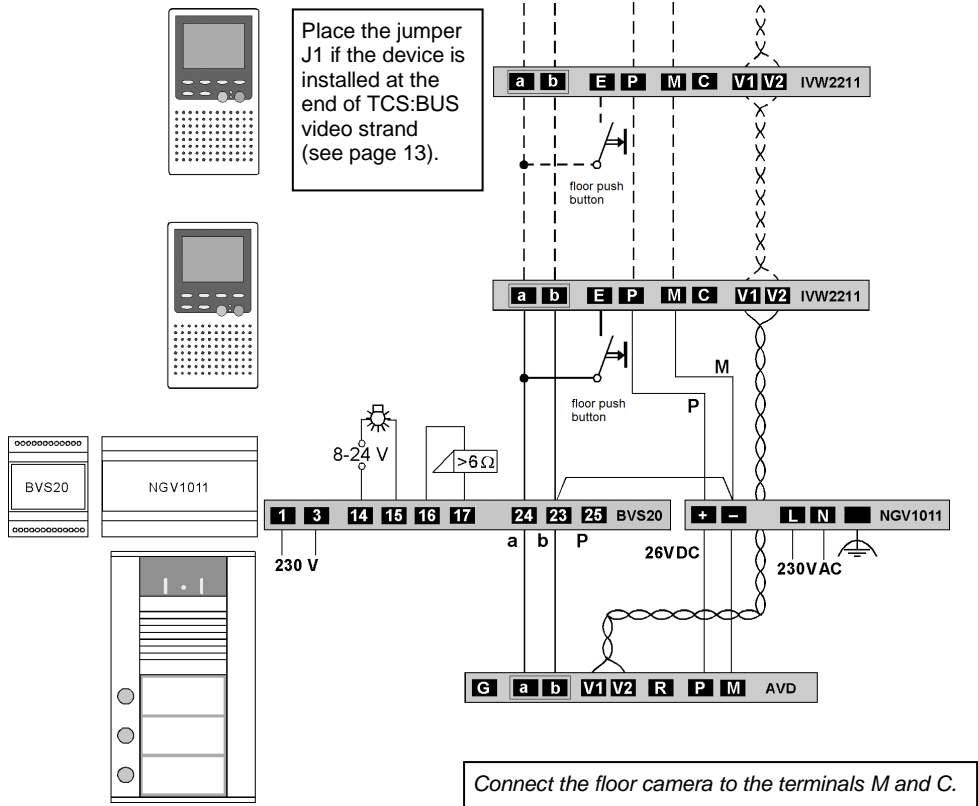
- There is a rectangular release opening at the underside of the device. Insert a small screwdriver straight and with slight pressure into this opening.
- The upper cover can be removed at the underside.
- Lift the upper cover out of the two upper adjustment increments.



Connection diagram



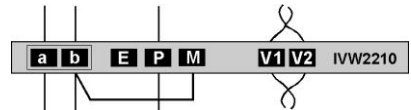
Wiring diagram



Please observe General information on the conduit in TCS video systems, page29!

5-wire special operation

In case only 5 lines are available to connect the device and the M-wire cannot be connected, you can use the device in 5-wire special operation.



! Installing a wire bridge between the wires b and M is only permitted when observing some conditions. For a solution for your project, please contact our hotline.

Commissioning

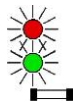





First install the system completely, than connect it to the mains voltage!

- Install the devices of the system completely.
- V1 and V2 must not be connected with the P-, a- or b-wire. When connecting the video wires V1 (+) and V2 (-) the polarity must be observed.
- Proof the a-, b- and P-wire against each other for short-circuits.
- Switch on the main voltage.

Error detection and indication

Errors are signalled optically and acoustically: single error tone and permanent flashing of both LEDs.

error cause	indication error mode	error tone	our solution
a- and P-wire are mixed or short-circuited	 both LEDs are flashing		change a- and P-wire or remove short-circuit, device is in standby mode again
a- or M-wire not connected or not supplied			connect the a- or M-wire or check the power supply, device is in standby mode again
button sticks (press longer than 15 seconds)			remove button at the IVW2211 or floor push button, device is going into standby mode again

Settings

Factory settings

AS-address dependent image activation

If there are also front-door stations without cameras within a system with IVW2211 and video front-door stations, the image is not activated when the IVW2211 is called by an audio front-door station.

To guarantee this function, the possible AS addresses are separated into two sections:

AS address 0 – 31*	reserved for video front-door stations	the image is activated in case of a door call (from max. 16 video front-door stations)
AS address as of 32*	free, for front-door stations without camera	the image is not activated in case of a door call

*) The video AS-border can be configured with the configurator *configo*TM.

Pre-adjusted times

communication time	2 min
remaining conversation time after pressing the door opener	4 sec
image switch time	80 sec
blinking period of the green LED, when • "video/speech channel is busy" when pressing the speech button or image button	6 sec 3 x flashing
internal standby time	around 30 s
floor door release time	around 30 s
timeout OSD menu	10 sec
timeout OSD parameter in the video image	3 sec

Configuration options

Function	manually	TCSK-01	config TM as of version 1.6.0.6
fixed simplex communication	–	–	x
simplex communication to the front-door station	–	–	x
ring tone volume	menu	–	x
ring tones for front-door calls, internal calls and floor calls	menu	–	x
call diversion	–	x	x
door release automatic	–	x	x
internal call	–	x	x
control function 8	–	x	x
light switch function	–	x	x
parallel allocation	–	x	x
floor door release function on / off	–	–	x
automatic hands-free talking after internal call on / off	–	–	x
determine video-AS border and door call-AS border	–	–	x
image activation in case of an incoming floor call (floor video function)	–	–	x
allocate short message groups	–	–	x
FVM1000 is always blocked	–	–	x
FVM1000 on/off (in comfort mode)	–	–	x

reload factory settings

Only the manually adjusted values can be reloaded to factory setting.

- Press the navigation buttons UP and DOWN simultaneously for 8 sec.
- The successful reset is signalled by an acknowledgement tone.

Programming the function key with Service Device TCSK-01

The indoor station is acting like a device for duplex communication. The commands "9" have to be used to configure the comfort simplex communication device (see *product information Service Device*).

A programming with the commands "9" has to be initiated once with the command *95#Ser.-No.#. Then the programming of the function key is to be realised with the Service Device.

initiation	*95#Ser.-Nr.#
call diversion	*90#Ser.-Nr.#ZielSNr.#
door release automatic	*91#Ser.-Nr.#
internal call	*92#Ser.-Nr.#IntSNr.#
control function 8	*93#Ser.-Nr.#
light switch function	*94#Ser.-Nr.#0#
parallel allocation	
note: Deactivation of the parallel allocation corresponds to the parallel allocation to serial number 0.	*99#Ser.-Nr.#ParSNr.#

ser. no. = the serial number of the indoor station that is to be configured new
TarSerNo. = the serial number of the indoor station, to which the call is to be diverted
IntSerNo. = the serial number of the indoor station, which is to be called internally
ParSNr. = the serial number of the indoor station, to which the new configured indoor station is allocated

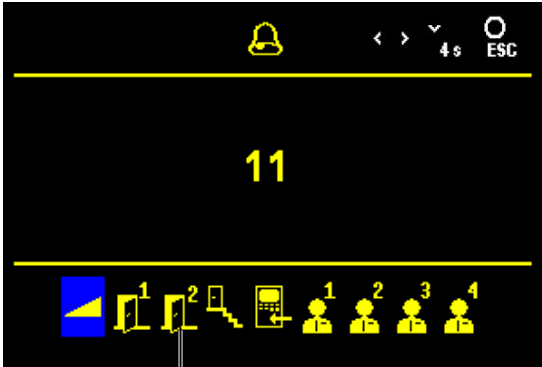
General information on the OSD menu

- The navigation within the OSD menu, the image buffer indication and live image are realised via the navigation buttons UP and DOWN.
- In delivery state, not all possible functions are configured. Symbols in the ODS menu are only displayed when the specific function was configured (image storing settings and short messages).

! To activate the image storage functions and short messages the configuration software configo™ is necessary!

- The live image is activated by pressing the image button or the speech button or when receiving a door call.
- The live image is deactivated automatically after 80 sec without any activity, by ending the voice connection or when a video channel is used by another device (not in case of a voice connection).

Menu is in standby mode (factory setting)



symbol ring tone parameter menu and help symbols

adjusted value for selected parameter

pictogram bar for parameter selection






selected parameter

Symbol	meaning
	ring tone selection for door calls \leq door call AS-border, door calls $>$ door call AS-border
	ring tone selection for floor calls
	ring tone selection for internal calls
	ring tone selection for sub door calls 1, 2, 3, 4
	ring tone volume
0, 1, 2, ...	display of adjusted values


Help function

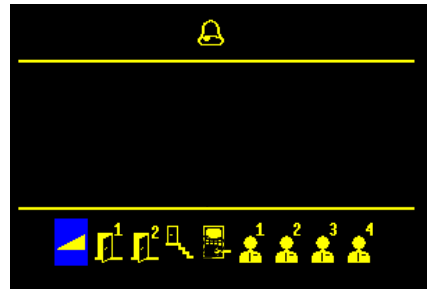
To simplify the operation of the device, help symbols are faded-in in the upper right corner which show the available buttons of every screen. Fading-in the symbols ends automatically after 5 sec or after a keystroke.



Symbol	meaning
 	Navigation buttons UP, DOWN can be used to navigate within the menu.
 OK	Menu button can be used to confirm.
 ESC	Function key can be used as cancel button.
	Navigation button DOWN can be pressed and hold for 4 sec.


Set the ring tone volume

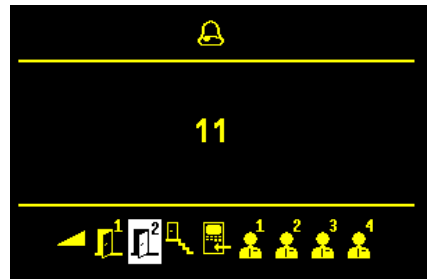
- Press the navigation button UP (or DOWN). The symbol *ring tone volume*  is pre-selected.
- Press the navigation button UP or DOWN to adjust the volume. The level of the ring tone volume (1 to 4) is displayed.



The adjusted ring tone sounds in the selected volume and is stored.

Ring tone selection

- Press the navigation button UP or DOWN to move to the symbol *Ring tone selection*  (e.g. for door 2).
- Press the navigation button UP or DOWN to select the ring tone. The number of the ring tone (e.g. 11) is displayed.

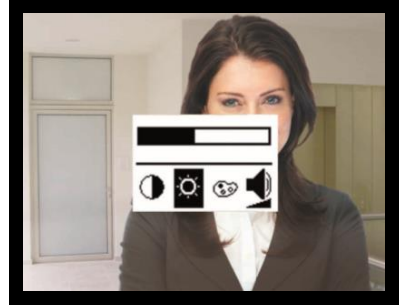


When selecting a ring tone, the ring tone sounds and is stored.

Set the conversation volume

... in case of a voice connection to the door:

- Press the menu button during a voice connection. The menu to set the image parameter and the symbol for conversation volume setting is displayed.
- Press the navigation button UP or DOWN to change the value. The setting immediately has an effect on the established voice connection. The value is stored.



Set image parameter






Symbols in the live image:

The symbols in the live image are faded-in for 10 sec by activating the image (after the image button was pressed or a door call has been received) or for 3 sec after pressing the speech button.

- Press the image button or speech button to activate the live image.



The symbols for ring tone mute, door release automatic, call diversion and image buffer mode are only displayed when the function is activated.

 05	image from camera AS-address (e.g. with AS-address 05)	
	ring tone mute	
	call diversion is activated	or  door release automatic activated
	automatic image storage is activated; menu image buffer is activated	

Set contrast, brightness and color saturation

- Press the speech button or the image button. The image from the video front-door station is displayed.
- Press the menu button. The menu for the setting is displayed.
- Press the menu button again to switch over to the next image parameter.
- Press the navigation button UP or DOWN to change the value of the image parameter.



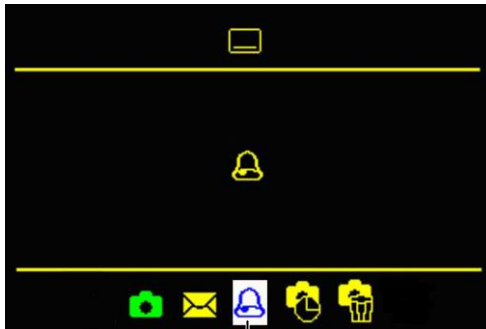
The change can be seen immediately in the video image.

	contrast
	brightness
	color intensity

Start menu image buffer

- The *image buffer start menu* can only be activated if the image buffer was activated via the configuration software configo™ (see *Image buffer*, page 25), no live image is displayed and the indoor station is in standby mode. That means that no voice connection is established and no door call came in.
- The *image buffer start menu* or image buffer indication is deactivated automatically after 10 sec, if no button is pressed. Or: Press the function key to exit the menu.

image buffer start menu (image buffer and short messages are activated)



symbol main menu

symbol of the selected menu (e.g. ring tone selection)

pictogram bar for menu selection

selected menu

Symbols and their meaning

symbol	meaning	symbol	meaning
	ring tone button for door calls <= AS-border	0...9	indication of adjusted values as numbers
	ring tone selection for door calls <= AS-border		menu for call settings
	ring tone selection for internal calls		image buffer; automatic image recording activated = green, deactivated = red*
	ring tone selection for floor calls		menu time setting of the image buffer menu
	ring tone selection for sub door ring tone 1		main menu
	ring tone selection for sub door ring tone 2		ring tone mute activated
	ring tone selection for sub door ring tone 3		menu short messages*
	ring tone selection for sub door ring tone 4		screen to read a short message*
	ring tone volume		delete short messages*
	contrast setting		date setting*
	brightness setting		time setting*
	color saturation setting		delete image buffer (all stored images)*
	symbol camera for fading-in the AS-address		hourglass as progress indicator*
	call diversion is activated		no stored images in the FVM1000*
	door release automatic activated		conversation volume setting




* Only if the image buffer is activated and the function short messages is released.


Image buffer

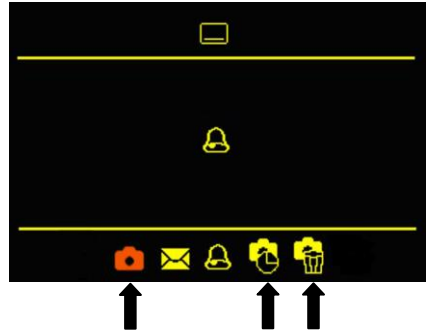
Images or image sequences can be stored with the external image buffer FVM1000.

The number of images is limited to 64 per device (simple comfort mode: 256). The oldest image is overwritten.

! Activate the image buffer via the configuration software **configo™** by selecting the comfort mode or simple comfort mode.


- The symbols *image buffer* , *time setting*  and *delete image buffer*  can be seen in the main menu.

Note: The **automatic** image storing is not activated, the color of the symbol image buffer  is red.




Activate/deactivate the automatic image storage

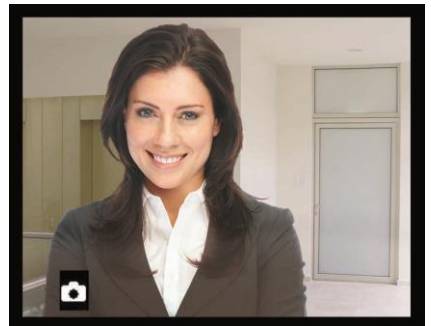
Activation

- Press the menu button longer than 4 sec. An acknowledgement tone sounds. The main menu is faded-in for 3 sec. The color of the symbol *image button*  changes from red to green.

An image is stored automatically when a door call is received.

Deactivation

- Press the menu button longer than 4 sec again. An acknowledgement tone sounds. The main menu is faded-in for 3 sec. The color of the symbol *image button*  changes from green to red.



Symbol in the live image:
automatic image storing is activated

Store images manually

When the image is activated, an image can be stored manually.


- Shortly press the navigation button UP.
- The green LED is blinking until the image has been viewed.

View stored images

When the green LED blinks, new images were stored:

- By pressing the menu button the image is displayed immediately.

When the green LED does not blink:

- Press the menu button. The main menu is displayed.
- Select the symbol *image buffer* , to display the image.
- Browse through all new stored images with the navigation buttons UP or DOWN.

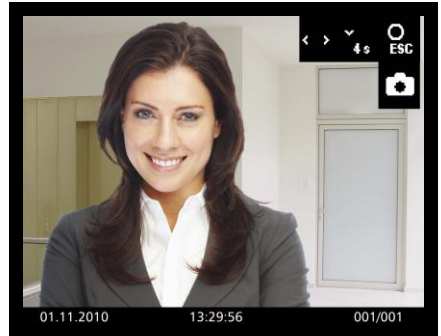

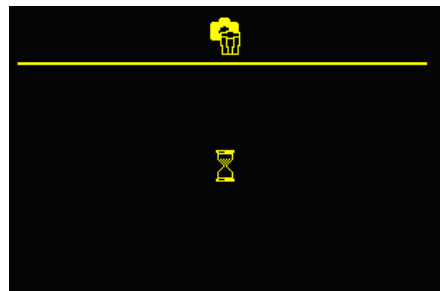


Image with date, time, image number of all stored images.

note: The symbol  is displayed, when another indoor station accesses the image buffer, a door call comes in or a voice connection is already established.


Delete a stored image

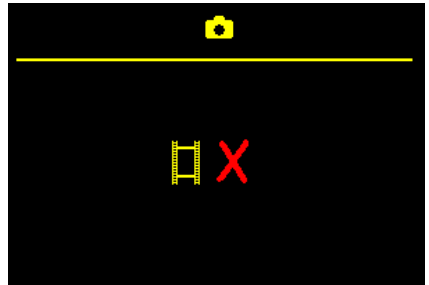
- To delete the displayed image, press the navigation button DOWN for 4 sec until an acknowledgement tone sounds. The image is deleted. The image stored before is displayed.



Delete all stored images

In the image buffer all stored images, allocated to the indoor station, can be deleted.

- Press the menu button. The main menu is displayed.
- Select the symbol delete image buffer .
- Confirm the selection by pressing the menu button.
- Depending on the number of stored images, the deletion process can take a few seconds (or up to 2 min).




Indication *empty storage*

*If all stored images of the allocated serial number have been deleted in the FVM1000 or no stored images are available when a call comes in, the information **empty storage** is displayed for 4 sec. Then the main menu is displayed.*

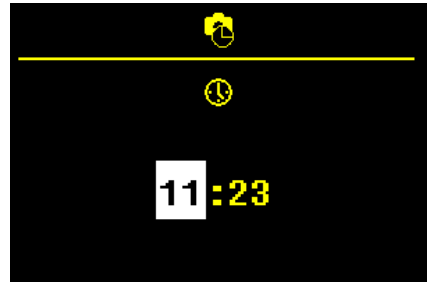
Set date and time of the image buffer

This dialog only appears when the use of an external image buffer and the permission to set date and time has been set in the EEPROM.

- Press the menu button.
The main menu is displayed.
- Select the symbol *time setting image buffer via navigation button* .
- Confirm the selection by pressing the menu button.
- The menu **date** is displayed.
- The marked number can be changed with the navigation buttons UP or DOWN.
- By pressing the menu button the adjustment of the parameter is closed. The menu automatically switches to the next parameter.




- When the setting for *day* is completed the menu automatically switches to the setting **time**.
- The marked number can be changed with the navigation buttons UP or DOWN.
Switch over to the next position by pressing the menu button.
- By pressing the menu button again the menu setting is closed.



Short messages

- The video indoor station IVW2211 can receive short messages via the TCS:BUS. The messages can be stored and displayed.

 Select *receive short messages* in the configuration software configo™.

- Max. 10 short messages can be stored.
- The received message can include max. 95 characters.

Read short messages

When the green LED blinks, new images were stored:


- Press the menu button to get directly to the menu *short messages*.

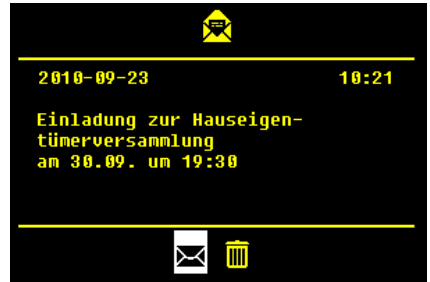
New, unread messages are marked with an exclamation.

When the green LED does not blink:

- Press the menu button.
- Select the symbol *Short messages*



- Select the required message with the navigation buttons UP or DOWN.
- Confirm the selection by pressing the menu button.
You can read the message now. The message includes the text, the sent date and time.
- Select the symbol short messages , confirm the selection by pressing the menu button. Then go back to the menu short messages.



Delete short messages

Read short messages can be deleted by the user. When more short messages have been received, than can be stored, the oldest message is overwritten automatically.



General information on the conduit in TCS video systems

6-wire operation

6-wire operation is the standard operation mode. Video operation, where two separated masses (b and M) are used.

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

- Please observe when selecting the length of the lines: the loop resistance a-b and M-P must not exceed 8Ω (table 1).
Loop resistance $> 8 \Omega$: plan multiple wiring of the strands (double twisted lines).
- Optional strand or star formed wiring

- Do not use more than 20 indoor stations per strand. For systems with more video indoor stations plan to use video distributors (FVY1200, FVY1400).
- Up to 64 front-door stations (16 of them video front-door stations) and almost an unlimited number of indoor stations can be connected within one system polarity-free (a/b; polarity-free only in 6-wire operation). Thus, a suitable power supply and control unit is to be used.

Table 1: loop resistances

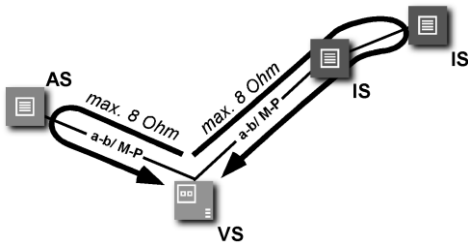
Length of the line a-b/ M-P in m	cable diameter	
	0.6 mm	0.8 mm
	loop resistance in Ω	
10	1.28	0.71
20	2.55	1.43
30	3.83	2.14
40	5.10	2.86
50	6.38	3.57
60	7.65	4.29
70		5.00
80		5.71
90		6.43
100		7.14

Principle loop resistance

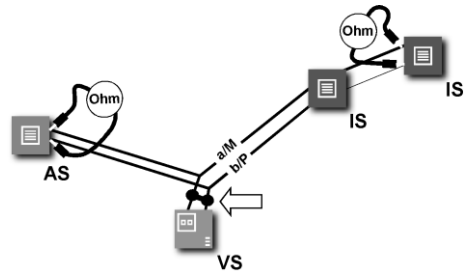
None of the devices (AS, IS or FE) should ever be located more than 8 Ohm away from the power supply and control unit (VS).

Measurement loop resistance

- Switch off the 230 V / 50 Hz of the VS.
- Install the a-b short-circuit at VS.
- Other devices do not disturb the measurement and can stay connected.



8 Ohm:
 around 65 m distance AS-VS by
 0.6 mm diameter
 around 115 m distance AS-VS by
 0.8 mm diameter







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




Max. number IVW2211 in 6-wire operation

small and medium-sized systems	max. number IVW2211	
VBVS05	12	
larger systems	max. number IVW2211	AS front-door station VS power supply and control unit IS indoor station TÖ door opener Note: The max. number of front-door stations which can be connected is limited. Details are described in the respective product information!
BVS20 + NGV1011	60	

FAQ

Error pattern	Possible cause	Our suggested solution
The video image is black and white.	The color saturation control of the indoor station is set to a minimum.	Adjust the contrast or color saturation control.
	The transmission level of the video BUS is too low.	At many components of the video BUS (e.g. FVY) the transmission level can be adjusted. Please see the product information of the active transmission components.
	The light intensity does not reach the minimum value of 10 lux. Thus, the camera switches over to black and white.	The camera module of the front-door station is very insensitive to light. Ensure that there is sufficient illumination or use an external camera.
The colours of the video image are too bright or the image in general is too bright. 	The color intensity is too high.	Reduce the color intensity.
	The brightness is too high.	Reduce the brightness.
	The level of the video signal is too high.	Turn down the level of the video bus (e.g. rotary control on the board of the camera). This only works, when the matching resistor is placed correctly at the station or active extended functions (e.g. FVY).
	The matching resistor at the end of the strand is not plugged.	Plug the matching resistor.

<p>The colors of the video image are without contrast.</p> 	<p>The level of the video signal is not high enough.</p> <p>The matching resistor at video distributor is not placed correctly.</p>	<p>The connection line of a camera was extended, although this is not permitted.</p> <p>The connection line between two active video components was exceeded impermissible.</p> <p>Loss of levels can be compensated to a certain part by rotary controls at active video components (see product information of the components).</p> <p>Check if the number of allowable video indoor stations per strand was not exceeded.</p> <p>Remove the matching resistors at relevant components. Only the last video component in a strand needs a matching resistor.</p>
<p>In one building block with multiple indoor stations, only one indoor station shows black lines on the video image.</p> 	<p>Image interferences due to transition resistance.</p> <p>Image interferences due to near disturbing sources such as external power supplies or other electric appliances, which are not shielded.</p> <p>Distortion due to compensation currents caused by potential differences.</p>	<p>The P-wire is not connected correctly.</p> <p>The connection contacts are not completely fixed.</p> <p>Relocate the video distributor or any other passive assembly package.</p> <p>Please check the line installation and try to install active components on one potential.</p>
<p>Distorted image</p> 	<p>No accurate video signal due to interchanged video wires.</p>	<p>The video BUS is not protected against polarity reversal. Please interchange the wires V1 and V2.</p>

<p>The image "rolls".</p> 	<p>The video signal cannot be synchronized.</p>	<p>Please check, if all wires of the video BUS are connected. Eventually you have to readjust the level.</p>
<p>Multiple contours occur</p> 	<p>Image reflections occur, so called "ghost images", due to open lines.</p>	<p>The video strand is not connected. Please place the matching resistor in the last device of the strand.</p>
<p>Contours of a second image are visible.</p> 	<p>Two video sources interfere.</p>	<p>Please remove the second video source from the strand. Connect the second video source, if necessary, via a video switch to the existing TCS:BUS.</p>
<p>No image. When pressing the image button there is no respond.</p>	<p>No signal present.</p>	<p>Connect the monitor before the video switch and check if there is a signal.</p>
	<p>Not both wires of the video BUS are connected.</p>	<p>Measure the voltage between P and b. The voltage is around 24 V. If this is not the case, check the BUS voltage supply.</p> <p>Please check the correct connection of the connection terminal.</p>
<p>The video image turns white after a while. Switching the supply voltage off and on again, the signal will be normal again. The video image turns white after a while again.</p>	<p>Thermal defect of the outdoor camera.</p>	<p>One of the wires of the video BUS short-circuits the P- or the a-wire. This causes an impermissible increased current. Please check the wiring for short-circuits.</p>
		<p>The camera is defect.</p>

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



Declarations of conformity for download under www.tcsag.de > Downloads > Commercial 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.

- Please observe our **standard terms and conditions of sale**, available under www.tcsag.de > Downloads > Commercial information and enclosed in our latest catalogue.
- Please contact us: **hotline@tcsag.de**.

Spare parts

Short text	Article number
IVW2210-0140 adapter plate WS (lower cover IVW2210-0140 ws, connection terminal with 8 pins RM5 AK130/8-5.0)	E32652

Accessory

Short text	Article number
Tabletop accessory ECOOS AI SW	ZIT1700-0016
Central image buffer	FVM1000-0400

Service

Please send your questions and inquiries to
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