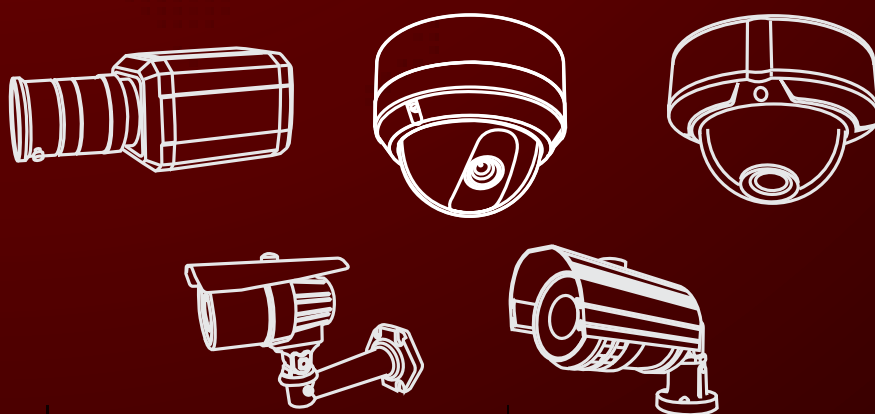


www.microdigital.co.kr

Full HD 1080P 2.1 Mega Pixel CMOS HD-SDI Camera

USER MANUAL



MICRODIGITAL

USER INFORMATION

⚡ CAUTION



CAUTION



RISK OF ELECTRIC SHOCK, DO NOT OPEN NO USER-SERVICEABLE PARTS INSIDE.
REFER FOR SERVICING TO QUALIFIED SERVICE PERSONNEL.



THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSISTING OF A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.



THIS EXCLAMATION POINT SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.



This marking on the product, accessories or literature indicates that the product and its electronic accessories should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

USER INFORMATION

◆ Information

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

◆ Warning

- Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This installation should be made by a qualified service person and should abide to all local codes.

USER INFORMATION

❖ PRECAUTIONS

• Do not install the camera in extreme temperature conditions.	Only use the camera under conditions where temperatures are between -10°C and +50°C. Be especially careful to provide ventilation when operating under high temperatures.	⊗
• Do not install or use the camera in an environment where the humidity is high.	It can cause the image quality to be poor.	⊗
• Do not install the camera under unstable lighting conditions.	Severe lighting change or flicker can cause the camera to work improperly.	⊗
• Do not touch the front lens of the camera.	This is one of the most important parts of the camera. Be careful not to leave fingerprints on the lens cover.	⊗
• Do not drop the camera and protect it from physical shocks.	It can cause malfunctions to occur.	⚠
• Never keep the camera pointed directly at strong light.	It can damage the CCD.	⊗
• Do not expose the camera to rain or spill beverage on it.	If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.	⚠
• Do not expose the camera to radioactivity.	If exposed to radioactivity the CCD will fail.	

USER INFORMATION

	Ignoring this information may result in material loss and/or serious personal injuries including death.		Indicates “Never Allowed.”
	Ignoring this information may result in material loss and/or a slight injuries.		Indicates “No Disassembling.”

NOTE

- Exposure to a spotlight or an object emitting strong light may cause smear or blooming.
- Ensure that the power source complies with normal specifications before supplying it to the camera.
- Power supply.(Adaptor : DC12V)
 - To avoid fire or shock hazard, must use a UL listed power supply.
- Monitor Impedance.
 - Set the impedance switch to 75ohm standard position.
 - When monitor is set to high impedance mode, the picture becomes blurred. In this case, just check the position of the monitor impedance switch.

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• OSD STRUCTURE-MAIN MENU

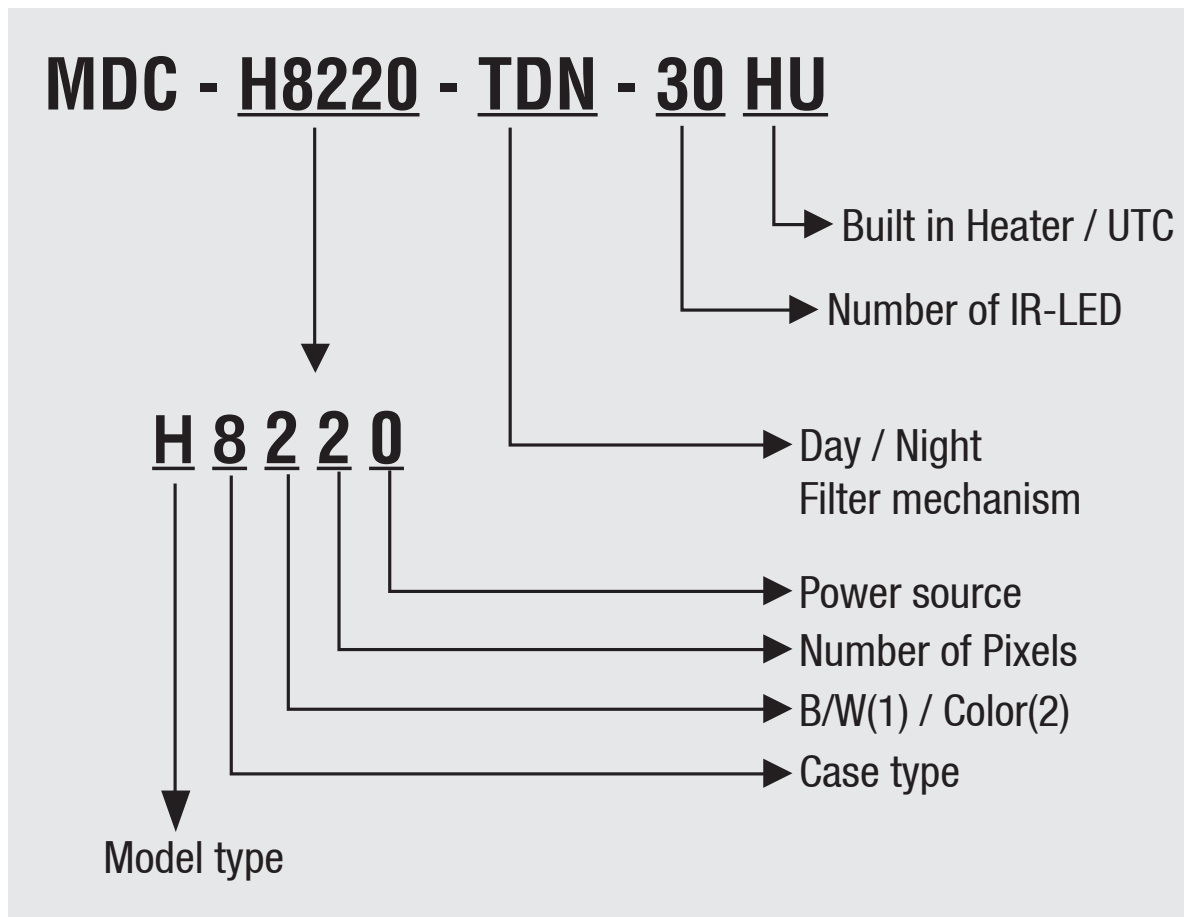
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I DESCRIPTION

Before operating the camera, confirm the camera model and proper input power voltage. In order to help you understand this manual thoroughly, we'll introduce our model description.

◆ MODEL DESCRIPTION

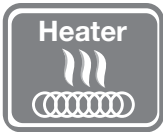
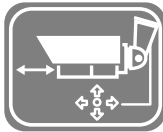
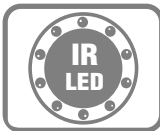
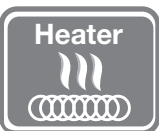
- EX)



DESCRIPTION

CASE TYPE	MODEL TYPE	COLOR	PIXEL	POWER	D/N LENS	IR/HEATER / CASE
1: MINI BULLET	i : IP	1: B/W	1: 270K	0: DC 12V	C	IR : No. of
2: MODULE	H : HD	2: COLOR	2: 410K	1: DUAL	CTD	IR-LED
3: MINI SQUARE			6: 1.3M	VOLTAGE	CDN	
4: BOX			9: 2.1M	(DC 12V/	F	H: With Heater
5: ZOOM				AC24V)	FDN	
6: IR BULLET				2: AC230V	TDN	U : UTC
7: IN DOOR					V	CONTROL
DOME					VX	
8: OUT DOOR					VTD	MS : SUFACE
DOME					VDN	MOUNT TYPE
(VANDAL)					WDN	
9: MINI VANDAL					F(E)	MF : FLUSH
					V(E)	MOUNT TYPE

IR & HEATER (MDC-6xxx, 7xxx, 8xxx MODEL)

-H		-U	
	Built-in Heater		UTC Remote Control
-30		-30H	 
	Built-in IR LED		Built-in IR LED With Heater

DESCRIPTION

❖ PRECAUTIONS

DAY / NIGHT FILTER & MECHANISM			
C			F
	DIGITAL DAY / NIGHT		
CTD			
	TRUE DAY / NIGHT (ICR-IR Cut Filter Removable)		
V			
	DIGITAL DAY / NIGHT		
VTD			
	TRUE DAY / NIGHT (ICR-IR Cut Filter Removable)		

POWER SOURCE		
		
MDC-xxx0 - DC 12V	MDC-xxx1 - AC 24V / DC 12V, Dual-Power	MDC-xxx2 - AC 230V

SPECIFICATION

Image Sensor	1/3" Panasonic CMOS
Total Pixels	2010(H) x 1108(V) = 2,227,080 (pixel)
Active pixels	1944(H) x 1092(V) = 2,122,848 (pixel)
Scanning system	Progressive
Resolution	Digital : 1920x1080p(1080p/30fps) 1280x720p(720p/60fps) Analog : 700TVL
Min. illumination	Color : 1.0 lux , BW : 0.5lux Color DSS : 0.002 lux , BW DSS : 0.001 lux
Video Output	HD-SDI / Analog : NTSC, PAL(without WDR)
S/N Ratio	more than 50dB (AGC off)
Function	
MODE	D&N / COLOR / IR SMART / IR CDS
EXPOSURE	
BRIGHTNESS	0 ~ 20 steps
LENS	DC / Manual
SHUTTER	Auto / Manual (1/30(1/25) ~ 1/60000)
DSS	Off / x2 / x3 / x4
AGC	Off / On
WDR/BLC	Off / WDR / BLC
DAY&NIGHT	Auto / Day / Night / Ext
SMART IR	Off / On
WHITE BAL	Auto / Push / Manual / Indoor / Outdoor
IMAGE	
SHARPNESS	0 ~ 10 steps
MIRROR	Off / H / V / H&V
FREEZE	Off / On
D.ZOOM	x1 ~ x32
HLC	Off / On
ACE	Off / On
DNR	Off / Low / Middle / High / Auto
D.COMPRESS	Off / On

SPECIFICATION

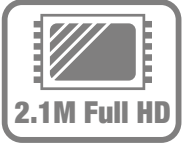
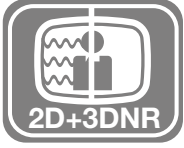
INTELLIGENCE	
PRIVACY	Off / On (32 points)
MOTION	Off / On (4 points)
SPECIAL FUNC	
SHADING DET	Off / On
SHADING	Off / On
DEFECT DET	Off / On
DEFOG	Off / On
SYSTEM	NTSC / PAL
HD FORMAT	1080P / 720P
PG	Off / On
CVBS	Off / On
COMM	ID (1 ~ 255)
	BAUDRATE (2400 / 4800 / 9600 / 19200 / 38400 / 57600/115200)
	PROTOCOL (PELCO-P / PELCO-D / UPDATE)
DEFAULT	ON / DONE
Language	English
OSD Text	0 ~ 9, A ~ Z, a ~ z
Electrical	
Power Source	DC12V $\pm$ 10%
General	
Operating Temperature	-10°C ~ +50°C (Humidity : 0%RH ~ 80%RH)
Storage Temperature	-20°C ~ +60°C (Humidity : 0%RH ~ 90%RH)

I SPECIFICATION

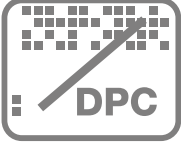
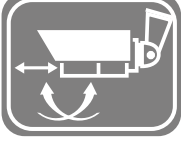
MDC-H4090C	
LENS	C/CS Mount Without TDN Mechanism
Power Consumption	Max. 2.1W(at 12V)
MDC-H4090CTD	
LENS	C/CS Mount With TDN Mechanism
Power Consumption	Max. 2.1W(at 12V)
MDC-H6290VTD-45	
Built in TDN	YES
Lens	Filter Changeable Vari-Focal 6.0~50.0mm DC Auto Iris Lens
IR LED	12pcs Giant & 30pcs IR-LED
Power Consumption	Max. 7.5W(at 12V)
MDC-H6290VTD-48	
Built in TDN	YES
Lens	Filter Changeable Vari-Focal 3.5~16.0mm DC Auto Iris Lens
IR LED	48pcs Include
Power Consumption	Max. 7.3W(at 12V)
MDC-H8290VTD	
Built in TDN	YES
Lens	Filter Changeable Vari-Focal 3.5~16.0mm DC Auto Iris Lens
Power Consumption	Max. 2.1W(at 12V)

► Specifications are subject to change without prior notice due to improvement

FEATURES

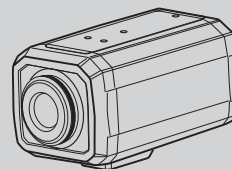
	1/3" Progressive CMOS 2.1M pixels Image Sensor - 2,227,080pixels(Total) / 2,122,848pixels(Active) Full HD Resolution - 1920x1080p / 30fps - 1280x720p / 60fps
	DAY / NIGHT The camera identifies whether it is day or night and automatically switches to the appropriate mode, depending on its environment. By day, the camera switches to color mode in order to maintain optimal color. At night, it switches to B/W mode so as to obtain better picture definition.
	WDR (Wide Dynamic Range) D-WDR is a powerful and ultra advanced technology that captures clear and superior high Resolution pictures even where images appear dark because there is a strong back light present.
	DNR (Digital Noise Reduction, 2D+3D) The DNR technology eliminates noise thus generating a distinct and clear image. This camera DNR function utilizes both an adaptive 2D filter reducing noise in the brightness of the image and an adaptive 3D filter reducing noise caused by movement.
	HLMASK (HLC, High Light Compensation) Function High Spotlight BLC Function is Especially Effective to Read the Number Plate of the Vehicles in the Street or Parking Lot at Night Time. Especially Users Can Adjust and Select the Special Required Area to Observe the Target Object Under the Strong Spots of Light Exist.
	DIGITAL ZOOM Digital zoom available, OFF(x1) / ON(x2~x32) can be selected
	Additional Functions 1. OSD - On Screen Display menu - the camera can be controlled by selecting text displayed on the monitor screen. 2. Free Area Selectable function of Intelligent Motion Detection 3. Privacy Color Masking for 32 Area selection

FEATURES

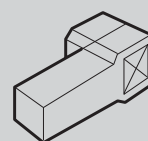
	DPC (Dead Pixel Compensation [Max 64points]) When the camera becomes hot after operating a couple of days, white spots are shown on the screen especially at low light condition and they are recorded together with normal image. By using this function, white spots are removed and you can get clean images.
	IR SMART It enables users to distinguish the indistinguishable images saturated by IR LED.
	C / CS Mount Lens Adjustable MDC-H4290C & CTD MODEL
	External Focus & Focal Length Adjustment 77Ø, 88Ø Series (MDC-6220TDN-45, 48)
	Dual(Surface / Flush) Mount Type Vandal Proof Dome Camera MDC-H8290VTD MODEL 1. The unit is installed by two types of installation with flush or surface mount. When the camera is installed with flush mount, the unit can be installed into an existing two-gang junction box. 2. Surface or Flush Mounting using the supplied surface mount bracket.
	Weather proof IP66 MDC-H6290VTD , MDC-H8290VTD MODEL

COMPONENTS

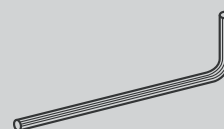
1. Camera



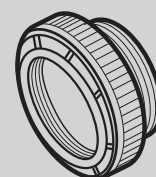
2. Auto IRIS Lens Connection Plug ...



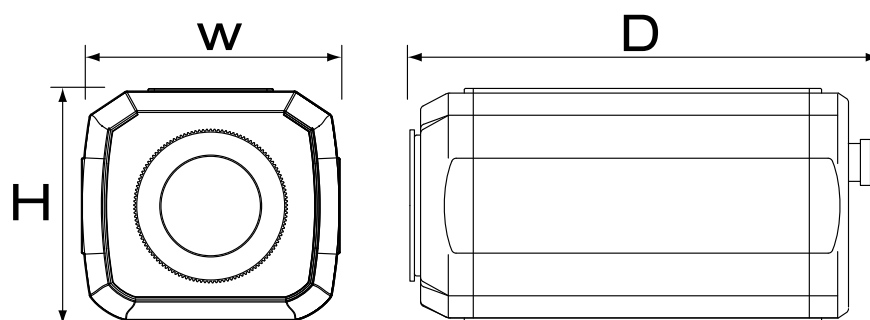
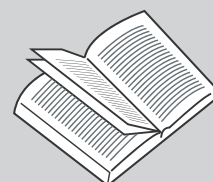
3. L-WRENCH



4. C - Mount Adaptor



5. Manual

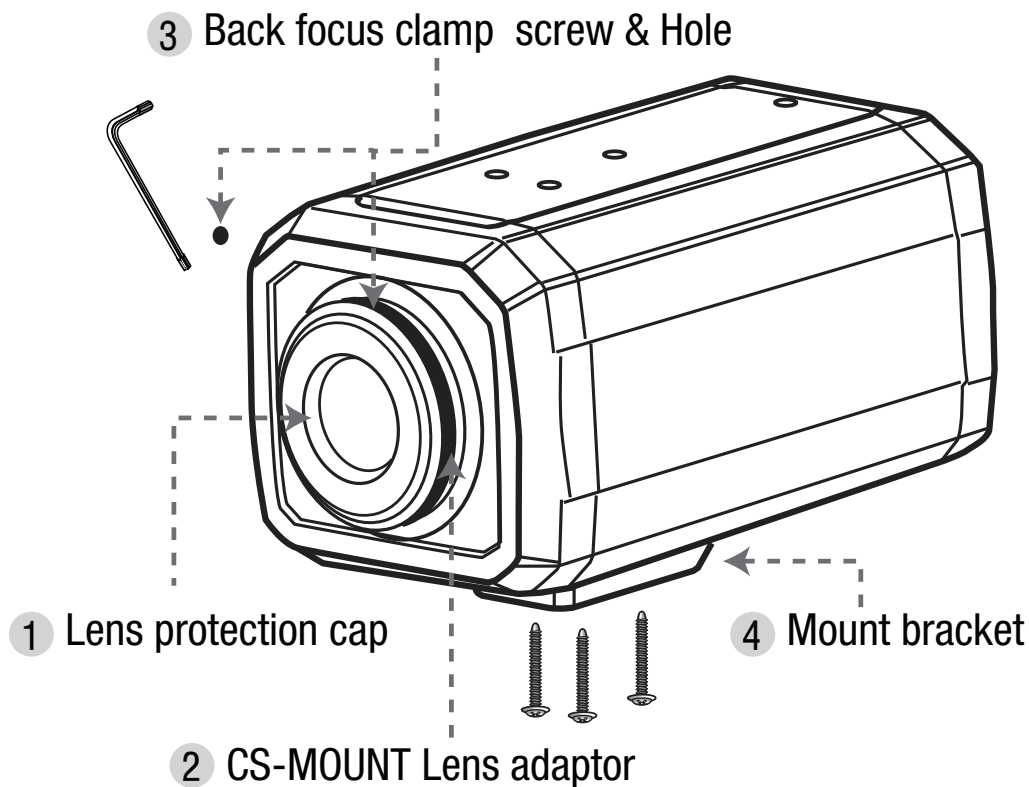


Width	Height	depth
64	58	122

COMPONENTS

❖ MDC-H4290C / CTD

Over view



1 Lens protection cap

Cover the lens when not in use.

2 CS-mount lens adaptor

Attach the CS-mount lens here, and if you want to use C-mount lens, also please attach C-ring to the CS-mount and then also

3 Back focus clamp screw

Loosen the clamp screw with a L-Wrench before adjusting the Back Focal length.

4 Mount bracket

Use the screw holes provided when fixing the camera onto a mounting bracket. The mounting bracket can be attached to either the bottom or the top of the camera.

COMPONENTS

Rear view

1 HD-SDI Output

720p “50 / 60fps”, 1080p “30 / 25fps” resolution output, SMPTE292M Compatible

2 CVBS Output

- D1 Resolution, “4:3” display ratio scaling (source : “16:9” display ratio)
- NTSC/PAL, This port is very helpful for installers to install HD-SDI camera easy.

3 OSD Control

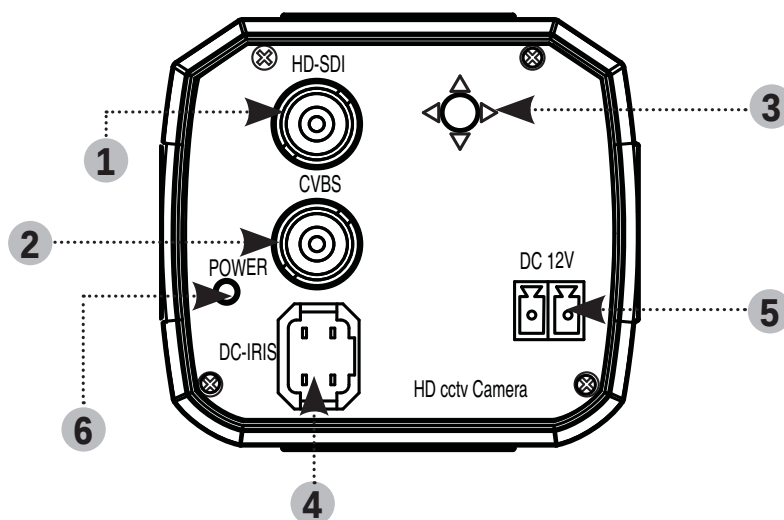
Arrow – Move to Up / Down / Left / Right, MENU – Menu Setup / OK Button

4 DC IRIS JACK

5 12V / GND : DC12V Power Input

Arrow – Move to Up/Down/Left/Right, MENU – Menu Setup / OK Button

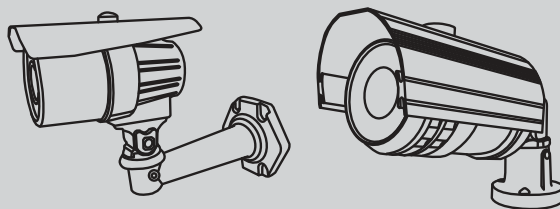
6 Power Lamp



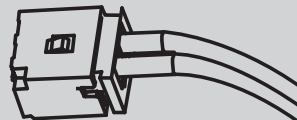
■ Specifications and Designs are subject to change without prior notice due to improvement

COMPONENTS

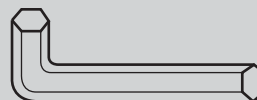
1. Varifocal IR Bullet Camera



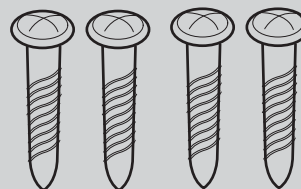
2. Cable for Extra Video



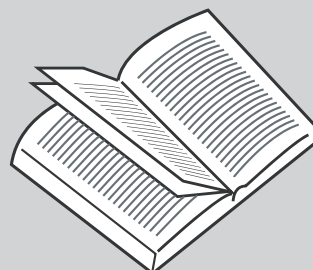
3. L-WRENCH



4. Screw for Installation



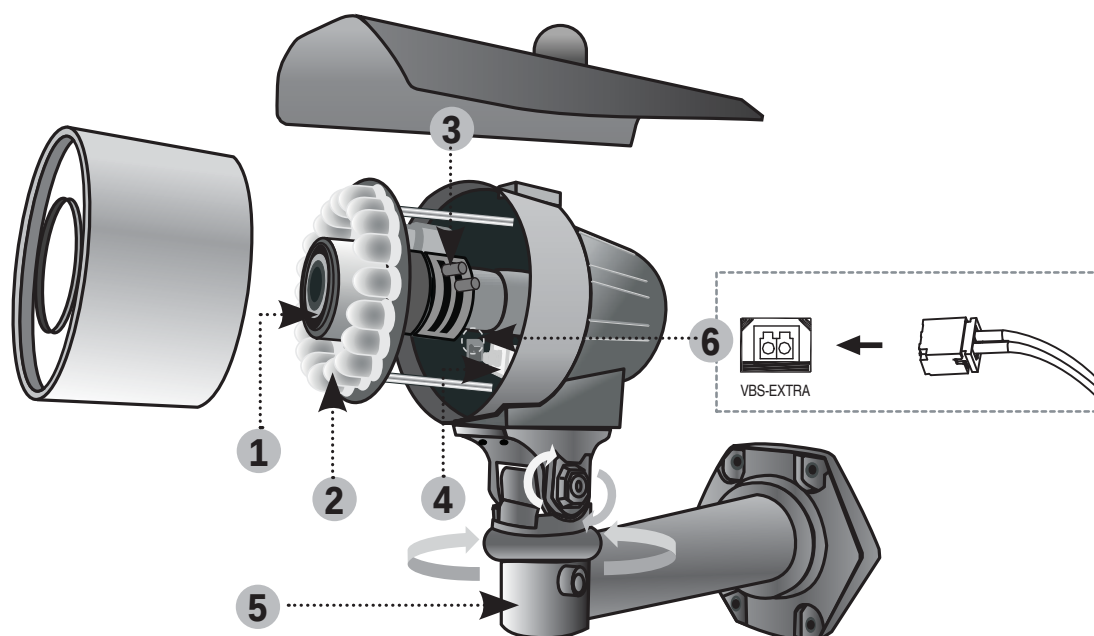
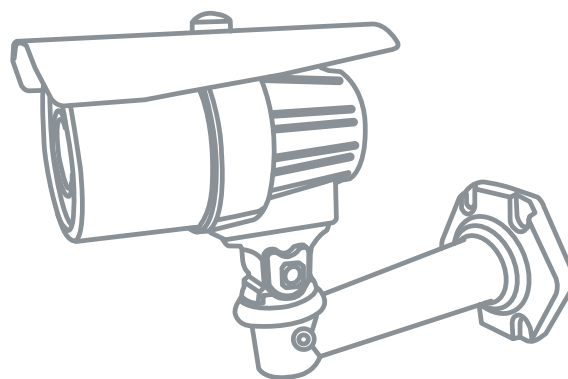
5. Manual



COMPONENTS

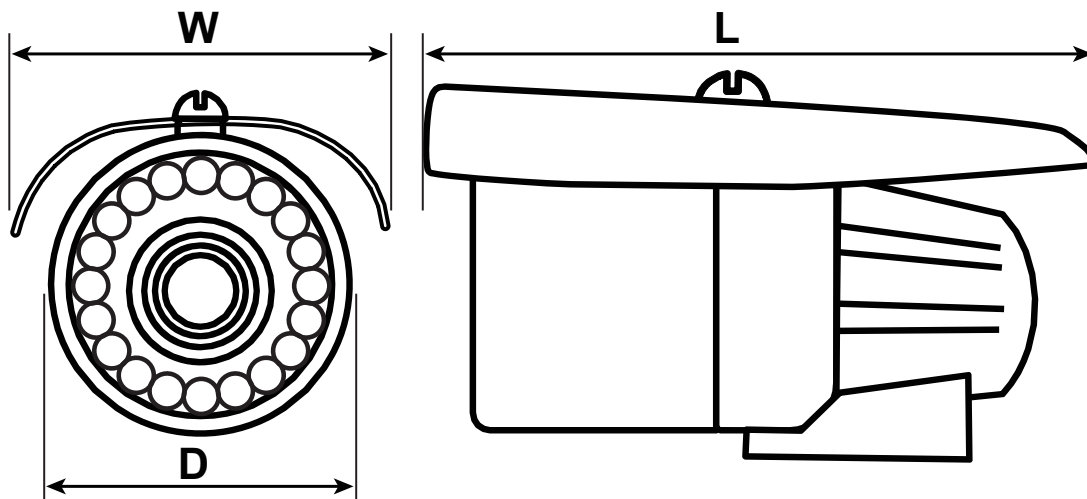
❖ MDC-H6290VTD-24H & 42 (70Ø) / 32 & 40H (90Ø)

- 1 Lens
- 2 IR-LED / Heater (Option)
- 3 Zoom / Focus Lever
- 4 OSD Joystick (Option)
- 5 Cable Management Bracket
- 6 VBS-Extra for connecting to LCD (Option)



COMPONENTS

Dimension



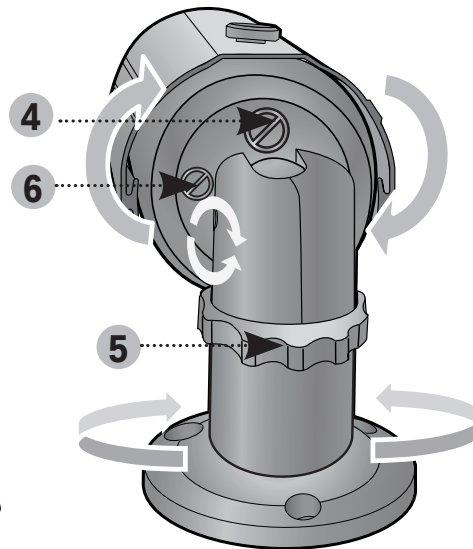
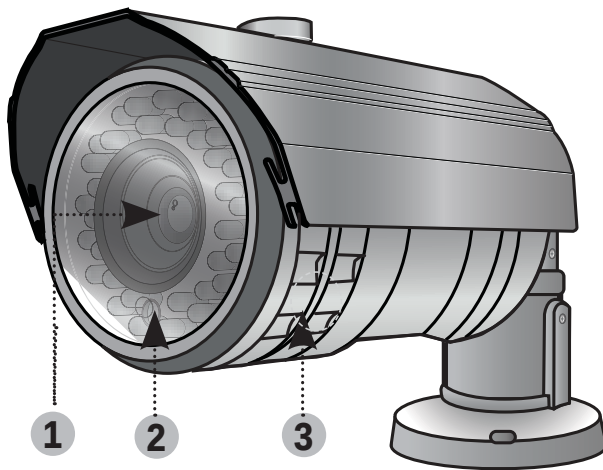
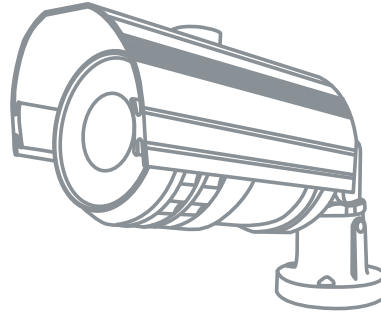
MDC-H6290	24H(U)	42(U)	32(U)	40H(U)
Dimension				
Diameter	70 ϕ (70.91 ϕ)		90 ϕ (92.59 ϕ)	
Width	81.00		106.00	
Length	146.05		175.5	
IR LED & Heater	24pcs IR LED, 4pcs Heaters	42pcs IR-LED	32pcs Giant IR-LED	16pcs Giant / 24pcs IR-LED, 4pcs Heaters
Power Consumption				
Normal	140mA			
IR LED ON	390mA	430mA	440mA	490mA
Heater ON	550mA	X	X	650mA

► Specifications and Designs are subject to change without prior notice due to improvement

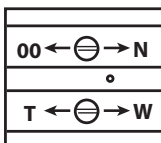
COMPONENTS

❖ MDC-H6220VTD-35H & 45(77Ø) / 36H & 48 (88Ø)

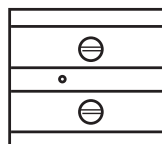
- 1 Lens
- 2 IR-LED / Heater (Option)
- 3 Zoom / Focus Ring
- 4 OSD Joystick
- 5 Cable Management Bracket



3



Focus / Zoom ring
fixing screw



Focus / Zoom lever
bolt screw

6 CVBS Output

- D1 Resolution, “4:3” display ratio scaling (source : “16:9” display ratio)
- NTSC/PAL, This port is very helpful for installers to install HD-SDI camera easy.



7 HD-SDI Output

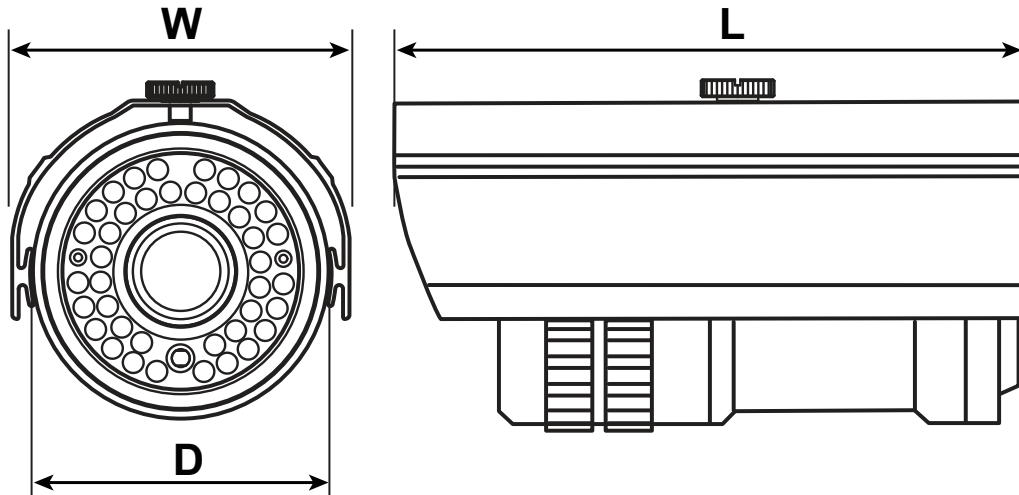
- 1080P “25/30fps” resolution output, SMPTE292M Compatible



8 12V/GND : DC12V Power Input

COMPONENTS

Dimension



MDC-H6290VTD	35H	45	36H	48
Dimension				
Diameter	88ø (87.92ø)		77ø (76.78ø)	
Width	101.03		86.90	
Length	171.00		160.00	
IR LED & Heater	12pcs Giant / 24pcs IR-LED & 4pcs Heater	12pcs Giant & 30pcs IR-LED	36pcs IR-LED & 4pcs Heater	48pcs IR-LED
Power Consumption				
Normal	170mA			
IR LED ON	410mA	450mA	380mA	490mA
Heater ON	600mA	X	570mA	X

► Specifications and Designs are subject to change without prior notice due to improvement

COMPONENTS

➔ Vandal Resistant Dome Camera (Surface Type)



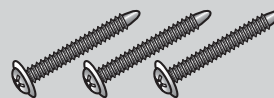
Manual



Service Monitor Cable



L-Wrench



Mounting Screw

➔ Vandal Resistant Dome Camera (Flush Type)



Manual



L-Wrench



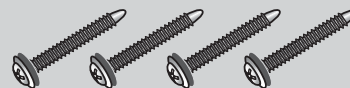
Tapping Screw



Service Monitor Cable



Surface Mount Bracket



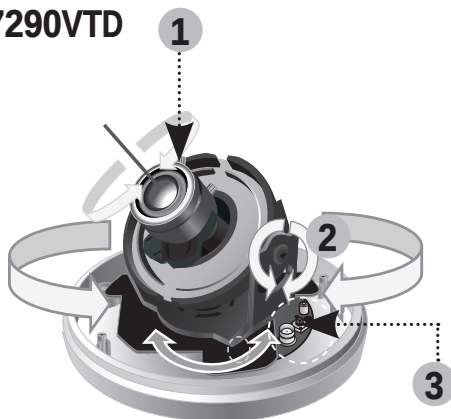
Surface Mount Screw

COMPONENTS

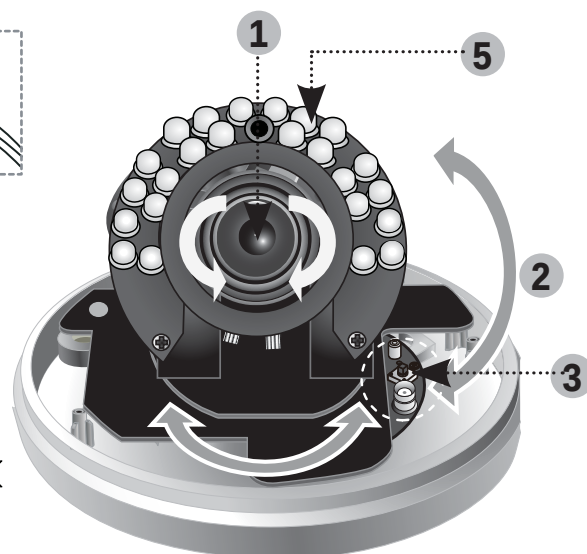
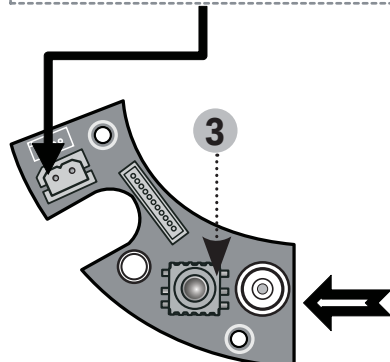
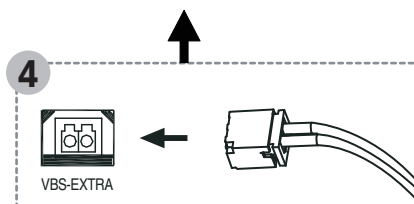
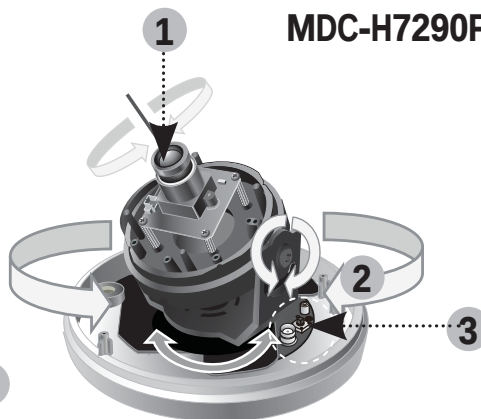
❖ MDC-H7290F / V, VTD, VTD-30 (100Ø)

- 1 Lens
- 2 3 Axis bracket
 - Adjust the pan and tilt to give the correct angle of view.
- 3 OSD Joystick / Board
- 4 VBS-Extra for connecting to LCD
 - Please use the supplied wire when connecting to an external monitor.
- 5 IR LED

MDC-H7290VTD



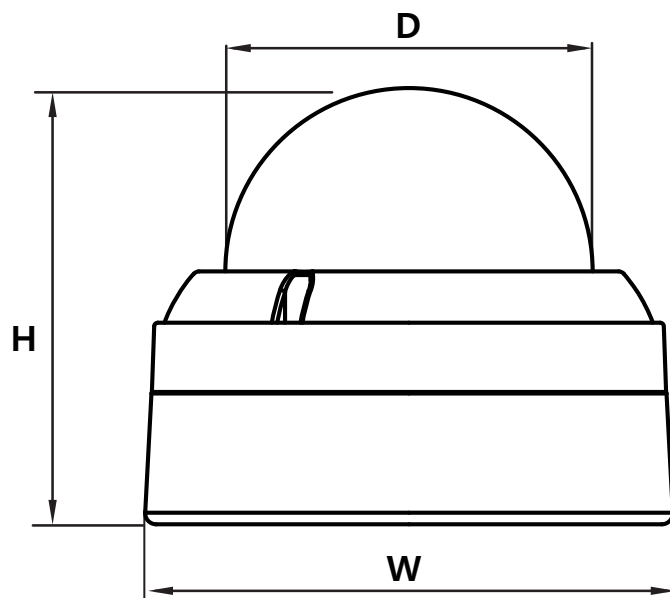
MDC-H7290F



MDC-H7290VTD-30

COMPONENTS

Dimension



MDC-H7290	F	V	VTD	VTD-30
Dimension				
Diameter	100ø			
Width	148			
Height	120			
IR LED	X	X	X	30pcs IR-LED
Power Consumption				
Normal	160mA			
IR LED ON	X	X	X	360mA

► Specifications and Designs are subject to change without prior notice due to improvement

COMPONENTS

❖ MDC-H8290F/ V, VTD,VTD-30,TDN-30, 30H (100Ø)

1 Lens **2 OSD Joystick**

3 Zoom / Focus Lever

4 3 Axis bracket

- Adjust the pan and tilt to give the correct angle of view.

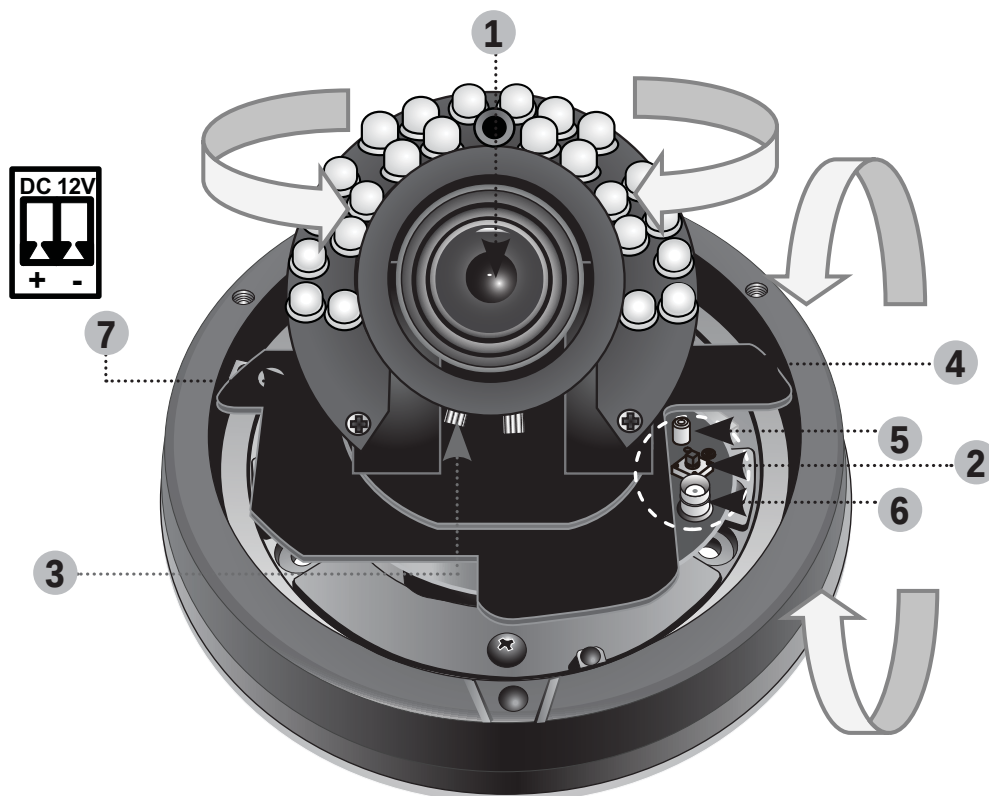
5 HD-SDI Output

- 1080p "30/25fps" resolution output, SMPTE292M Compatible

6 CVBS Output

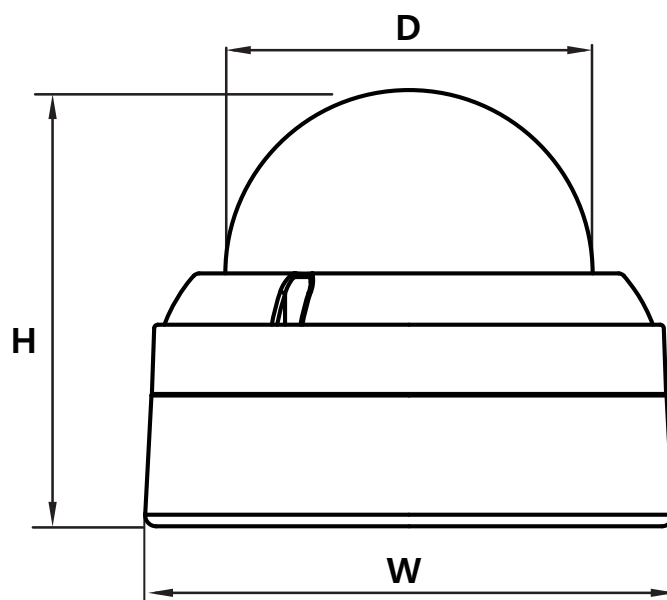
- D1 Resolution, "4:3" display ratio scaling (source : "16:9" display ratio)
- NTSC/PAL, This port is very helpful for installers to install HD-SDI camera easy.

7 12V/GND : DC 12V Power Input



COMPONENTS

Dimension



MDC-H8290	F	V	VTD	VTD-30
Dimension				
Diameter	100ø			
Width	148mm			
Height	120mm			
IR LED	X	X	X	30pcs IR-LED
Power Consumption				
Normal	160mA			
IR LED ON	X	X	X	360mA

► Specifications and Designs are subject to change without prior notice due to improvement

INSTALLATION

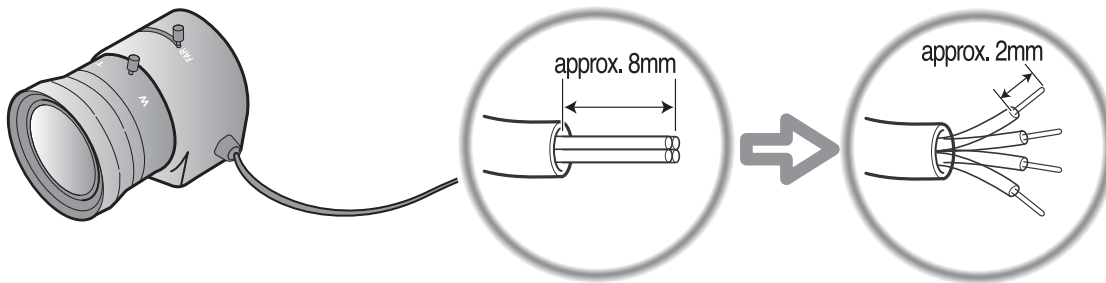
❖ MDC-H4xxx

Lens

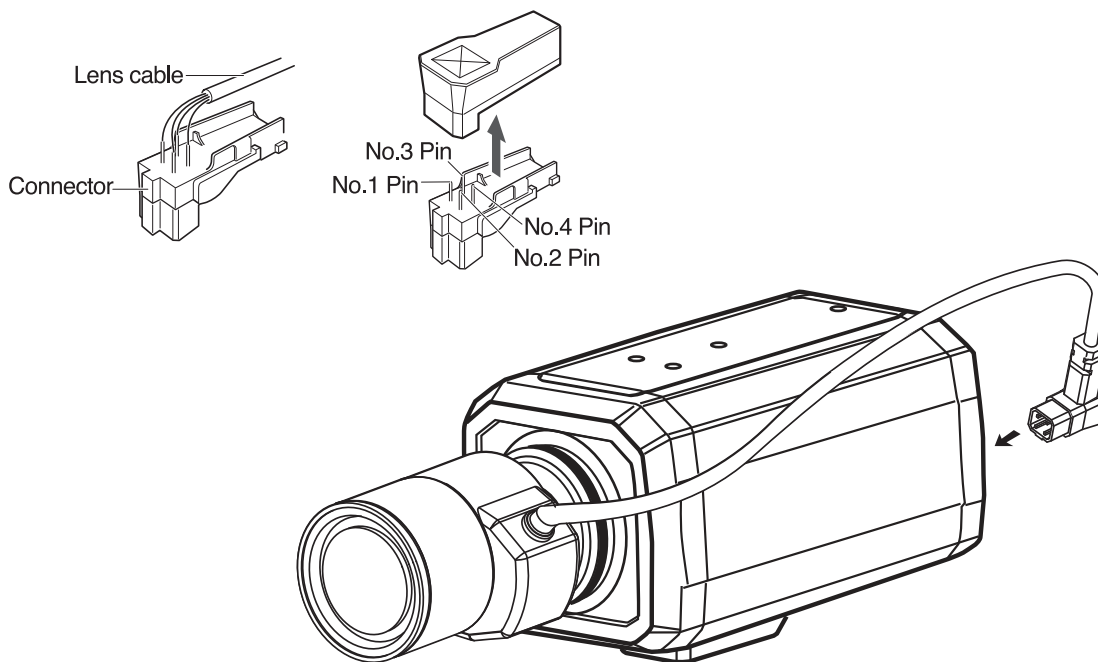
- The camera is supplied without a lens. Lenses, such as auto iris, CS-Mount and C-Mount, can be used.

▷ When using an auto iris lens

- Strip back about 8mm of the outer sheath of the auto iris lens cable.
- Strip off about 2mm of the insulation of wires inside the lens cable.



- Remove the cover of the auto iris lens connection plug and solder the wires to the connector pins inside the plug, as shown below.



INSTALLATION

	DC TYPE LENS
PIN NO.	NAME
1	DAMP COIL -
2	DAMP COIL +
3	DRIVE COIL +
4	DRIVE COIL -

- Replace the auto iris lens connection plug cover. Remove the lens protection cap and then attach the auto iris lens to the camera by screwing it in clockwise.
- Insert the connection plug connected to the auto iris lens cable into the auto lens connector jack, which is located on the rear of the camera.
- Set the lens selection switch, located on the rear of the camera, to either DC or VIDEO, depending on the type of auto iris lens being used.

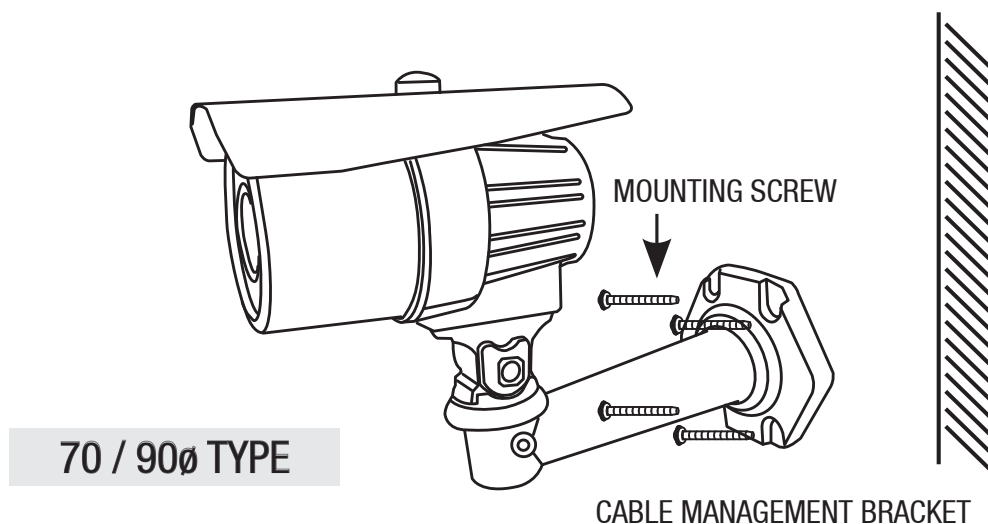
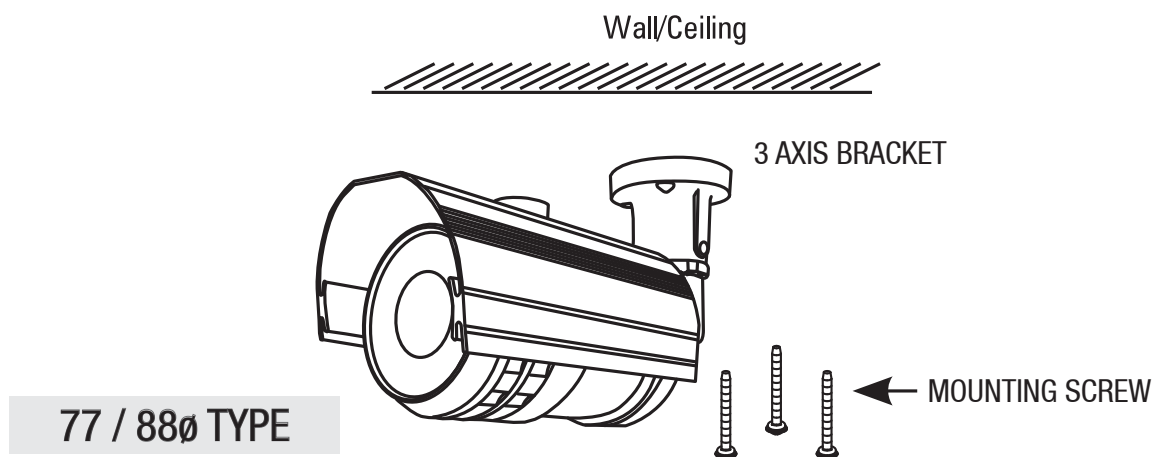
INSTALLATION

❖ MDC-H6xxx

- There are three ~ four mounting holes on the bracket so that users can install the unit in any place such as on the ceiling, On the wall, on the fence and etc.
- Fix the camera on the bracket.
- Please check the points below before connecting video & power cable.
- Adjust picture direction pan & tilt

Caution!

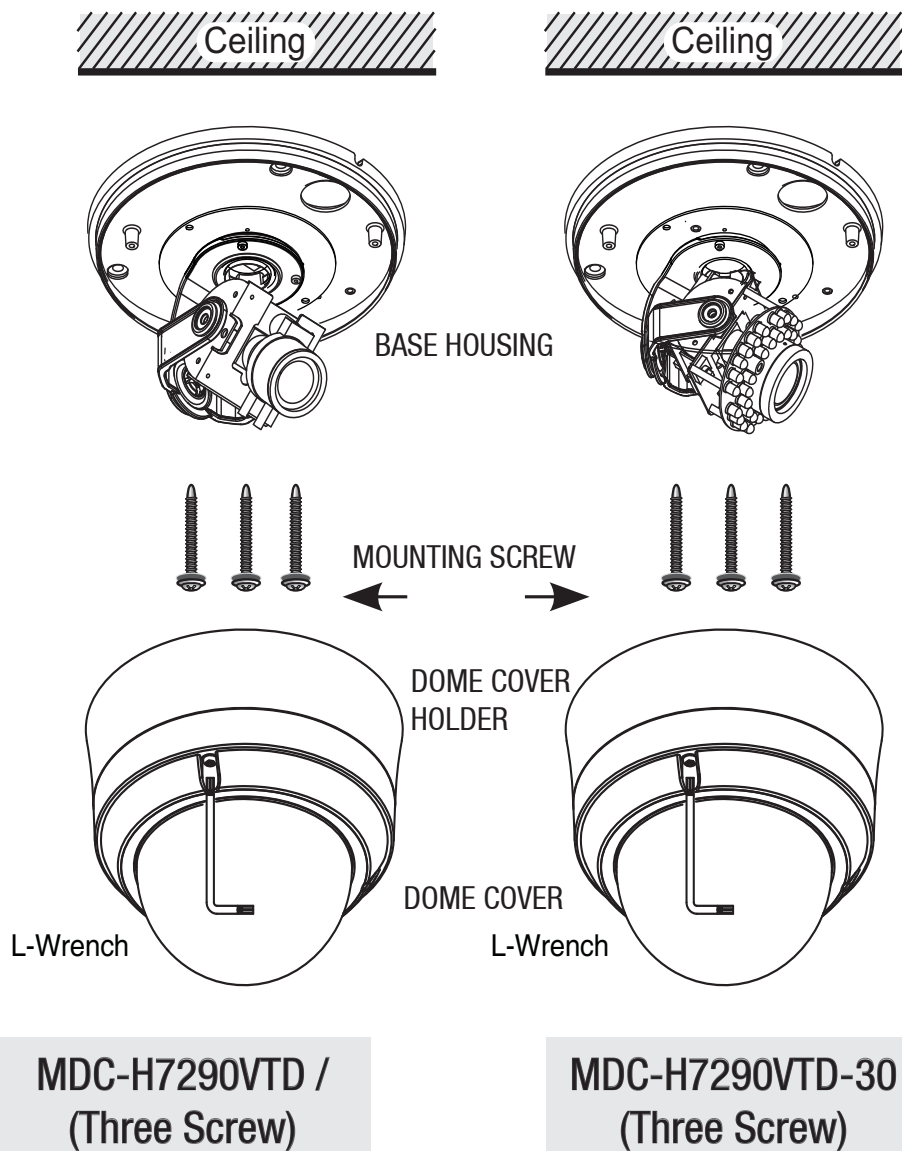
To avoid smear, never face the camera directly to the strong light source such as sun or spot light.



INSTALLATION

❖ MDC-H7xxx

- Open the dome with the ring unscrewed.
- There are two mounting holes on the dome base so that users can install the unit in any place such as on the ceiling, on the wall, on the fence and etc.
- The mounting in any place connecting the video/power cable, before connecting please check the below point.
- Adjust picture direction pan & tilting.
- Close the dome with the ring screwed.



INSTALLATION

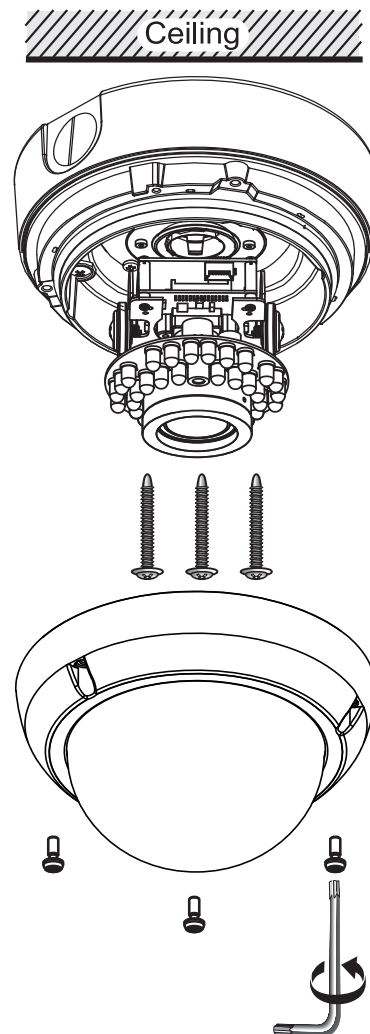
❖ MDC-H8xxx

- Open the dome cover on the base by L-Wrench.
- Remove the tapping screw on the dome camera base by screw driver.

► Surface type

- Fixed the surface mount bracket to a ceiling using three mounting screw.
- Draw out power/video wires to the connecting places.
- Insert dome camera base into the surface mount bracket.
- Fixed the dome camera base to a surface mount bracket using three tapping screw.

- 1 Draw out power / video wires to the connecting places.
- 2 Fixed the camera to a ceiling using four screws.
- 3 Adjust desired focus and scene by turning and moving the 3-axis camera bracket by hand.
- 4 Put the dome cover over the base.
- 5 Fix the dome cover on the base by L-Wrench.



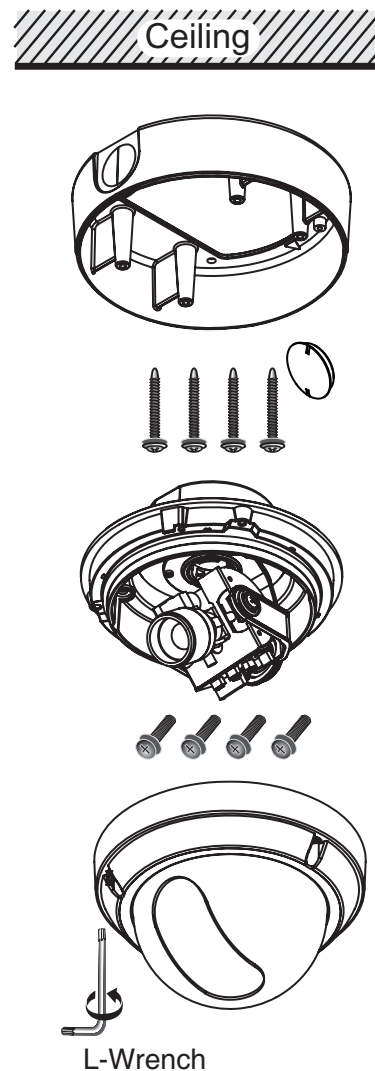
INSTALLATION

❖ MDC-H8xxx

► Flush type

- Remove the surface mount bracket then insert dome camera base into the drilled holes.
- Draw out power/video wires to the connecting places.
- Fixed the dome camera base to a ceiling using three mounting screw.
- Adjust desired focus and scene by turning and moving 3-axis by hand.
- Close the dome cover on the base by L-Wrench.

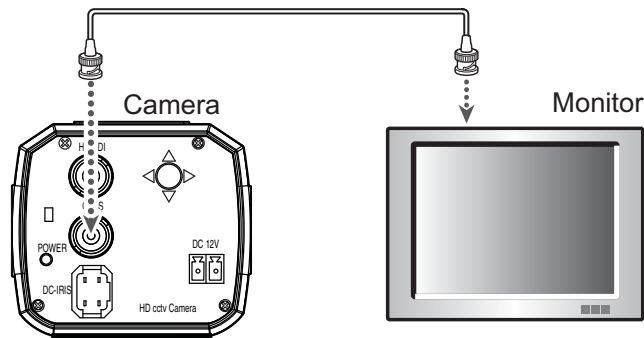
- 1** Fix the surface mount bracket by screws on the ceiling.
- 2** Draw out power / video wires to the connecting places.
- 3** Connect the dome base to the surface mount bracket by screws.
- 4** Adjust desired focus and scene by turning and moving the 3-axis camera bracket by hand.
- 5** Put the dome cover over the base.
- 6** Fix the dome cover on the base by L-Wrench.



OSD OPERATION

❖ MDC-H4xxx

1) Connection to Monitor

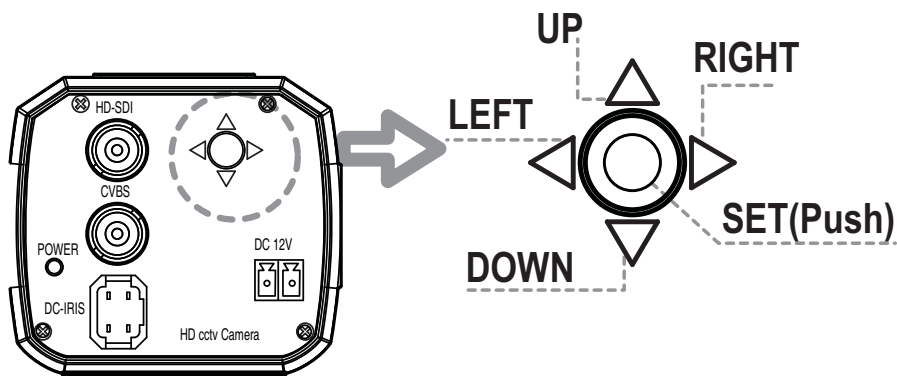


- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- If necessary, you can connect the monitor to the REMOTE jack on the back of your camera.
- Only connect the cable when the power is turned off.

2) Connection to Power

- Connect the adaptor to the power input connector as shown in the following figure. The Standard voltage for camera option : DC 12V $\pm$ 10%, AC 24V $\pm$ 10%.

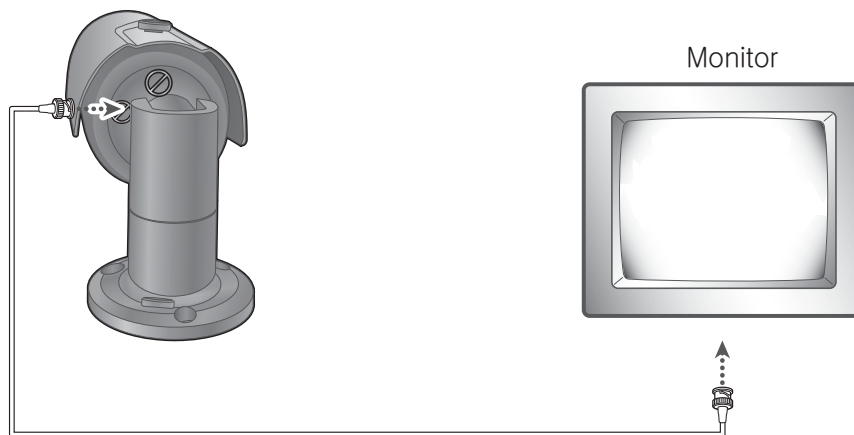
Settings can be made using the 4 or 5 buttons located on the nearby of the camera.



OSD OPERATION

❖ MDC-H6xxx

1) Connection to Monitor



- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- If necessary, you can connect the monitor to the REMOTE jack on the back of your camera.
- Only connect the cable when the power is turned off.

2) Connection to Power

- Connect the adaptor to the power input connector as shown in the following figure. The Standard voltage for camera option : DC 12V $\pm$ 10%, AC 24V $\pm$ 10%.

NOTE

- Normal we do not use the RS-485 additional cable. only have power and video

OSD OPERATION

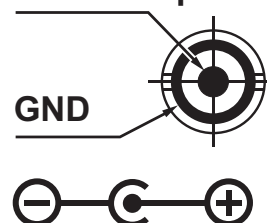
Connecting to Monitor and Power

For 12V DC Power Type

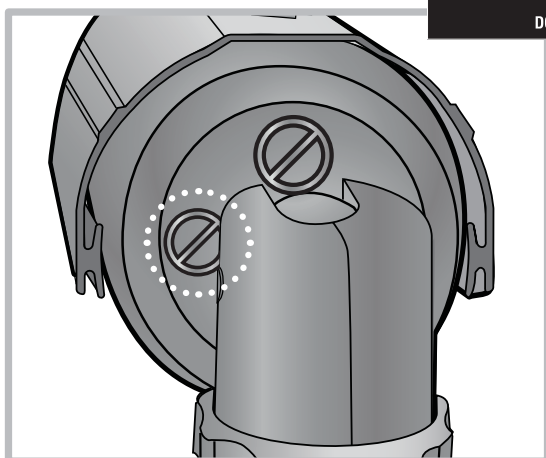
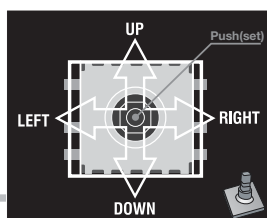
- Connect the video-out jack to the video-in jack of monitor.
- Connect the power adapter to the power input connector.
- Use 12V DC power source.
- Use the power rated at least 600mA (12VDC)

NO	Function	Terminal Color	Remark
#1	Video Output	Yellow	1.0 Vp-p
#2	Power Input	Red	12V DC(10V~15V), Max 4.8W / 600mA

Video Output



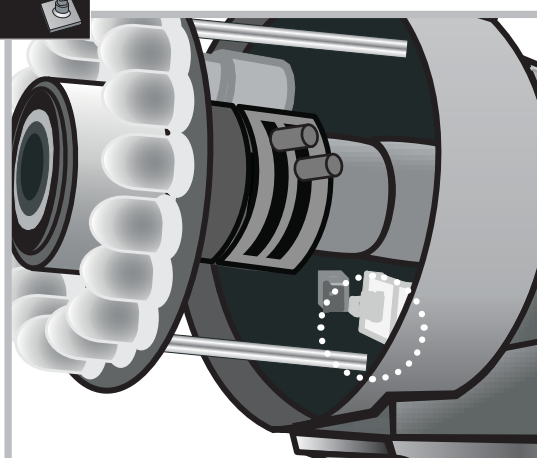
❖ MDC-H6xxx



MDC-H6290VTD

-35H, 36H, 45, 48

◆ Unscrew the OSD button cap



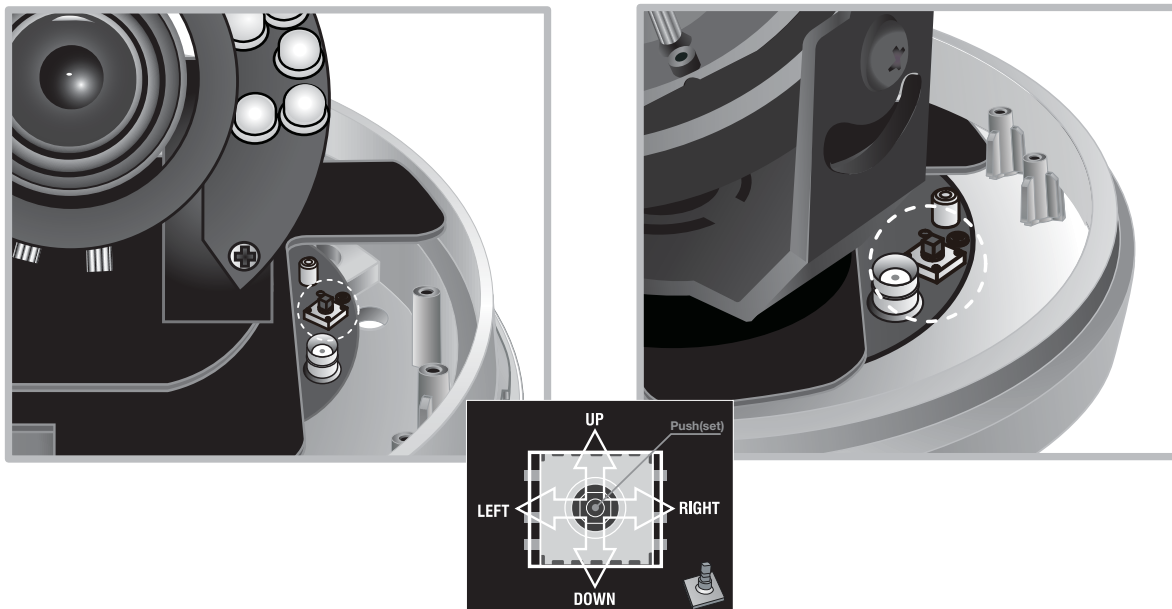
MDC-H6290VTD

-24H, 42, 30, 40

◆ Unscrew the front cover

OSD OPERATION

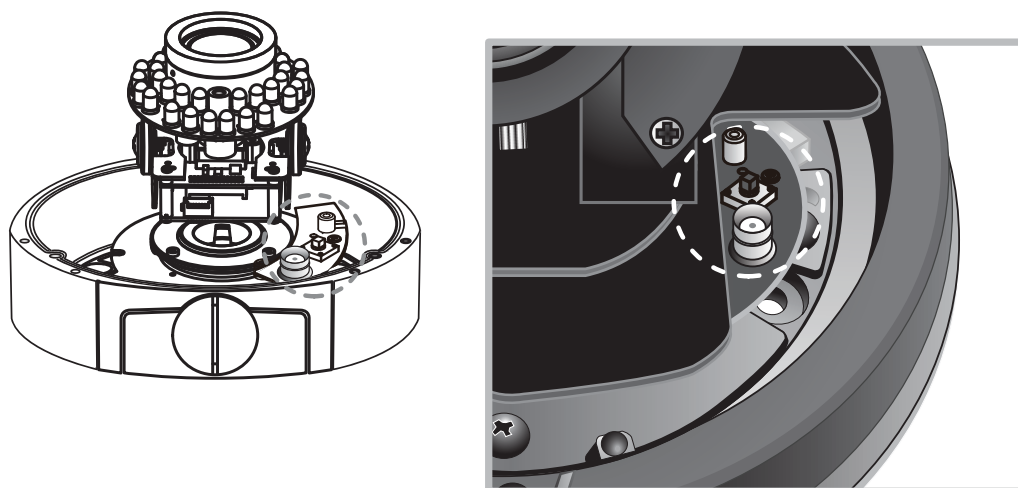
❖ MDC-H7xxx



**MDC-H7290F / H7290V / H7290VTD / H7290VTD-30
(OSD JOYSTICK)**

❖ MDC-H8xxx

Without Heater type OSD Board

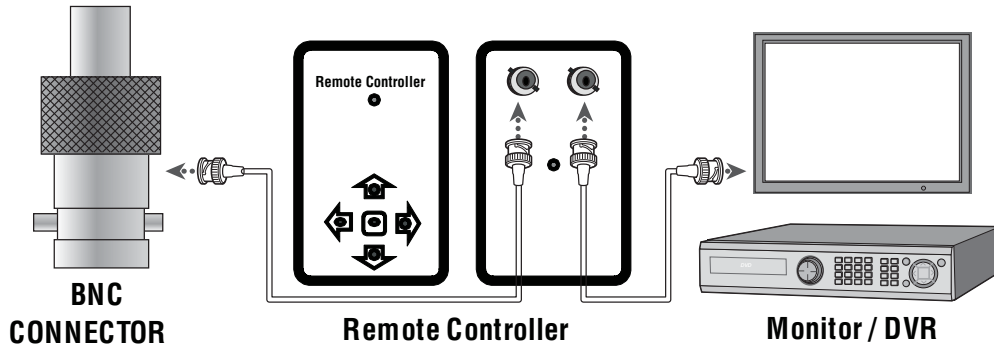


OSD OPERATION

✂ UTC CONTROLLER

► CONNECTION

- Camera(BNC) → Remote Controller → BNC → Monitor / DVR



► UTC Specification

Content	Spec	Remark
Support VIDEO format	NTSC / PAL	
Video Input Level	1.0 Vp-p / 75 Ohm BNC	
Video Output Level	1.0 Vp-p / 75 Ohm BNC	
Control	OSD, PAN/Focus	
Compatibility	MicroDigital UTC Product Family	Except Other Companies
Distance	Video Output Distance	TEST : 500M (RG59)
Operation temperature	-20°C ~ +60°C	Standard
Dimension (W x D x H)	55 x 85 x 10 (mm)	
Power	CR2032 X 2	Battery

• Features

- Long distance controller.
- Menu can be adjusted without opening the camera case.
- User can adjust OSD control during installation without the portable monitor.
- It is of conveniently portable size.

I INSTRUCTIONS

❖ OSD(On Screen Display) Button

▷ SET button

- Used for the menu display. This button can be used to confirm settings after changing the value of the selected function or current conditions.

▷ UP & DOWN buttons

- Used for selecting items by moving the cursor up or down on the menu screen.

▷ LEFT & RIGHT buttons

- Used when changing item values, by moving the cursor to the left or right on the menu screen.

❖ Setting

▷ Use the OSD control switch on the main body of the camera

▷ Settings can be made using the 5 buttons located on the rear of the camera

▷ Press the set switch

- The [SETUP] menu appears on the monitor screen
- Use UP and DOWN switch to select menu, then press SET switch (↑ ↓ ⊙)
 - Submenu appears on monitor screen
- Set up selected item by using the LEFT and RIGHT switch (← →)
- To finish and save the settings, select [EXIT] and press the SET button (⊙)

NOTE

- An item with the ↵ icon also has sub-menus. To select a sub-menu, press the SET button.
- An item with the - - - icon has no sub-menus available for selection

OSD STRUCTURE

❖ Function Menu Structure

Menu	Sub Menu	Description
MODE	D&N	D&N / COLOR / IR SMART /IR CDS
EXPOSURE	BRIGHTNESS	Adjust brightness level - 0(dark) ~ 20(bright) steps
	LENS	Select LENS type - DC / MANUAL
	SHUTTER SPEED	Can be set in AUTO or MANUAL 1/30(25) ~ 1/30,000
	DSS	Select maximum DSS(Digital Slow Shutter) - OFF / x2, x3, x4
	AGC	Select Auto Gain Control - 0 ~ 20 steps
	WDR / BLC	Select WDR(Wide Dynamic Range) or BLC(Back Light Compensation)
	DAY & NIGHT	Select Day & Night - AUTO / DAY / NIGHT / EXT
	SMART IR	OFF / ON
WHITE-BAL	AWB	Select WB mode - AUTO/PUSH/MANUAL/INDOOR/OUTDOOR
	CHROMA	Adjust CHROMA gain value - 0 ~ 20 steps
IMAGE	SHARPNESS	Adjust sharpness level - 0 ~ 10 steps
	MIRROR	Select a flip mode - OFF / H / V / H&V
	FREEZE	Select real or still mode - OFF / ON
	D.ZOOM	Select maximum digital zoom magnification - x1~x32
	HLC	Select High Light Compensation. - OFF / ON
	ACE	Select Digital WDR(Wide Dynamic Range) - OFF / ON
	DNR	Select Digital Noise Reduction - AUTO/OFF/LOW/MIDDLE/HIGH
	D.COMPRESS	Video image data compression function

OSD STRUCTURE

Menu	Sub Menu	Description
INTELLIGENCE	PRIVACY	Hide an area you want to hide on the screen - OFF / ON
	MOTION	When there is movement of the subject in the screen, there will be an motion detection - OFF / ON
SPECIAL FUNC	SHADING DET	Sets the shading calibration that the lens will perform. - OFF / ON
	SHADING	Select Lens shading compensation - OFF / ON
	DEFECT DET	Adjust sensor pixels defect compensation - OFF / ON
	DEFOG	Carry out defog function - OFF / ON
	SYSTEM	Select NTSC or PAL. (NTSC / PAL)
	HD FORMAT	Select Digital output 1080P or 720P. (1080P / 720P)
	PG	Select Color pattern generator - OFF/ON
	CVBS	Select Composite signal - OFF / ON
DISPLAY	COMM	Set up the camera ID, baud rate, protocol
	DEFAULT	All the settings will be restored to the factory default.
	DISP SEL	Select display item.
	SET TITLE	Select camera title menu (Text edit)

OSD STRUCTURE-MAIN MENU

❖ MAIN MENU

MENU	
MODE	D&N
EXPOSURE	↵
WHITE BAL.	↵
IMAGE	↵
INTELLIGENCE	↵
SPECIAL FUNC	↵
DISPLAY	↵
EXIT	

Functions can be setup using Menu Key of pelco protocol.

The menu consists of the “Main Menu” and “Sub Menu”.

The main menu is displayed where 6 camera functions can be selected.

To the push of each main menu selection, the sub-menu is displayed.

❖ MODEL

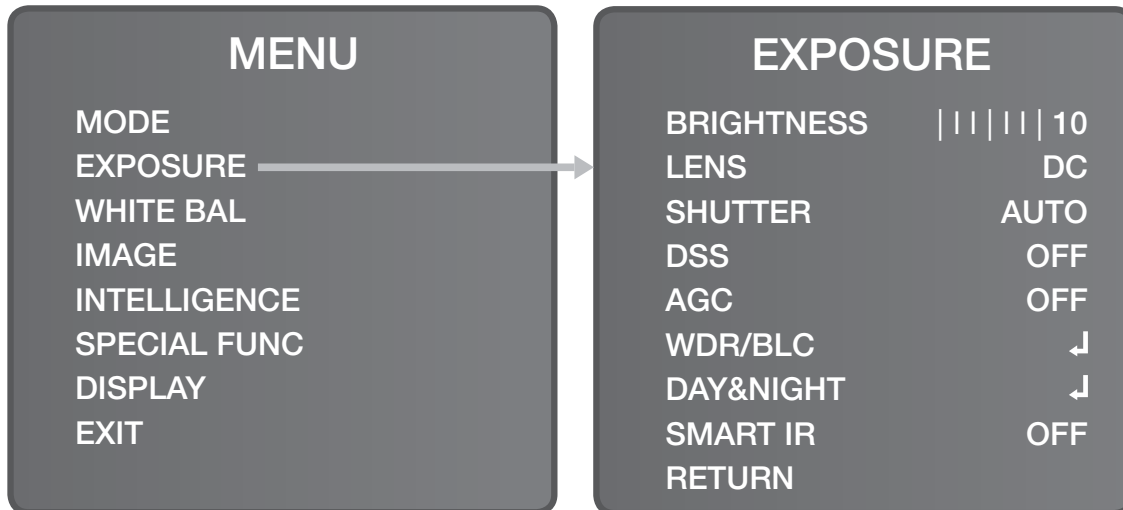
MENU	
MODE	D&N
EXPOSURE	↵
WHITE BAL.	↵
IMAGE	↵
INTELLIGENCE	↵
SPECIAL FUNC	↵
DISPLAY	↵
EXIT	

► **MODE** : Select mode

- D&N / COLOR / IR SMART / IR CDS

OSD STRUCTURE-MAIN MENU

❖ EXPOSURE



▶ **BRIGHTNESS** : Adjust brightness level

- 0(dark) ~ 20(bright) steps

▶ **LENS** : Select LENS type

- DC / MANUAL
- MODE : In case of the indoor, will be recommended the INDOOR MODE
In case of the outdoor, will be recommended the OUTDOOR MODE
- ※ If Shutter rolling occurs, the MODE should be changed from OUTDOOR to INDOOR

▶ **SHUTTER** : Can be set in AUTO or MANUAL

- AUTO / 1/30(25), 1/60(50), 1/120(100), 1/240, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000, 1/30000, 1/60000 sec

▶ **DSS** : Select maximum DSS(Digital Slow Shutter)

- OFF / x2, x3, x4

▶ **AGC** : Select Auto Gain Control

- OFF / ON

OSD STRUCTURE-MAIN MENU

► WDR/BLC :

Select WDR(Wide Dynamic Range) or BLC(Back Light Compensation)

- WDR

- WEIGHT : Adjust WDR level.

- » 0 ~ 3

- BLC

- AREA : Control BLC area according to light condition.

- POS-X : Adjust the window X-Axis position

- POS-Y : Adjust the window Y-Axis position

- SIZ-X : Adjust the window X-Axis size

- SIZ-Y : Adjust the window Y-Axis size

- ※ When WDR is ON, ACE and DEFOG function can not turn on.

❖ EXPOSURE

► DAY&NIGHT : Select Day&Night

1. D&N Model

- AUTO / DAY / NIGHT / EXT

- Delay : 0 ~ 255 second

- BURST : OFF / ON

- THRS : (LOW / MIDDLE / HIGH)

- According to daytime, nighttime setting the levels of transition sets to no changes when it is dark at, higher the step it is set to

- GAP : LOW / MIDDLE / HIGH

- This setting adjusts the margin of change from the setting of light to dark / daytime to nighttime and dark to light / nighttime to daytime. If this setting is too low then fluctuation may occur.

OSD STRUCTURE-MAIN MENU

2. COLOR Model

- AUTO / DAY / NIGHT / EXT
 - Delay : 0 ~ 255 second
 - BURST : OFF / ON
 - THRS : LOW / MIDDLE / HIGH
 - GAP : LOW / MIDDLE / HIGH

3. IR SMART Model

- AUTO
 - Delay : ---
 - BURST : OFF / ON
 - THRS : ---
 - GAP : ---

4. IR CDS Model

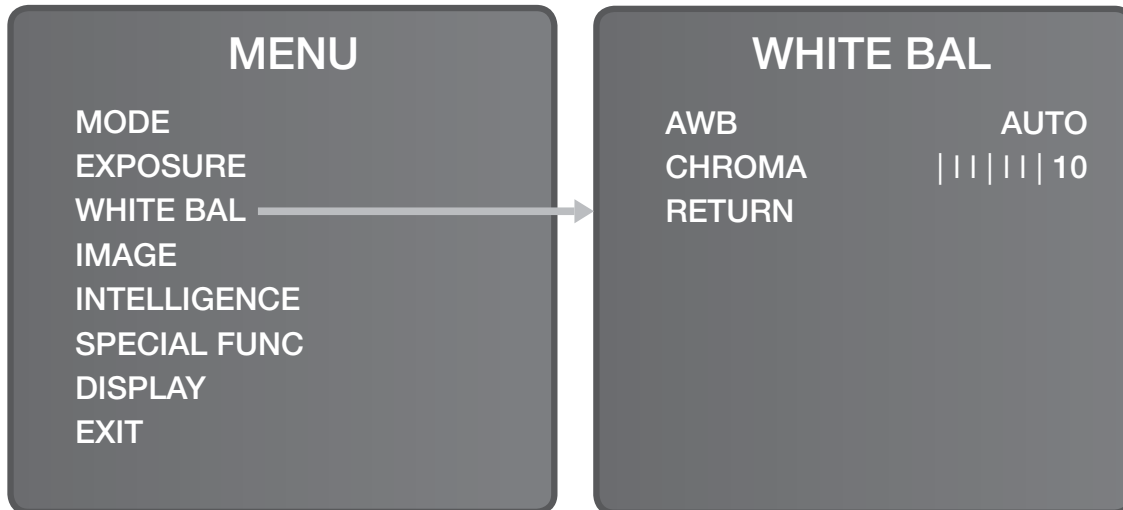
- AUTO / DAY / NIGHT
 - Delay : ---
 - BURST : OFF / ON
 - THRS : ---
 - GAP : ---

► DAY&NIGHT : Select Day&Night

- SMART IR : OFF / ON
 - THRS : Set-up Smart IR turns on point. When you level up the value, Smart IR turns on in a low light condition.
 - ※ SMART IR function only works with IR Smart Model.

OSD STRUCTURE-MAIN MENU

❖ WHITE BAL



▶ **AWB** : Select WHITE BALANCE mode

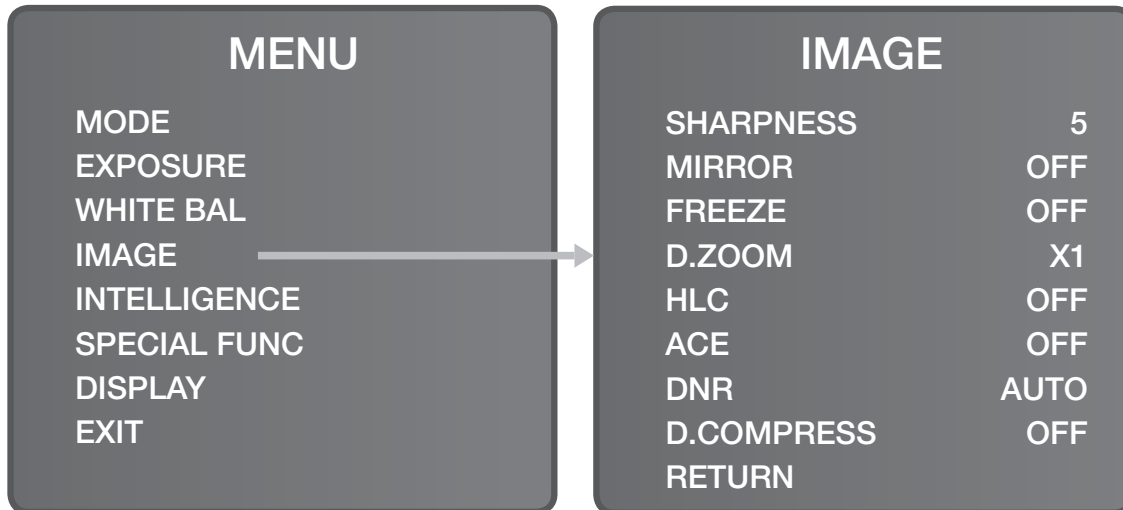
- AUTO / PUSH / MANUAL / INDOOR / OUTDOOR
 - AUTO : Automatically adjusts color according to the available lighting.
 - PUSH : It is a fixed white balance mode that may be automatically readjusted only by pressing PUSH
 - MANUAL : Color can be corrected when the user increases or decreases “RED GAIN” or “BLUE GAIN”.
 - » RED GAIN : Adjust R gain value 0 ~ 20
 - » BLUE GAIN : Adjust B gain value 0 ~ 20
 - INDOOR : Set color temperature to be Indoor light (3700°K)
 - OUTDOOR : Set color temperature to be Outdoor light (5100°K)

▶ **CHROMA** : Adjust CHROMA gain value

- 0 ~ 20 steps

OSD STRUCTURE-MAIN MENU

❖ IMAGE



- ▶ **SHARPNESS** : Adjust sharpness level
 - 0 ~ 10 steps
- ▶ **MIRROR** : Select a flip mode
 - OFF / H / V / H&V
 - H : You can flip the picture horizontally on the screen
 - V : You can flip the picture vertically on the screen
 - H&V : You can flip the picture horizontally & vertically on the screen
- ▶ **Freeze** : Select real or still mode
 - OFF / ON
- ▶ **D.ZOOM** : Select maximum digital zoom magnification.
 - x1 ~ x12, x14, x15, x18, x21, x25, x32
- ▶ **HLC** : Select High Light Compensation.

When extremely bright light is projected to the camera masking is used on the portion to prevent partial saturation on the monitor.

 - OFF / ON
 - ON LEVEL : 0 ~ 20 steps
 - COLOR : Black, White, Yellow, Cyan, Green, Magenta, Red, Blue

OSD STRUCTURE-MAIN MENU

❖ IMAGE

▶ **ACE** : Select Digital WDR(Wide Dynamic Range)

- OFF / ON

※ When ACE is ON, WDR and DEFOG function can not turn on.

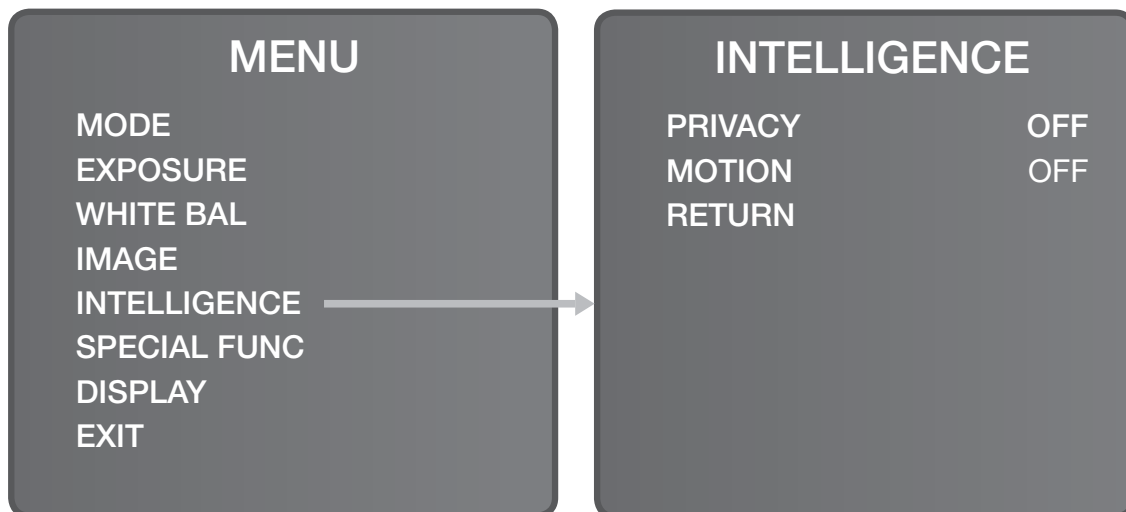
▶ **DNR** : Select Digital Noise Reduction

- AUTO / OFF / LOW / MIDDLE / HIGH

▶ **D.COMPRESS** : Video image data compression function.
Please use this function only IP camera.

- OFF / ON

❖ INTELLIGENT



▶ **PRIVACY** : Hide an area you want to hide on the screen

- OFF / ON

- MASK# : Select mask area number (0 ~ 31)
- MODE : Mask enable or disable (OFF / ON)
- X-POS : Adjust the mask X-Axis position
- Y-POS : Adjust the mask Y-Axis position
- X-SIZ : Adjust the mask X-Axis size
- Y-SIZ : Adjust the mask Y-Axis size
- COLOR : Cyan, Green, Magenta, Red, Blue, Black, White, Yellow
- TRANS : Select mask transparency level (0 ~ 4)

OSD STRUCTURE-MAIN MENU

❖ INTELLIGENT

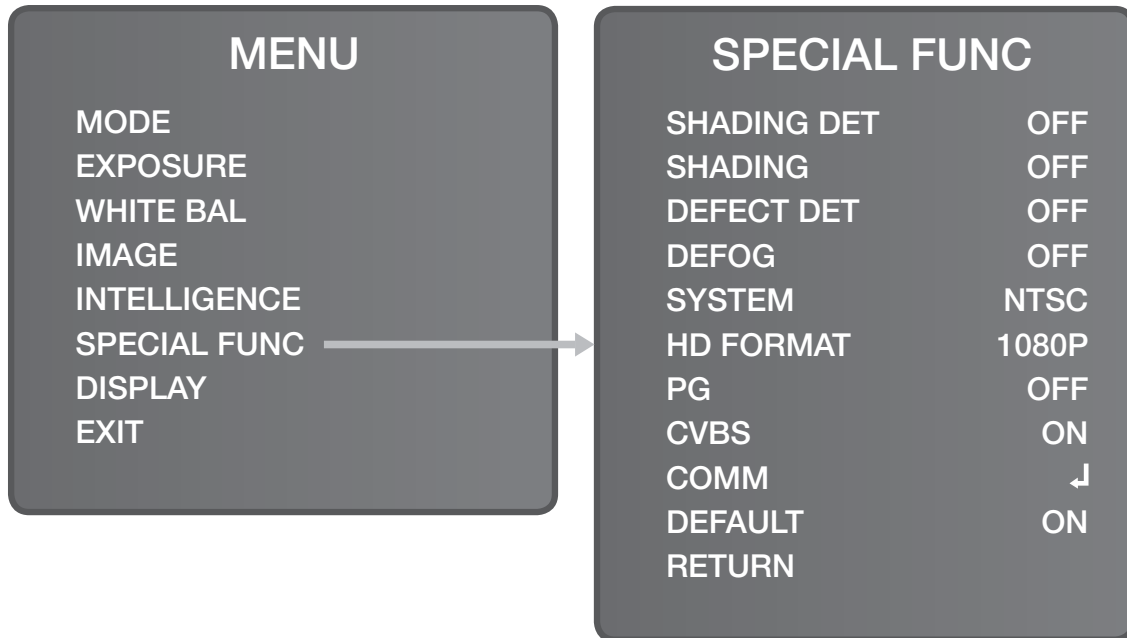
► **MOTION** : When there is movement of the subject in the screen, there will be an motion detection

- OFF / ON

- SENSITIVITY : Adjust sensitivity of MD (0 ~ 20 steps)
More sensitive to setting to low step with sensitivity
- AREA : Designate motion detection area (WHOLE / EACH)
- AREA# : Setting 3 areas(0~2) of motion detection
- MODE : Limit and define areas of motion detection
- X-POS : Adjust the AREA X-Axis position
- Y-POS : Adjust the AREA Y-Axis position
- X-SIZ : Adjust the AREA X-Axis size
- Y-SIZ : Adjust the AREA Y-Axis size
- TRANS : Adjust color tone of out of selected areas.
- INTERVAL :Select the alarm interval time (0 ~ 255sec)
- DWELL : Select the duration time about changing MD mode (0 ~ 255sec)
- RETURN

OSD STRUCTURE-MAIN MENU

❖ SPECIAL FUNC



► SHADING DET :

Sets the shading calibration that the lens will perform.

Only occurs when the entire screen is viewed in white light. (OFF / ON)

► SHADING : Select Lens shading compensation. (OFF / ON)

► DEFECT DET :

Compensates for bad pixels that may occur.

Occurs when the whole screen is in full black or if there is bad pixelation and it changes the THRS values until the screen is fixed. (OFF / ON)

I OSD STRUCTURE-MAIN MENU

▶ **DEFOG** : Carry out defog function

- OFF / ON

- LEVEL : Eliminate amount of fog on display screen.

0 ~ 10

※ When DEFOG is ON, ACE and WDR function can not turn on.

▶ **SYSTEM** : Select NTSC or PAL. (NTSC / PAL)

▶ **HD FORMAT** : Select Digital output 1080P or 720P.
(1080P / 720P)

▶ **PG** : Select Color pattern generator. (OFF / ON)

▶ **CVBS** : Select Composite signal. (OFF / ON)

▶ **COMM** : Set up the camera ID, baud rate, protocol

- ID : Select the camera ID

- 1 ~ 255

- BAUD RATE : Select serial communication speed

- 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200bps

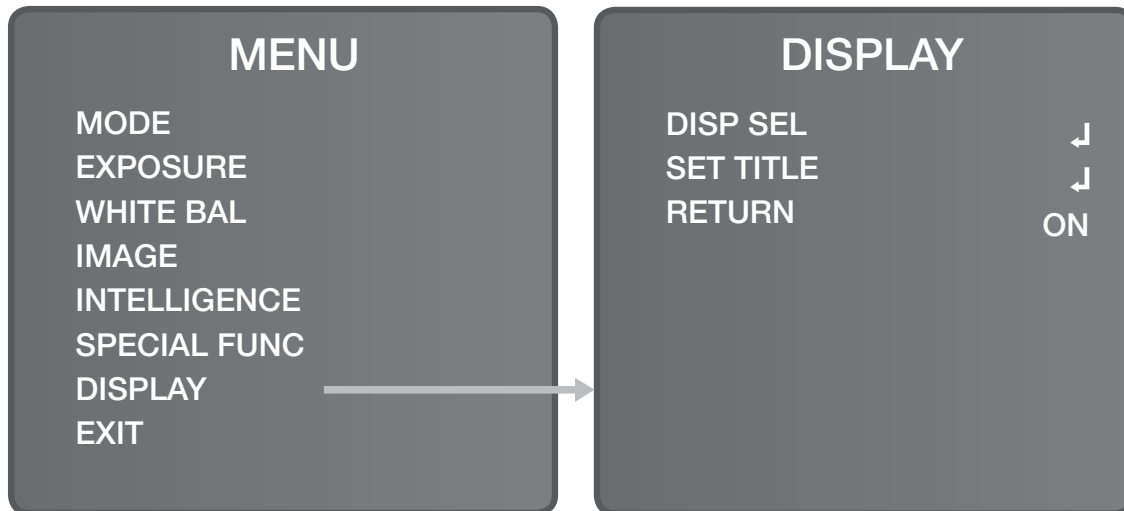
- PROTOCOL : Select operating protocol

- PELCO-D / PELCO-P / UPDATE

▶ **DEFAULT** : All the settings will be restored to the factory default.

OSD STRUCTURE-MAIN MENU

❖ DISPLAY



► **DISP SEL** : Select display item.

- ID : OFF / ON
- TITLE : OFF / ON
- D.ZOOM : OFF / ON

► **SET TITLE** : Select camera title menu (Text edit)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
UVWXYZabcdefghijklmnopqrstuvwxyz,
.,(){}[]
0123456789*+ - / = ~ ! ? " '
SP BS CLR POS
RETURN

I MEMO

I MENO



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TOTAL SECURITY SOLUTION

● Design and specifications are subject to change without notice.

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