

Installation and Operating Instructions 1/4" Camera, Day & Night, 23x Zoom VKC-1425





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- D Betriebsanleitung
- GB Installation and Operating Instructions
- F Mode d'emploi

PL Instrukcja instalacji i obsługi

www.videor.com www.eneo-security.com

1. Safety Instructions

- Read these safety instructions and the operation manual first before you install and commission the camera.
- · Keep the manual in a safe place for later reference.
- Protect your camera from contamination with water and humidity to prevent it from permanent damage.
 - Never switch the camera on when it gets wet. Have it checked at an authorized service center in this case.
- Never operate the camera outside of the specifications as this may prevent the camera functioning.
- Do not operate the cameras beyond their specified temperature, humidity or power ratings.
 - Operate the camera only at a temperature range of -10°C to $+50^{\circ}$ C and at a humidity of max. 90%.
- To disconnect the power cord of the unit, pull it out by the plug.
 Never pull the cord itself.
- Pay attention when laying the connection cable and observe that the cable is not subject to heavy loads, kinks, or damage and no moisture can get in.
- The warranty becomes void if repairs are undertaken by unauthorized persons. Do not open the camera housing.
- Never point the camera towards the sun with the aperture open.
 This can destroy the sensor.
- Installation, maintenance and repair have to be carried out only by authorized service centers.
 - Before opening the cover disconnect the unit from mains input.

- The fitter is responsible for the system of protection being followed in accordance with the technical data, e.g. by sealing of the cable outlet with silicone.
- · Contact your local dealer in case of malfunction.
- Only use original parts and original accessories from Videor E. Hartig GmbH.
- Do not use strong or abrasive detergents when cleaning the dome. Use a dry cloth to clean the surface.
 In case the dirt is hard to remove, use a mild detergent and wipe gently.
- During assembly, care must be taken to ensure that existing seals are correctly inserted and are not displaced as a result of assembly.
 You must not continue to use damaged seals.

NOTE: This is a class A digital device. This digital device can cause harmful interference in a residential area; in this case the user may be required to take appropriate corrective action at his/her own expense.

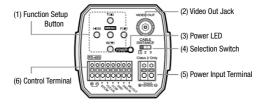
2. General Description

- · High Resolution Day&Night Camera
- . Integrated 23x AF lens / 10x digital zoom
- · True day&night mode with IR cut filter
- Adjustable video transmission distance (3 steps)
- · Powerful digital noise reduction (3D DNR)
- Motion detection (MD)
- · Low speed shutter control (DSS)
- · Digital effects: H/V reverse, 180° rotate
- Privacy masking
- On-screen menu control (OSD)
- RS-485 serial interface (Pelco P & D)

Parts supplied

- Camera
- · Camera socket with 4 screws
- · Installation and Operating Instructions

3. Rear View and Part Names



1. Function Setup Button

Functions can be setup using 5 buttons on the camera's rear panel.



- MENU Buttons: Used to access menu mode. Also used to escape menu mode.
- TELE/WIDE Buttons: Used to choose the desired menu item.

 It also moves the cursor up or down in the menu screen.
- NEAR/FAR Buttons: Used to change the parameter of the selected menu item. It also moves the cursor the left of right in the menu screen.

2. VIDEO OUT Jack

Used to connect an external video monitor in jack

3. Power LED

The LED turns on when power is supplied.

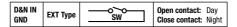
4. Selection Switch

When the distance is far from camera to monitor, set "Selection Switch" in 2 or 3. It shows more clear video on the monitor.

5. POWER Input Terminal

6. Control Terminal

 D&N IN: It is the function that can turn on external D&N mode is set "EXT D&N" on the OSD menu of the camera.



 MD OUT: It is the function that can turn on DVR recorder when MD mode is set "ON" on the OSD menu of the camera.

MD OUT	+5V	+5V 10mA: Motion on
GND	OV	OV: Motion off

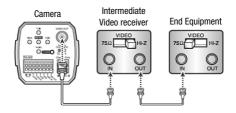
4. Installation

4.1 Connecting a Monitor

Connect the video out jack on the back of the product to the monitor

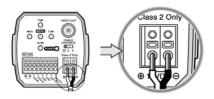


- · Connect the camera after switching off each piece of equipment.
- Change the 75ohms/Hi-Z conversation switch of each piece of equipment according to the following diagram - move the switch of the intermediate monitor to Hi-Z, and the end equipment to 75ohms.



4.2 Connecting to Power

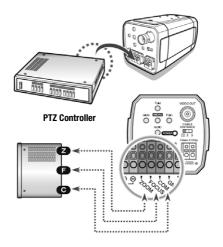
- · The wire is polarized. Be careful of polarity.
- Use 12VDC === power source.



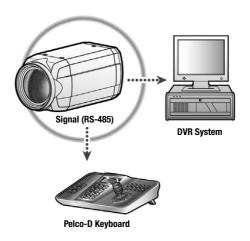
- As voltage may drop according to the length of electric cord, a camera may malfunction if too long output line of adaptor is connected to the camera.
- Voltage for camera operation: 12VDC ±10%

4.3 Camera Control Methods

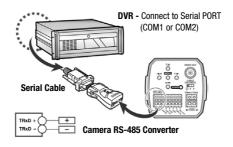
Remote control using for PTZ controller



Remote control using for RS-485



DVR



• Keyboard (Pelco-D, Pelco-P)



5. Communication Protocol

5.1 PELCO-D Byte Format

- -RS-485, 9600bps, 1 start bit, 8 data bits, 1 stop bit, no parity
- Command Message

Function		Zoom Tele					
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x20	0x00	0x00	Checksum
Function				Zoom Wi	ide		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x40	0x00	0x00	Checksum
Function				Focus No	ear		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x01	0x00	0x00	0x00	Checksum
Function				Focus F	ar		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x80	0x00	0x00	Checksum
Function			N	∕lenu On /	/ Off		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x40	0x00	0x00	0x00	Checksum
Function				Power ()n		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x88	0x00	0x00	0x00	Checksum
Function				Power 0	Off		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x08	0x00	0x00	0x00	Checksum
Function				Pelco D S	top		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x00	Don't	care	Checksum

• Pelco Keyboard (95 + Pattern)

Function	Menu On / Off						
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x23	0x00	0x5F	Checksum

• Video Keyboard (Set Preset + 98)

Function	Menu On / Off						
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
MSG	0xFF	CamID	0x00	0x03	0x00	0x62	Checksum

5.2 PELCO-P Byte Format

-RS-485, 9600bps, 1 start bit, 8 data bits, 1 stop bit, no parity

· Command Message

Function		Zoom Tele						
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x00	0x20	0x00	0x00	0xAF	Checksum
Function				Zoo	m Wide			
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x00	0x40	0x00	0x00	0xAF	Checksum
Function				Foci	us Near			
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x02	0x00	0x00	0x00	0xAF	Checksum
Function				Foo	us Far			
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x01	0x80	0x00	0x00	0xAF	Checksum
Function				Menu	On / Of	f		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x80	0x00	0x00	0x00	0xAF	Checksum
Function				Pov	ver On			
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x50	0x00	0x00	0x00	0xAF	Checksum
Function				Pov	ver Off			
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x40	0x00	0x00	0x00	0xAF	Checksum
Function			(Continuo	us Key :	Stop		
	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
MSG	0xA0	CamID	0x00	0x00	Don't	care	0xAF	Checksum

6. On-Screen Display

6.1 Explanation of the On-Screen Display

The OSD (On-Screen Display) is as follows:

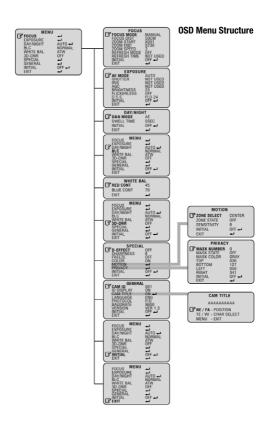


	Function	OSD	Explanation	
		ND	Automatic focus mode	
1	Focus	ß	Manual focus mode	
		ND	No screen inverted	
2	D-Effect		Screen is inverted to the horizontally or vertically.	
	Backlight	ND	Backlight compensation off	
3		Backlight	Backlight	AB
		ND	Automatic colour correction mode	
	White Balance	MWB	Special colour correction mode	
4		IWB	Indoor mode	
	Dalance	OWB	Outdoor mode	
		PWB	Temporary automatic mode	

	Function	OSD	Explanation
		ND	Standard shutter speed (NTSC: 1/60, PAL: 1/50)
5	Shutter Speed	FLK	Flicker correction mode
		x125 ~ x10.000	Shutter speed indicator
6	ID	000 ~ 255	Camera identification number
	Motion Detect	ND	No motion detected
7		MD	Motion detected
8	Initial LOGO	WAITING	Displayed when POWER ON of the camera is in operation
9	Cam Title	-	Explanation of the scene capture by the camera (max.10 letters)
10	Zoom	x1 Dx230	Optical zoom: x1 ~ x23 Digital zoom: Dx24 ~ Dx230 ("D" indicates digital zoom)

"ND": No Display

The OSDs of 1, 2, 3, 4, 5, 7, 8, 10 disappear 5 sec later.



7. Menu and Operation

7.1 How to Set Up Functions

Functions can be setup using 5 buttons on the camera's rear panel.

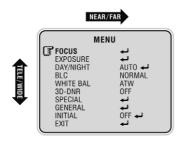


- MENU Key: Shows/Hides Menu
- . TELE/WIDE: Moves up and down items
- NEAR/FAR: Set data for the selected item

The above keys may be used differently in some functions: "CAM TITLE"

1. Press the MENU button

- The Menu consists of the "Main Menu" and "Sub Menu".
- The main menu is displayed where 10 camera functions can be selected.
- Main menu selection, the sub-menu is displayed.

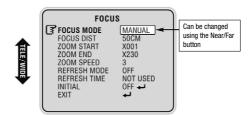


2. Press the TELE/WIDE button

- It moves up and down the main menu category.
- The sub-menu functions of the main menu category are displayed on the right.

3. Press the NEAR/FAR button

- · The current set state of each sub-menu can be checked.
- Press the TELE/WIDE button to move up and down the sub-menu category and set each category by pressing the NEAR/FAR button.

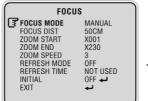


Press the OSD MENU button at the main menu or sub-menu screen to hide the menu.

- It does not apply when the MENU button is used for other uses. "Cam Title" setup screen
- · It moves to the sub-menu window of the selected main menu.

7.2 Main Menu - FOCUS

- Sets camera zoom and focus
- Press the MENU button to move to the sub-menu.





1. FOCUS MODE

- AUTO: Focuses automatically when the menu including D&N changes.
- MANUAL: User focuses manually
- PUSH: When Temporary Automatic Focus is selected, the camera focuses automatically when only the MENU button is pressed.

NOTE: Automatic focus in manual mode is only possible when the location of the zoom lens has changed or when the "temporary automatic focus" category is selected. Automatic focus is also possible based on external AF command (1 shot AF).

2. FOCAL DIST

Minimum distance the camera can focus.
 Example, 10cm: Objects/subjects closer than 10cm cannot be brought into focus.

3. ZOOM START

Minimum zoom movement. Possible from x001 to x023

4. ZOOM END

Maximum zoom movement. Possible from x001 to x230

5. ZOOM SPEED

- Zoom speed movement (Start x1 ~ End x23)
 - 1: 7.5sec
 - 2: 6sec
 - 3: 4sec

6. REFRESH MODE

· Adjusts focus every REFRESH TIME automatically

7. REFRESH TIME

· Period of auto focus adjusting

8. INITIAL

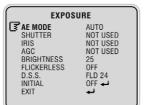
· Initializes changed category in FOCUS Menu.

9. EXIT

Closes the sub-menu and moves to the main menu.

7.3 Main Menu - EXPOSURE

Press the MENII button to move to the sub-menu





1. AE MODE

- AUTO: Automatically adjusts brightness according to the available lighting
- MANUAL: Manually adjusts all brightness
- · AGC MAN: Allows you to adjust gain
- IRIS MAN: Allows you to adjust iris
- . SHUT MAN: Allows you to adjust the shutter speed

NOTE: Cannot adjust when D&N mode (refer to page 28) is in Auto.

2. SHUTTER

- · Can be changed while in Manual and Shutter Manual mode
- Shutter speed can be changed from standard to 1/10.000.
- Standard shutter speed: NTSC- 1/60, PAL- 1/50.

3. IRIS

- · Adjusts the opening of iris
- Can be adjusted from 0 (closed) to 255 (opened)
- . Change in screen can be recognized only within the certain range
- · Can be adjusted in MANUAL and IRIS MANUAL mode.

4. AGC

- · Gain adjustment of image signal
- Can be adjusted from 0 to 255
- · Can be adjusted in MANUAL and AGC MANUAL mode

5. BRIGHTNESS

- · Brightness can be adjusted from 0 (dark) to 48 (bright)
- · Not used while in MANUAL mode

6. FLICKERLESS

 Removes screen flickering caused by disordance of frequency and lighting

D.S.S.

- · Use under very low light condition for full colour surveillance
- . OFF: Digital slow shutter function is disabled.
- . Can be adjusted from FLD 2 to FLD 128

8. INITIAL

Initializes the changed category in EXPOSURE menu to the initial settings

9. EXIT

Closes the sub-menu and moves to the main menu

7.4 Main Menu - DAY/NIGHT (optional)

- Determines and operates in mode suitable for day or night
- Press the MENU button to move to the sub-menu.
- You can select between AUTO, NIGHT and DAY using the NEAR/FAR button.



1. D&N MODE

- AE: Automatically adjusts brightness according to the available lighting.
- . EXT D&N: DAY/NIGHT filter operates by External signal

2. DWELL TIME

- · Sets conversion time of IR cut filter while in Automatic mode
- · Time can be adjusted from 1 to 10 seconds.

3. INITIAL

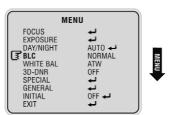
Initializes changed category in Night - Day/Night menu

4. EXIT

· Closes the sub-menu and moves to the main menu

7.5 Main Menu - BLC

Press the MENU button to move to the sub-menu.

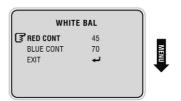


1. BLC

- · Use to select BLC mode
- BLC can be set from NORMAL, C1, C2, L1, L2, U1, U2, D1, D2, R1, R2 and vice versa using the NEAR/FAR button.

7.6 Main Menu - WHITE BAL

- · Adjusts picture colour
- Press the MENII button to move to the sub-menu.
- You can select between ATW, MANUAL, INDOOR, OUTDOOR and PUSH using the NEAR/FAR button.
 - ATW: Automatically adjusts colour according to the available lighting.
 - MANUAL: Colour can be corrected when the user increases or decreases "Red Control" or "Blue Control".
 - INDOOR: Set colour temperature to be 5400K
 - OUTDOOR: Set colour temperature to be 3200K
 - PUSH: Colour will be automatically adjusted while the MENU button is pressed in the temporary automatic mode.



1. RED CONT

- Can be changed in Special mode only, and R-Gain value is adjusted.
- · Can be set from 0 to 255.

2. BLUE CONT

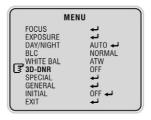
- Can be changed in Special mode only, and B-Gain value is adjusted.
- Can be set from 0 to 255

3. EXIT

· Closes the sub-menu and moves to the main menu.

7.7 Main Menu - 3D-DNR

· Press the MENU button to move to the sub-menu.





1. 3D-DNR

- To reduce the image noise especially during the low ambient lighting conditions.
- You can adjust between OFF, LOW, MIDDLE and HIGH using the NEAR/FAR button

7.8 Main Menu - SPECIAL

Press the MENII button to move to the sub-menu



1. D-EFFECT

- You can select between OFF, V-FLIP, ROTATE and MIRROR using the NEAR/FAR button.
 - V-FLIP: You can flip the picture hotizontally on the screen.
 - ROTATE: You can rotate 180 degrees the picture.
 - . MIRROR: You can flip the picture vertically on the screen.

2. SHARPNESS

- · Adjusts sharpness of outlines
- . Can be set from 0 to 16

3. FREEZE

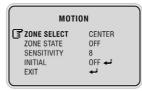
· Freeze the video

4. COLOR

You can select between ON/OFF using the NEAR/FAR button.

5 MOTION

- When there is movement of the subject in the screen, there will be an alarm, or the user will be informed through communications or _MD" will display on the screen.
- Press the MENII button to move to the sub-menu.





A. ZONE SELECT

Sets motion detection field
 Can be set to CENTER, WHOLE, UPPER and OUT

B. ZONE STATE

· Enables or disables motion detection function

C. SENSITIVITY

Sets sensitivity to detect movement
 Can be set from 1 (low response) to 15 (sensitive)

D. INITIAL

Initializes the changed category in MOTION menu

E. EXIT

. Closes the sub-menu and moves to the main menu

NOTE: There is a signal every time there is movement by the subject. If motion is detected, MD (Motion Detected) is displayed on the upper left of the screen. This message enables the user to set On-Screen Display state in the menu.

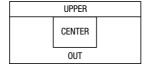
CAUTION: Error can occur in the motion detection function in the following cases.

- When lighting is unsteady
- When light changes often even though there is no movement of the subject.

It is recommended that this function should be used after setting the detection sensitivity and detection field after monitoring the environment for an extended time.

NOTE: The detection field on screen is as follows:

WHOLE



6. PRIVACY

 Select PRIVACY using the TELE/WIDE button and press the MENU button to active the PRIVACY option.





A. MASK NUMBER: To specify the PRIVACY area

 Select AREA using the TELE/WIDE button. You can select area from 0~3 position using the NEAR/FAR button.





B. MASK STATE: To display the Privacy Zone area

 Select DISPLAY using the TELE/WIDE button. You can select between ON/OFF using the NEAR/FAR button.





- ON: displays the Privacy Zone area
- (2) OFF: disable

C. MASK COLOR: To change colour of privacy zone

· Select COLOR using the TELE/WIDE button. You can adjust from GRAY, BLACK, WHITE or YELLOW using the NEAR/FAR button





- D. TOP/BOTTOM/LEFT/RIGHT: Users can specify PRIVACY ZONE area
- Select TOP, BOTTOM, LEFT or RIGHT using the TELE/WIDE button. You can adjust the privacy zone using the NEAR/FAR button
 - (1) TOP: extend or reduce the upper area of the PRIVACY ZONE area
 - (2) BOTTOM: extend or reduce the bottom area of the PRIVACY 70NF area
 - (3) LEFT: extend or reduce the left side of the PRIVACY ZONE area
 - (4) RIGHT: extend or reduce the right side of the PRIVACY ZONE area

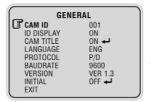


- E. INITIAL: To reset the factory default only on the PRIVACY mode.
- Select INITIAL using the TELE/WIDE button. You can reset the PRIVACY mode using the MENU button.

- F. EXIT: To return to SPECIAL MENU
- Select EXIT using the TELE/WIDE button. You can return to SPECIAL using the MENU button.

7.9 Main Menu - GENERAL

- · Sets up the general operation of the camera.
- · Press the MENU button to move to the sub-menu.





1. CAMERA ID

- Displays the camera's ID
- Camera ID can be specified using numbers from 000 to 255 using the NEAR/FAR button.

2. ID DISPLAY

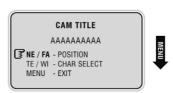
· Displays CAM ID on the screen

3. CAM TITLE

- Edits and displays the information of camera or explanation on the area of the image being captured at the bottom left of the screen
- Maximum of 10 letters can be used/edited

CAM TITLE

 User can edit explanation or condition of camera, and this will be displayed on the lower left screen.



 You can choose up to 84 symbols from the available symbols table.



- Select the location of letters using the TELE/WIDE button. A downward arrow will blink on top of the letter to edit.
- 3. Select letters using the NEAR/FAR button.
- 4. To exit, press the MENU.

CAUTION: Denotes a blank letter and will be displayed as a blank space on the actual screen.

4 I ANGIIAGE

- · Displays the currently set language
- Language can be set from ENG to CHN and vice versa using the NEAR/FAR button.

5. PROTOCOL

- DEF: Default
- P/D: Pelco-D
- P/P: Pelco-P

6. BAUDRATE

You can select 2400/4800/9600/38400 bps.

7. VERSION

· Displays the camera's version

8. INITIAL

· Resets the current general settings category to the initial settings

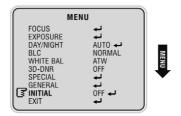
9. EXIT

. Closes the sub-menu and moves to the main menu.

CAUTION: Change the data of the sub-menu using the NFAR/FAR button

7.10 Main Menu - INITIAL

- · Initializes all current settings
- No sub-menu
- · Press the MENU button to initialize the entire camera settings
- · Note that all settings in the sub-menus will be initialized.

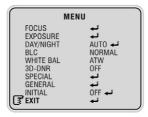


- . OFF STATE: Indicates that settings are not initialized
- . ON STATE: Indicates that camera settings have been initialized

CAUTION: Please use caution when performing this function.
Every setting (even in all sub-menus) will be
initialized (except some menus CAM ID, CAM TITLE,
LANGUAGE, PROTOCOL, BAUDRATE of GENERAL menu).
Initialization in sub-menus will initialize each
category of the sub-menu only.

7.11 Main Menu - EXIT

- · Closes menu
- Press the MENU button to close menu





8. Specifications

Туре	VKC-1425
Art. No.	92769
System	Day & night
Video standard	PAL
Sensor size	1/4"
Imager	CCD, Monalisa II DSP
Active picture elements	795(H) x 596(V) pixels
Synchronization	Internal
Signal-to-noise ratio	>50dB
Horizontal resolution	580 TVL
Sensitivity (at 50% video signal)	0.24 Lux, (colour); 0.15Lux (B&W) at F1.2 (measured)
Exposure modes	Automatic, manual, iris priority, shutter priority, AGC priority
Automatic electronic shutter (ESC)	1/50 ~1/10,000sec.
Manual electronic shutter (MES)	1/50 ~1/10.000sec.
Low speed shutter	yes
Automatic gain control (AGC)	ON/OFF switchable
Digital Noise Reduction (DNR)	yes, ON, OFF, low, middle, high
Flickerless function	ON/OFF switchable
Mirror function	Flip, V flip, rotation

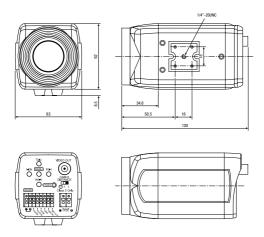
White balance	ATW, indoor, manual, outdoor, one push
Backlight compensation	BLC, 4 adjustable zones, ON/OFF switchable
Wide Dynamic Range (WDR)	no
IR cut filter	Switchable
Video outputs	Composite (CVBS)
Lens type	Zoom
Focal length	3.6 mm - 82.8 mm
PTZ support	no
Digital zoom	2x ~10x
Horizontal angle of view	55.21° - 2.12°
Illumination	no
Menu language	English
OSD function control	OSD camera setup
Text display	10 digit
Activity detection	yes
Motion detector	4 zones, ON/OFF switchable
Privacy zones masking	3 areas
Serial interfaces	RS-485
Serial interfaces protocols	Pelco D, Pelco P, DEF
External adjustments	Menu, zoom and focus
External connections	Video (BNC), RS-485, voltage input, alarm output, external day&night switching

Housing material	Metal, plastic
Housing	Indoor
Integrated wall mount	no
Hidden cable	no
management	
Sunshield	no
Window heater	no
Colour (housing)	Silver grey
Vandalism resistant	no
Protection rating	n/a
Alarm inputs	no
Alarm outputs	1
Supply voltage	12VDC, (+/-10%)
Power consumption	4.6watts
Dimensions	See drawings
Weight	325g
Certificates	CE

Optional Accessories

The optional accessories currently available can be found on our Homepages: www.videor.com and www.eneo-security.com

9. Dimensional Drawings



Dimensions: mm



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