

Instructions manual

01964

Module for CCTV system for monitor 20550



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Technical characteristics

The device, appropriately integrated with the colour monitor 20550, permits transforming the latter into a monitoring system for flush-mounting closed circuit video cameras (CCTV).

The CCTV module is nothing other than an audio-video interface through which it is possible to view the video signal coming from an external video camera and possibly also listen to the audio signal coming from a microphone (the standard for the video signal is CVBS - Composite Video - whereas, for the audio signal, compatibility is ensured with the microphones in the VIMAR devices such as art. 20565 and 14565).

The device is equipped with 9 terminals, that enable connecting up with the other system appliances (power supply, video cameras, audio inputs, etc.).

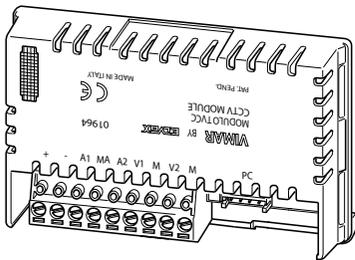


Figure 1 - CCTV interface module 01964.



Figure 2 - Monitor VIMAR 20550.

Technical characteristics

Type of system.

The CCTV module 01964 (to be installed on monitor 20550) can be used with any type of video camera compatible with the CVBS video signal (with output signal 1Vpp on 75 Ω); audio inputs can be used for the levels of amplification of the microphones fitted on the devices, such as the recess-mounted video camera with two modules 20565 and 14565 and therefore using other types of audio sources does not assure the correct level of amplification for the voice channel.

The CCTV interface allows input of 2 independent audio/video channels to which up to two video cameras with audio input can be directly connected.

In the case of a greater number of video sources it is necessary to use a video multiplexer for CCTV systems to connect to one of the two main audio/video inputs of the module 01964.

The power supply of the CCTV interface 01964 is supplied through any power supply with output 18-24 Vdc (minimum 6 VA), while the power supply of the video cameras must be supplied separately according to their characteristics.

As regards the type of cables to use for the connection between the components of the system, it is recommended to use the 75 Ω coaxial cable for the composite video signals at the input to the module 01964 and 0.5 mm² cables for audio signals and for the power supply.

The CCTV system.

Using the module 01964 enables creating a simple and flexible video surveillance and environmental listening system, able to satisfy the video control and environmental listening requirements of residential and household sectors.

The applications concern the audio and video control of environments of the home such as, for instance, "baby-watching", video control of rooms and garden, private car parks, etc.

Using only the CCTV interface and the monitor 20550 provides audio/video control of two independent rooms without the aid of additional accessories (multiplexer, video matrices, etc.); viewing and listening to these rooms can be done directly or cyclically and with user programmable times.

If it is necessary to control three or more rooms or record the audio/video signals, it will be enough to insert an audio/video multiplexer with the output connected at the input to one of the two channels of the module 01964 and a video recording appliance (VCR) to be connected to the multiplexer.

WARNING: In the case of environmental video recording, see the paragraph on "RULES OF INSTALLATION AND REGULATORY COMPLIANCE" and for greater details the specific regulations for local video surveillance.

Technical characteristics

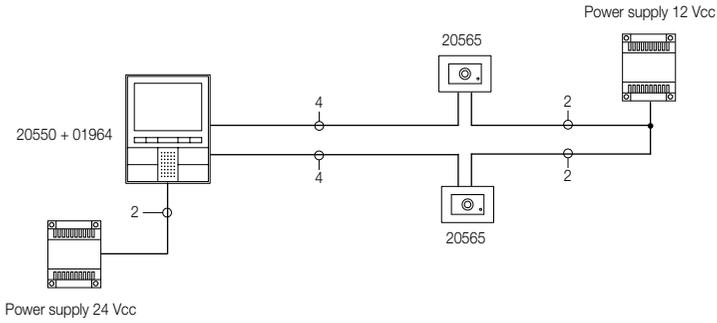


Figure 3 - CCTV System with two video inputs on multiplexer and VCR.

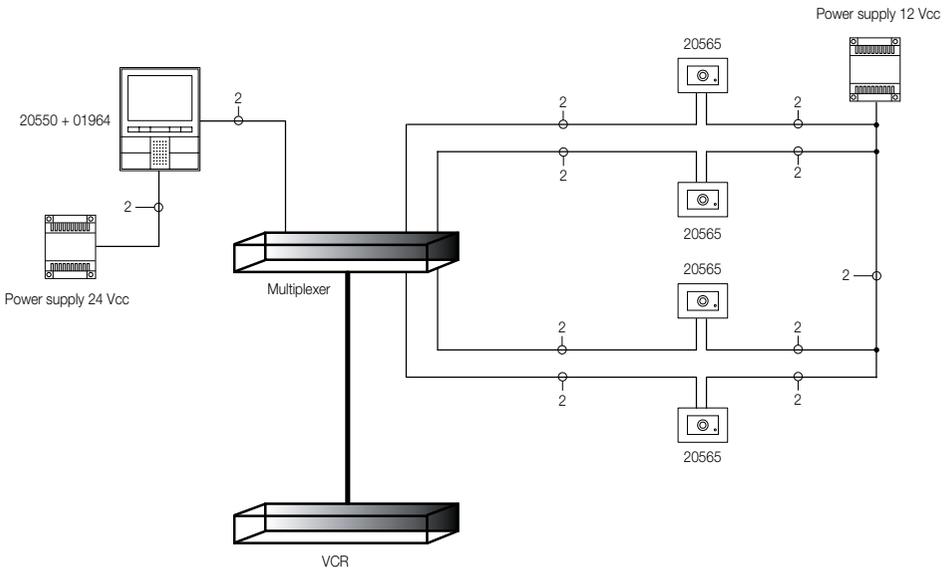


Figure 4 - CCTV System with four video inputs on multiplexer and VCR.

Technical characteristics

Main technical characteristics of the CCTV

- Simple and flexible TVCC system for domestic use
- CCTV interface for monitor 20550 with 2 independent audio/video inputs
- Viewing and listening the single channel or automatic cyclical switching
- Times for switching off and cyclical switching can be set via control panel 01960
- Possible to use external multiplexers to increase the number of audio/video inputs
- Possibility of using audio/video recording media connected to the external multiplexer
- Independent power supply of the video cameras
- Power Supply of the module 01964 with any power supply at 18 -24 Vdc (minimum 6 VA)

Description of terminals.

The video door entry module 01964 has two types of connectors:

- **removable 9-pin connector:** connector on pillar side for the connection of the audio/video inputs (fig. 5).
- **30-pole PIN-STRIP connector:** connector on the monitor side for hooking up the interface module for CCTV 01964 with the monitor 20550 (fig. 6).

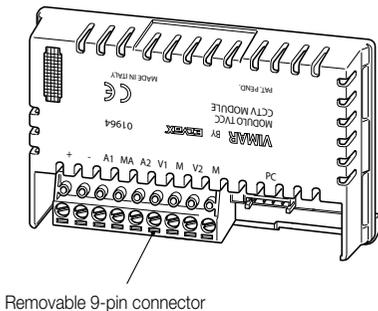


Figure 5

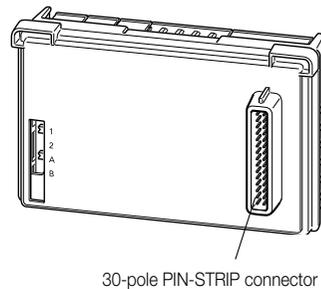


Figure 6

Technical characteristics

The removable connector is provided with 9 terminals divided according to the functions given in the following table:

Terminal number	Type	Function
+	-	Power Supply (18 Vdc....24 V dc)
-	-	Power supply (GND)
A1	Input	Channel 1 audio signal input
MA	-	Audio signal input (GND)
A2	Input	Channel 2 audio signal input
V1	Input	Channel 1 video signal input
M	-	Channel 1 video reference input (GND)
V2	Input	Channel 2 video signal input
M	-	Channel 2 video reference input (GND)

The connector on the monitor side must be inserted in the compartment on the top of the back of monitor 20550 in correspondence with the connector bearing the words "CCTV" (fig. 7).

You are recommended to do this without the devices being powered and checking that, after hooking up the module with the monitor, the mechanical coupling is perfect (all the clamps must be properly tightened).

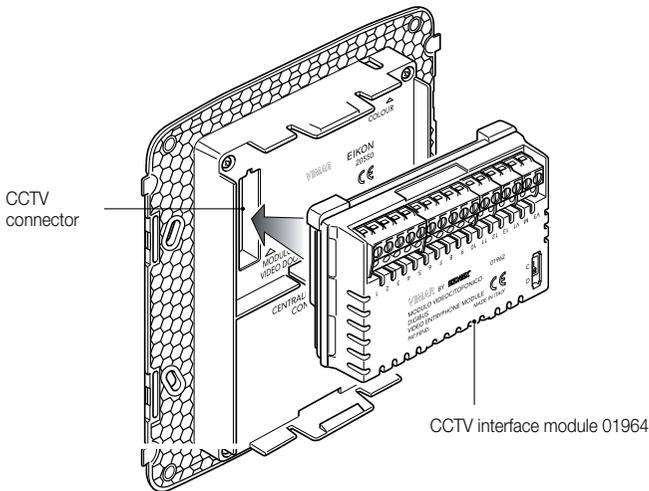


Figure 7 - Connecting the CCTV interface module.

Technical characteristics

Power input.

The consumption of the CCTV interface module 01964, once inserted in the monitor 20550, depends on the current operating mode of the interface (standby, on call, red/green LED on, only video on, audio and video on, etc.). The mean values of the power input in the two typical modes of operation are the following:

- minimum (on standby): 20 mA (supply voltage 18Vdc)
- maximum (video and audio): 300 mA (supply voltage 18Vdc)

N.B. The above values are approximate.

Power supplies and other CCTV accessories.

The CCTV interface module 01964 can be powered via any power supply available on the market that can supply a voltage of minimum output of 18 Vdc and maximum 24 Vdc with power output at least 6 VA.

The other accessories that are used are the generic ones that characterize the normal CCTV systems such as, for instance, multiplexers, VCRs, outdoor video cameras, etc.

Functions of the CCTV interface and configuration

The monitor 20550, after adding module 01964, to all intents and purposes becomes a monitor for video surveillance and environmental listening.

The main function of the device is to allow observation of environments in which video surveillance cameras are installed and if necessary listening of the audio signal from them (use the Vimar video cameras 20565 or 14565).

In addition, the interface 01964 enables implementing other additional functions that are:

- timed activation of the single channel
- alternating cyclical activation of the two channels
- enabling/disabling listening to audio

All the functions are enabled by pressing the dedicated buttons. The main states of operation of the CCTV interface are the following:

- With MONITOR ON (the LCD monitor and the LEDs for backlighting the buttons are on).
- With MONITOR OFF (the LCD monitor and the LEDs for backlighting the buttons are off).

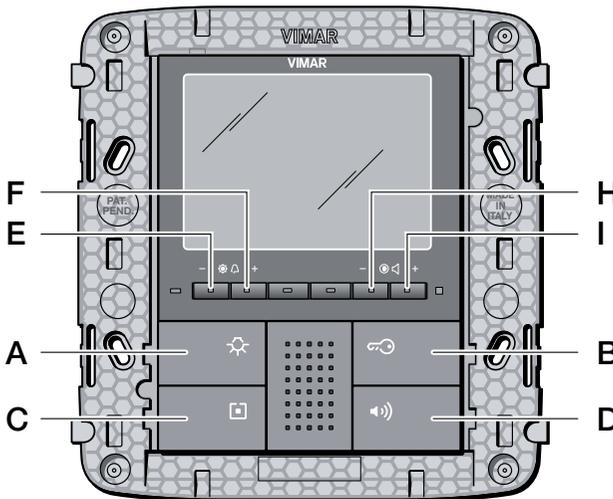


Figure 8 - Front view monitor 20550.

- | | |
|--|--|
| <p>A ON/OFF button</p> <p>B CHANNEL SELECTION button (1 or 2)</p> <p>C SECOND FUNCTION button (2ndF)</p> <p>D Button ENABLING/DISABLING LISTENING TO AUDIO</p> | <p>E-F BRIGHTNESS control buttons</p> <p>H-I AUDIO VOLUME and CONTRAST control buttons</p> |
|--|--|

Functions of the CCTV interface and configuration

For further information on using the CCTV interface, see the following chapter "CONFIGURATION OF THE CCTV INTERFACE" and the "QUICK GUIDE TO USING THE CCTV INTERFACE."

Turning on and off

To switch on the module 01964 it is necessary to press, for at least 1 s, the ON/OFF button (button "A"); the monitor will switch on and show the video signal on the channel currently selected.

To switch off the CCTV interface, press button "A" again for at least 1 s.

Audio/video channel selection

When the module 01964 is on, to select the channel to view (channel 1 or channel 2) press and immediately release the CHANNEL SELECTION button (button "B").

By repeatedly pressing button "B" the selection of the channel to view is continually switched over.

Self-shutdown

When switching on the monitor, the self-shutdown time related to viewing the selected channel is equal to 5 minutes (default time set by the factory).

The user can enable or disable the function of self-shutdown by pressing the SECOND FUNCTION button at the same time (button "C") and the ON/OFF button (button "A") :

"C"+"A" (with one flash of the green LED) = SELF-SHUTDOWN ON

"C"+"A" (with two flashes of the green LED) = SELF-SHUTDOWN OFF

After enabling or disabling the self-shutdown the green LED stays off.

WARNING: If self-shutdown is disabled and no other operation has been performed on the buttons, the monitor switches off after a time-out of 12 h.

Setting time for self-shutdown

If module 01960 has also been inserted in the monitor 20550, the system enables setting the time for self-shutdown in the time interval ranging from a minimum of 1 min to a maximum of 240 min (in steps of 1 min); for greater details see the technical documentation of the control panel module 01960.

If there is no module 01960, the time for self-shutdown stays fixed according to the factory setting (5 min).

Functions of the CCTV interface and configuration

Cyclical audio/video

This type of function allows, when the monitor is on, cyclically viewing the video signals on channels 1 and 2.

The time for viewing each single channel on cyclical switching is equal to 5 s (default value set by the factory).

The user can enable or disable the cyclical switching by pressing the SECOND FUNCTION button at the same time (button "**C**") and the CHANNEL SELECTION button (button "**B**");

"**C**"+"**B**" (with one flash of the green LED) = CYCLICAL SWITCHING ON

"**C**"+"**B**" (with two flashes of the green LED) = CYCLICAL SWITCHING OFF

After enabling or disabling the cyclical switching the green LED stays off.

WARNING: Even if the cyclical switching function is enabled and no other operation has been performed on the buttons, the monitor switches off after a time-out of 12 h.

Setting time for cyclical switching

If module 01960 has also been inserted in the monitor 20550, the system enables setting the cyclical switching time in a time interval ranging from a minimum of 5 s to a maximum of 120 s (in steps of 5 s); for greater details see the technical documentation of the control panel module 01960.

If there is no module 01960, the time for self-shutdown stays fixed according to the factory setting (5 min).

Activation for listening to audio channel

Activation for listening to the audio signal transmitted from the channel currently in use (1 or 2) is performed by immediately pressing and releasing the LISTENING ON-LISTENING OFF button (button "**D**").

Pressing and again releasing button "**D**" turns off listening to the audio channel.

The green LED signals the state of on/off for listening to the audio signal:

Green LED on = audio signal listening on

Green LED off = audio signal listening off

It is in addition possible to turn only audio signal listening on or off even without enabling the display of the video signal (for example, listening to rooms with no lighting, listening to the "baby room", etc.); to do this it is enough, with the MONITOR OFF, to press the LISTENING ON/OFF button (button "**D**").

WARNING: Even if audio channel listening is on and no other operation has been performed on the monitor buttons, the module 01960 disables this function after a time-out of 12 h.

Functions of the CCTV interface and configuration

Setting the volume for listening to audio channel

The audio channel listening volume can be adjusted only if the "Audio channel listening activation" function has been enabled (green LED on).

The setting, with the green LED on, is made with the buttons "H" and "I":

button "H" = decreases the listening volume

button "I" = increases the listening volume

If the listening volume is reset to zero (MUTE), the red LED lights up.

Setting the video parameters.

With the following procedures it is possible to set the three parameters that control the video picture on the LCD monitor:

- brightness;
- contrast;
- colour

Setting the brightness.

To set the degree of brightness of the LCD monitor it is necessary, with the MONITOR ON, to perform the following operations:

- Press button "E" to decrease the brightness;
- Press button "F" to increase the brightness.

Saving the setting is indicated by the red LED blinking.

Setting the contrast.

To set the degree of contrast of the LCD monitor it is necessary, with the MONITOR ON, to perform the following operations:

- Press button "H" to decrease the contrast;
- Press button "I" to increase the contrast.

Saving the setting is indicated by the red LED blinking.

Functions of the CCTV interface and configuration

Setting the colour.

The colour adjustment is made with the trimmer on the inside top of the monitor 20550 (see figure 9); **it is therefore necessary to make the adjustment before installing the appliance on the wall.**

After installing the monitor on the wall with a flush mounting box it will no longer be possible to get to the trimmer except by again removing the it from the box.

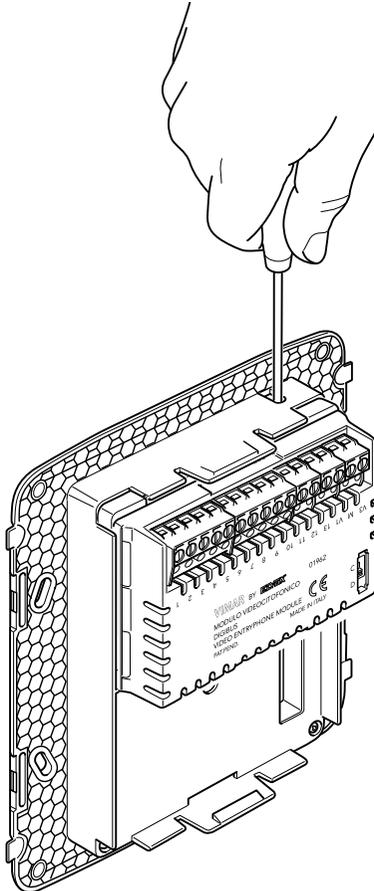


Figure 9 - Setting the colour.

Note: The colour setting is the least critical one and the least influential one for the quality of the image on the LCD monitor in relation to the changes in environmental light.

Integration of the CCTV interface with the By-me system

The monitor 20550 is fitted for being integrated with the CCTV interface module 01964 and the control panel module 01960 that permits managing the By-me home automation system (control of the electrical system, burglar alarm, temperature control, load control, automations, etc.).

If both modules 01964 and 01960 are present on the monitor 20550, the appliance will be in home automation mode and will switch onto CCTV mode when the user activates it via the navigation menus on the By-me home automation side.

Similarly for the CCTV module, the control panel module 01960 must be inserted in the compartment at the bottom on the back of monitor 20550 in correspondence with the connector bearing the words "CONTROL PANEL 01960."

For further technical details, see the instructions manual for the CONTROL PANEL module 01960.

Examples and installation diagrams.

The examples shown in the diagrams accompanying this manual sum up the typical video control and environmental listening installations in the residential sector.

For the installation details, see the diagrams in the following session.

Standard CCTV diagrams.

- CCTV audio/video system connection diagram with 2 video cameras.
- CCTV video system connection diagram with 4 video cameras, multiplexer and VCR for recording events.

Quick guide to using the CCTV interface

Table of the functions of the buttons on the flush-mounting monitor (20550 + 01964) in the CCTV systems.

We distinguish cases in which the LCD monitor is OFF from those in which it is ON.

SYSTEM	CCTV		
Button Pressed	<i>Description:</i>		
	Monitor OFF	Monitor ON	
A 	Turns on the video channel	Turns off the video channel	
B 	Not used	Switches the audio/video signal from channel 1 to channel 2 and vice versa	
C 	SECOND FUNCTION button (2ndF)	SECOND FUNCTION button (2ndF)	
D 	Turns the voice signal on/off in the listening channel	Turns the voice signal on/off in the listening channel	
E (-)	Not used	Brightness setting (decrease)	
F (+)	Not used	Brightness setting (increase)	
H (-)	If the voice signal is on, decrease in listening volume,	Setting Contrast	If the voice signal is on, decrease in listening volume,
I (+)	If the voice signal is on, increase in listening volume	Setting Contrast	If the voice signal is on, increase in listening volume
C+B	CYCLICAL SWITCHING on/off (set default time = 5 s per channel)		
C+A	SELF-SHUTDOWN on/off(default timeout set = 5 min.)		
Red_LED	Off = not used On = audio volume setting on minimum (MUTE) Blinking = volume adjustments and videos saved in the memory of the device		
Green_LED	Off = voice unit of the audio channel off On = voice unit of the audio channel on Blinking (setting self-shutdown/cyclical channel switching): - 1 blink = enabled - 2 blinks = disabled		

IMPORTANT: Buttons A and B of the monitor 20550 can be replaced with two specially customized button covers for applying CCTV and they are exclusively available on request from the Vimar sales network.

WARNING: If there is also module 01960, the LEDs are also managed by the By-me control panel and their signals take on different meanings. If you are using the CCTV function (CCTV menu), the meaning of the LEDs is as stated in the above table while if the home automation system control panel is used (home automation system menu) see the technical documentation related to module 01960.

Installation rules and compliance with regulations

Installation regulations.

Installation should be carried out observing current installation regulations for electrical systems in the country where the products are installed.

WARNING: The environmental audio/video recording is regulated by Italian legislative decree D.lgs dated June 30th 2003, no. 196.

Video cameras and microphones for environmental recording must only be used in private environments; all the zones adjacent to public ground and subjected to environmental recording must be marked with special informative signs that must be affixed in clearly visible positions.

Regulatory compliance.

EMC directive

Standards EN 61000-6-1, EN 61000-6-3

Note: Compliance with regulations refers to module 01964 when it is inserted in monitor 20550.

Glossary

CCTV

Set of devices that allow carrying out remote video surveillance of one or more places.

Generally, when talking about CCTV we include the need, for reasons of safety, to record the video signal from indoor and/or outdoor television cameras.

CCTV systems must comply with the prescriptions of specific regulations that govern and protect the privacy of the people transiting through the areas under video surveillance.

Multiplexer

A device allowing input of a number of video signals (and audio signals when necessary) and it features cyclical output of the channels or selective output of the single channel.

Generally, they integrate other functions such as an output for video recording (VCR), picture splitter (the monitor shows a number of different areas at the same time), etc.

CVBS (composite video signal)

Standard format used for analogue video signals.



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