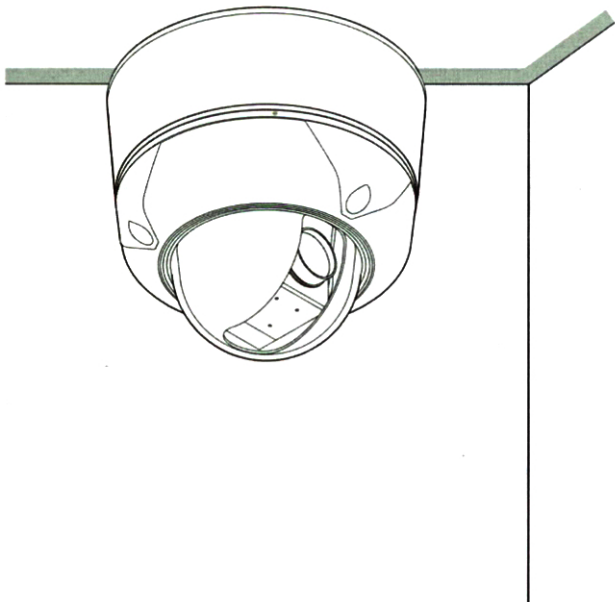


MINI SPEED DOME CAMERA

10X Mini Speed Dome Camera Instruction Manual



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WARNINGS & CAUTION

If you fail to read this information and handle the product incorrectly, death or serious injury may occur.

The unit should be installed by the trained personnel

Switch off immediately if the product emits smoke or abnormal heat.

Never install the product in area exposed to water, oil or gas.

Never install the product on a ceiling that cannot hold its weight.

Never touch the power cord with wet hands.

Clean only with dry cloth.

Never install the product in extreme high or low temperature.

Ensure that the product is not subjected to strong impacts and vibration

Never expose the camera to direct sunlight

Never touch the front glass of the product.



This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning

Never manually move the pan/tilt assembly. Serious and permanent damage will occur

What's in the Box ?

1. Camera
2. Screws (Ø4x16 screw 5EA)
3. Terminal block 5pin 2EA (DC Type)
4. Terminal block 5pin 1EA , 6pin 1EA (AC 24V Type)
5. Manual
6. Screw Cap (1EA)

GENERAL FEATURES

100X Zoom Mini Speed Dome

10X Optical Zoom with 10X digital zoom

±0.2° dome system accuracy with full micro step

With 0.1° positional accuracy, the camera provides excellent sensitive and delicate control. This is achieved by full micro step motors and twin gear system

360° Endless Rotation

10X mini speed dome is capable of endless rotation of 360 degrees

Compensation function: preset position

The function provides absolute preset position even in difficult applications where vibration and strong winds may otherwise affect dome performance.

Over 200°/Sec Preset Speed

The 360° full pan function moves through a maximum of 200°/sec., enabling you to quickly pinpoint the spot you want to watch. Tilt speed is also driven at 200°/sec on preset seek.

Polarity Protection of Power (DC12V)

This protection function prevents damage to the domes power board if the dc supply is connected with incorrect polarity.

Filter changeable True Day/Night

Top quality images are assured under day and night conditions due to the true day / night camera with IR cut filter. Low light sensitivity is further increased by the cameras digital slow shutter.

Indoor / Outdoor applications

The domes small size and construction to IP 66 ingress protection rating make it ideal for internal or external applications.

Quick Operation Keys

This camera provides quick function keys to allow control by most keyboards and DVRs that have Pelco protocol support.

Various Surveillance Functions

Auto Scan repeats pan and tilt between two preset positions with different speed and dwell time.

8 Group Tour up to 8 Programmable Group tours are available with each group is consisting of up to 60 preset steps with different speed and dwell times along with 16 character titling.

165 Preset positions up to 165 programmable preset positions are available with 16 character title.

8 Patterns up to 8 programmable user-defined patterns are available with 16 character title. Each can be up to 50 seconds long, giving a total of 400 seconds.

8 Sectors up to 8 programmable user-defined sectors are available with 16 character titling.

4 Privacy Masking Zones up to 4 programmable user-defined privacy masking zones are available.

4 Alarm input up to 4 alarms can be wired to the dome head and can activate presets, tours, or patterns.

150°/S – Manual speed

The dome provides up to 150°/sec of manual speed and is also adjustable from 100°/sec to 150°/sec in 10°/sec increments.

1/4" Sony Super HAD CCD

Equipped with Sony Super HAD CCD technology, the camera provides excellent sensitivity and low smear levels.

Intelligent Pan/Tilt Controlling

Intelligent Pan/Tilt function is continually increases or decreases pan and tilt speeds in proportion to zoom.

Dome Housing

The elegantly designed aluminum body and Poly Carbonate dome cover provide a very solid product for a wide range of applications.

Password Protection

It is possible to password protect all dome settings to prevent unauthorized changes.

NAMES OF EACH PART

4000 SYSTEM

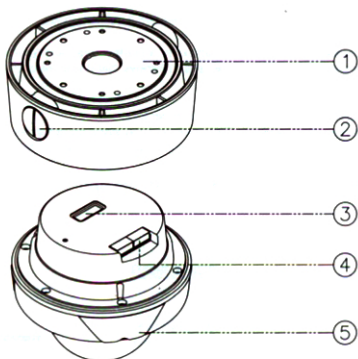


FIG. 1

1. Surface Mount Adaptor
2. Cap Screw (PT3/4, 1EA)
3. Dip Switch
4. Terminal Block
5. Main body

INSTALLATION

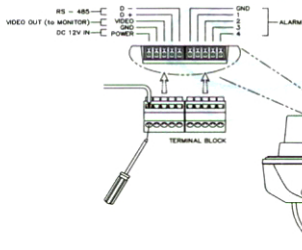
A. CONNECTIONS

A-1

1. Loosen the screws on the domes cover and remove it from the base.
(Screws won't be removed)
2. Loosen the screws which connect mount cover and Main base and separate dome cover from the main base. (These are captive screws that do not remove)
3. Connect power to Power and GND.
4. Connect video to video and GND.
5. Connect communication cable to RS-485 connectors.
6. Connect alarm common cables to GND. Connect the alarm input cables to their relevant terminal (1-4) Alarm polarity can be programmed as N/O or N/C

• Do not over tighten screws. This can cause damage.

■ 12VDC type



■ 24VAC type

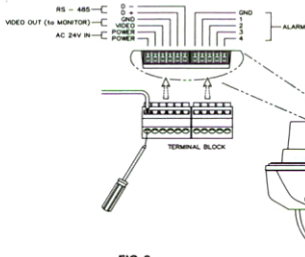


FIG. 2

INSTALLATION

B. CEILING MOUNT TYPE

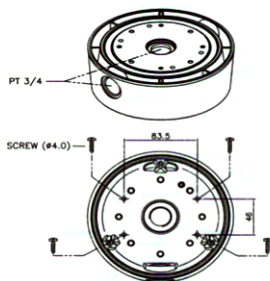


FIG. 3

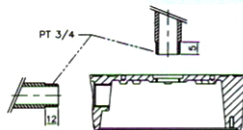
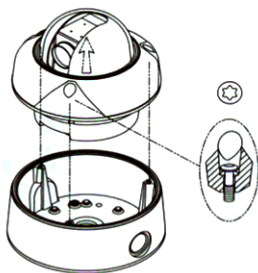


FIG. 4

1. Fix the surface mount adaptor with 4pcs of screws on the place where you want to install. (FIG. 3)
2. When you use pipe, please note the standard size of pipe. (FIG.4)
3. Re-assemble the dome.

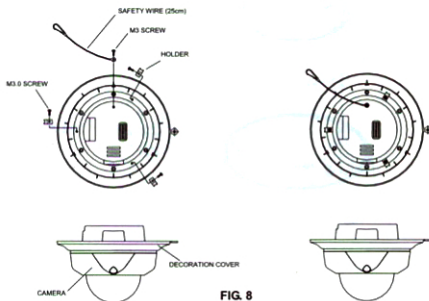
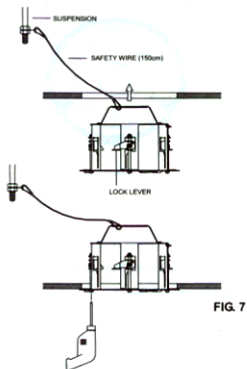
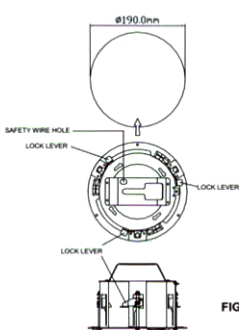


INSTALLATION

C. EMBEDDED MOUNT TYPE

Contents

- Embedded mount bracket 1ea
- Decoration cover 1ea
- Screw - M3.0 x 6 5ea
- Holder 3ea
- Safety wire 2ea
- Screw - $\varnothing 4.0 \times 16$ 1ea



INSTALLATION

1. Make a hole, 190mm, on the ceiling. (FIG. 6)
2. Hook the safety wire over suspension and safety wire hold of embedded mount bracket. Fold the lock levers and insert the bracket into the hole. You can fix the lock lever by driving screws. (FIG. 7)
3. Fix the decoration cover on the rear of camera by holder screws (M3.0) (FIG. 8)
4. Drive the screw (M4.0) to fix safety wire of camera and hook the safety wire over safety wire hold of embedded mount bracket. (FIG. 9)
5. Install the camera by inserting cover lock and twisting it clockwise. (FIG. 10)
6. Fix the decoration cover by screw ($\varnothing 4.0 \times 16$) (FIG. 10)

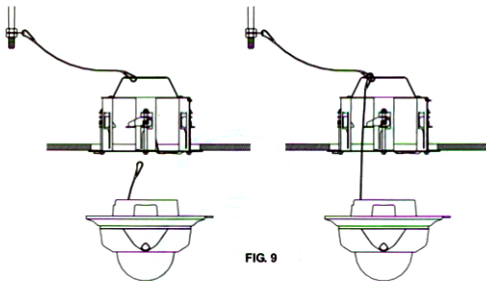


FIG. 9

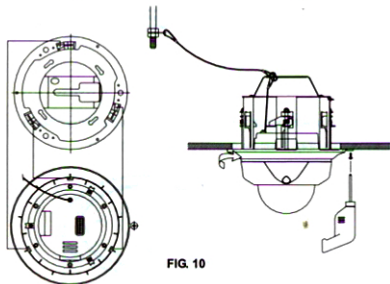


FIG. 10

D. PIPE MOUNT TYPE

Contents

- Pipe mount bracket 1ea
- Rubber 1ea
- Screw – M4.0 x 8 4ea
- Set anchor bolt (W5/16) 4ea

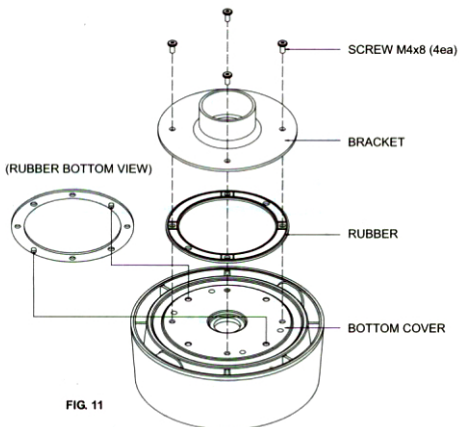


FIG. 11

1. As above FIG.11, assemble rubber and bracket on the bottom of camera.
2. After finishing assembly, it will be shown as below. (FIG.12)

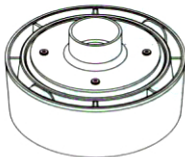


FIG. 12

INSTALLATION

3. If you want to install the speed dome on the concrete wall, you need to make 12.5mm diameter 4 holes by drill like FIG. 13 (Depth 37mm)
4. Install SET ANCHOR BOLT on the holes.
5. As shown on FIG.15, after assembling mini PTZ and bottom cover assembly, drive the pipe mount bracket and fix. (FIG.15)

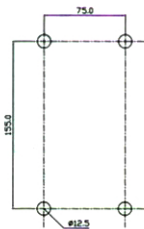
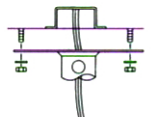
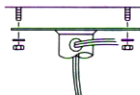


FIG. 13



<the cable into the ceiling>



<the cable out of the ceiling>

FIG. 14

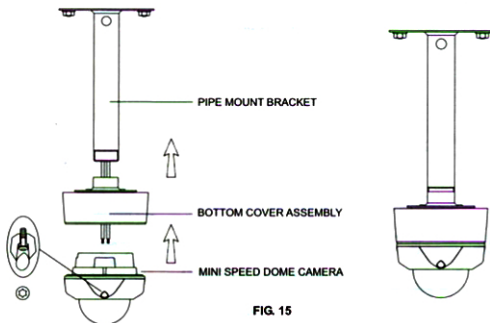


FIG. 15

INSTALLATION

E. GOOSENECK MOUNT TYPE

Contents

- | | |
|-------------------------------|------------------|
| ■ Gooseneck mount bracket 1ea | ■ Rubber 1ea |
| ■ Set anchor bolt (W5/16) 4ea | ■ Screw M4x8 4ea |

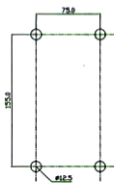
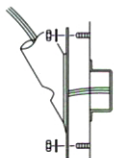
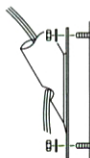


FIG. 16



<the cable into the ceiling>



<the cable out of the ceiling>

1. If you want to install the speed dome on the concrete wall, you need to make 12.5mm diameter 4 holes by drill like FIG.16 (Depth 37mm)
2. Install SET ANCHOR BOLT on the holes.
3. As shown on FIG.17, after assembling mini PTZ and bottom cover assembly, drive the gooseneck mount bracket and fix. (FIG.17)

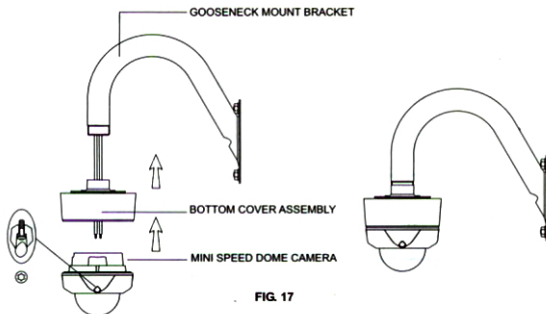


FIG. 17

INSTALLATION

F. WALL MOUNT TYPE

Contents

- Wall mount bracket 1ea
- Hexagon Socket head cap screw M4.0 x16 4ea
- Hexagon wrench 3mm L Type 1ea
- Set Anchor Bolt (W5/16) 4ea

1. If you want to install the speed dome on the concrete wall, you need to make 12.5mm diameter 4 holes by drill like FIG. 1 (Depth 37mm) (FIG.18)
2. Install SET ANCHOR BOLT on the holes.
3. To install Wall Mount Bracket

**Tip> Select a ceiling board strong enough to hold 4 times the total weight of the camera
(Weight combined camera: approx.5kg)**

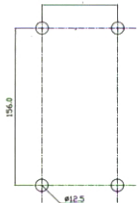


FIG. 18

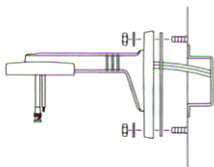
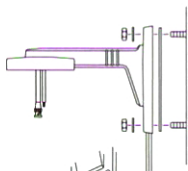


FIG. 19

<the cable into the ceiling>



<the cable out of the ceiling>

INSTALLATION

4. Assemble a wall mount bracket and camera by Hexagon socket head cap screws (M4.0X16) (FIG. 20)

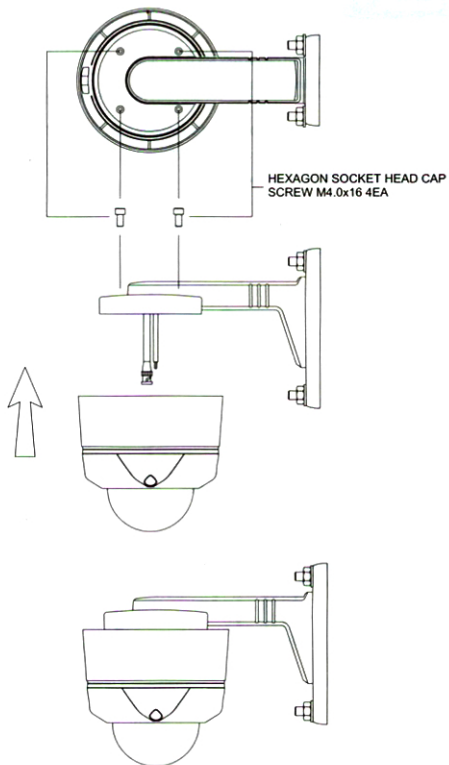


FIG. 20

INSTALLATION

G. CORNER MOUNT TYPE

Contents

- Corner mount adaptor 1ea
- Set Anchor Bolt (W5/16) 4ea
- M10 Bolt & Nut 4ea

1. First mark the positions of holes placing the corner mount bracket. (FIG. 21)
2. Make 12.5mm diameter 4 holes by drill. (Depth 37mm)
3. Install SET ANCHOR BOLT on the holes.
4. Fix the wanted bracket on the corner mount bracket with 4 ea of M10 BOLT before you install the corner mount bracket. (FIG. 22)
5. Screw the set anchor bolt of the bracket by nut on the wall. (FIG. 23)

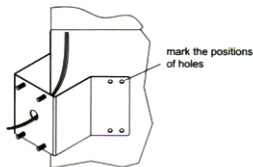


FIG. 21

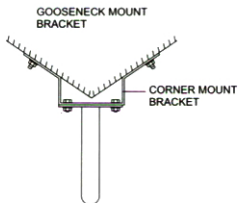


FIG. 23

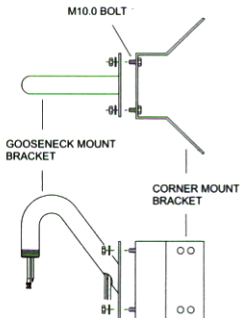


FIG. 22

INSTALLATION

6. After driving a bottom cover assembly to gooseneck mount bracket, as shown on FIG 23, assemble mini PTZ with bottom cover assembly. (FIG. 24)

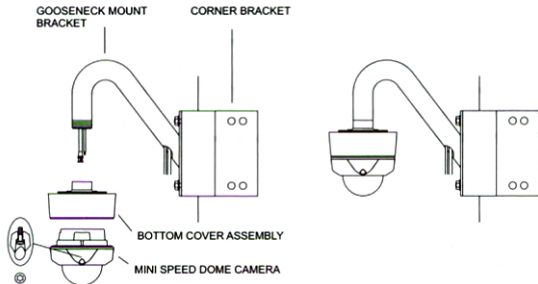


FIG. 24

INSTALLATION

H. POLE MOUNT TYPE

Contents

- Pole mount adaptor 1ea
- Band Clamp 2ea
- M10 Bolt & Nut 4ea

1. Fix the wanted bracket on the pole mount bracket with 4 ea of M10 BOLT before you install the pole mount bracket. (FIG. 25)
2. Tie the bracket with SUS BAND tightly. (FIG. 26)
3. As shown FIG. 26 after installing a wall mount bracket, fix a camera on the wall mount bracket. (FIG. 27)

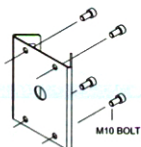


FIG. 25

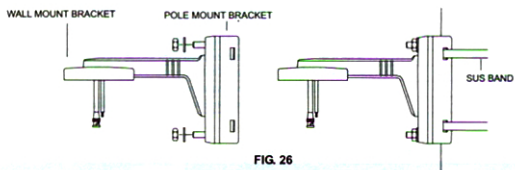


FIG. 26

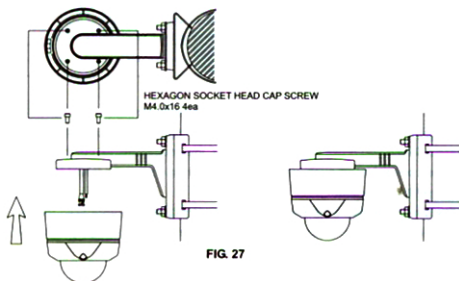


FIG. 27

QUICK OPERATING KEYS

The dome supports Pelco-D/P, SAMSUNG and VICON protocols.

The dome may be used with any controller or DVR etc that supports the Pelco D and Pelco P protocols.

The default setting of the dome is Pelco D / P with 2400 bps (baud rate).

[PELCO D/P, SAMSUNG PROTOCOLS]

The comprehensive feature set of the dome is available from Pelco compatible controllers via quick operation keys as defined below.

1-64 + preset and 100~200 + preset are used for normal user presets.

Presets 65-99 + are reserved for special functions.

For example, to enter OSD MENU, press the button **95** + **PRESET**

<Quick Operation Key Table 1, Pelco D/P, SAMSUNG>

Number	Note	Function
1 ~ 64, 100~200 +Preset	PRESET	Execute Preset 1 ~ 64
65 + Preset	PRESET STATUS	Display Preset Status
66 +Preset	AUTO SCAN	Execute Auto Scan
67 +Preset	AUTO FLIP	Selectable On/Off/Auto in Auto Flip function
71~78 +Preset	GROUP TOUR	Execute Group Tour #1 ~ #8
81~88 +Preset	PATTERN	Execute Pattern #1 ~ #8
91 + Preset	ZERO POSITION	Search For Pan / Tilt Zero Position
92 + Preset	FREEZE	Select Freezing of current image
93 + Preset	BLC MODE	Selectable On/Off in BLC function
94 + Preset	D/N MODE	Selectable Day/Night Mode (Auto/Day/Night Mode)
95 + Preset	OSD MAIN MENU	To enter OSD Main Menu
96 + Preset	FOCUS ADJUST	Focus adjustment
97 +Preset	ALARM	Selectable Enable/Disable all Alarms

<Quick Operation Keys Table 2> Use these function keys if controller has these keys>

Menu	Function
Tilt Up / Down	Sub menu cursor moves up / down
Pan Left / Right	Enter to the sub menu or status change or decrement
Focus Near	Using for Enter key when user select YES or NO
Focus Far	Using for function changing keys when set coordinate
Zoom Tele	Status cursor to the right
Zoom Wide	Status cursor to the left

- **65 + preset** : "Preset Status" is displayed, to remove this screen, press **Focus Near** button.
- **92 + preset** : This feature freezes the current live image during tour, auto scan or pattern operation. When you press **92 + preset** button, the image freezes but the camera is still working as per operation such as tour, pattern or auto scan. To return to normal images, press **92 + preset** button again.
This feature is operated by preset number but not included in OSD main menu.
- If a controller asks for an unsupported feature "Not available" is displayed on the monitor.

QUICK OPERATING KEYS

[VICON PROTOCOL]

If user wants to choose Vicon Protocol, the user may change the dip switch first.

(Refer to Page #36 DIP SWITCH SETTING - PROTOCOL)

Baud Rate: 4800 (Vicon default)

The operation system is almost same as Pelco D/P protocols but some special features are different way as noted below

<Quick Operation Key Table 2: VICON>

Number	Note	Function
1 ~ 79 +Preset	PRESET	Execute Preset 1 ~ 79
80-87 +Preset	GROUP TOUR	Execute Group Tour #1 ~ #8
88-89 +Preset	PATTERN	Execute Pattern #1 ~ #2
90 + Preset	Focus Mode Set	Focus Mode Toggle to Auto or Manual
90 + Preset Save	Pan/Tilt Lockout	PAN/TILT Lock or Unlock setting
91 + Preset Save	ZERO POSITION	Search For Pan / Tilt Zero Position
92 + Preset Save	ALARM	Selectable Enable/Disable all Alarms
93 + Preset Save	BLC MODE	Selectable On/Off in BLC function
94 + Preset Save	OSD MAIN MENU	To enter OSD Main Menu
95 + Preset Save	D/N MODE	Selectable Day/Night Mode (Auto/Day/Night Mode)
96 + Preset Save	SECTOR	SECTOR setting menu entrance
97 + Preset Save	DOME Reset	Initial DOME Reset - Rebooting
98 + Preset Save	AUTO PAN	AUTO PAN setting menu entrance
99 + Preset Save	Pan/Tilt Speed	Manual Pan/Tilt Max Speed setting

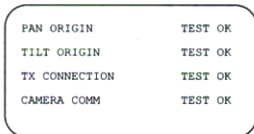
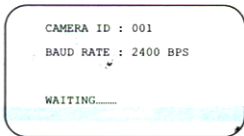
<Quick Operation Keys Table 2> Use these function keys if controller has these keys>

Menu	Function
Tilt Up / Down	Sub menu cursor moves up / down
Pan Left / Right	Enter to the sub menu or status change or decrement
A/P	Using for Enter key when user select YES or NO
A/I	Using for function changing keys when set coordinate
Zoom Tele	Status cursor to the right
Zoom Wide	Status cursor to the left

DIAGNOSTIC

Whenever the dome is powered on, a standard diagnostic is operated.

The following messages are displayed on the monitor.



A. Pan Origin Test

Zero point of Pan is located during the Panning test.

B. Tilt Origin Test

Zero point of Tilt is located during the Tilt test.

C. TX connection Test

The Tx connection test looks for commands from a controller to the dome. If no commands are detected the test will exit after 60 seconds.

During the 60 seconds, the camera must receive a signal from the controller or DVR, so please operate the controller during this phase. As soon as the dome detects a command "OK" will be displayed and the test will move on to the next step.

If the Tx connection test fails check the RS 485 wiring.

D. Camera Comm. Test

Camera communication is also checked.

OK should be displayed in these four tests before installation.

If all the above Tests are OK, "NOW EEPROM CHECKING" and "ALL DATA INITIALIZING" is displayed and the camera is ready to operate.

OSD MENU SETTING

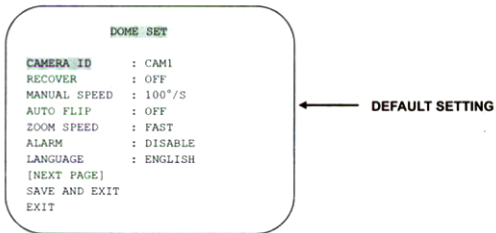
To enter OSD Menu, press the button **95** + **PRESET**.



* Use "up down" to move the position and "left right" to make selection

B. Dome Setup

In order to enter Dome setup, select right direction when the cursor is on dome setup.



B-1. DOME SET - CAMERA ID

To set camera name, and select a title of up to 16 characters using left or right direction keys or joystick.

Press **ZOOM TELE** button to move to the next character from left to right direction and

ZOOM WIDE button to move to the next character from right to left direction

(Space displays when appears)

OSD MENU SETTING

B-2. DOME SET - RECOVER

This feature allows the dome to revert to a specific programmed action when the dome has not received a command for the recovery timer period.

Actions can be Auto scan, group tour and pattern. The recover time can be programmed from 15 second to 90 seconds. The default setting is OFF.

B-3. DOME SET - MANUAL SPEED

The manual speed of Pan/Tilt is selectable from 100°/sec up to 150°/sec.

The default setting is 100°/sec

B-4. DOME SET - AUTO FLIP

Auto Flip enables the dome to automatically do a 180° turn when the tilt bottom point is reached.

The default setting is OFF. This function can be recalled by pushing **67+ preset** button.

B-5. DOME SET - ZOOM SPEED

Zoom speeds are selectable as FAST or SLOW mode. The default setting is FAST.

B-6. DOME SET - ALARM

You must enable the alarms for them to operate. The default setting is DISABLED.

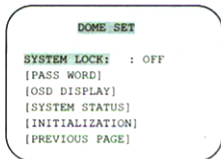
This function can be recalled by pushing **97 + preset** button.

B-7. DOME SET - LANGUAGE

Multiple languages are selectable (English, German, Dutch, Danish, French)

The default setting is ENGLISH.

B-8. DOME SET - [NEXT PAGE]



← DEFAULT SETTING

B-8-1. DOME SET - [NEXT PAGE] - SYSTEM LOCK

All stored dome settings can be password protected to prevent unauthorized changes.

In order to enter [PASS WORD] page, the system lock status must firstly be set as ON.

The default setting is OFF.

OSD MENU SETTING

B-8-2. DOME SET - [NEXT PAGE] - [PASSWORD]

To enter this page to set a password, move joystick or pan key in the right direction.
The password must be set by preset number from 001 to 255 (Default 99)

```
ENTER PASSWORD
BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM ***
```

Enter any number from 001-255 on the password blank area and again for confirmation on blank area. Then "CONFIRMED" is displayed on the monitor and the menu will go back to the previous page automatically.

```
ENTER PASSWORD
BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM ***CONFIRMED
```

<CONFIRMED>

```
ENTER PASSWORD
BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM ***NOT CORRECT
```

<CANCELLED>

If you press an incorrect number between PASSWORD and CONFIRM, "NOT CORRECT" is displayed on the monitor.

- * When a password has been set, the operator must enter the correct password in order to enter OSD MAIN MENU, or to change any of the domes configuration data
- * If you set a password you must ensure that it does not get lost. If this happens the dome must be returned for workshop repair

B-8-3. DOME SET - [NEXT PAGE] - [OSD DISPLAY]

The camera ID setting defines whether the camera OSD display is displayed or switched off.

```
OSD DISPLAY

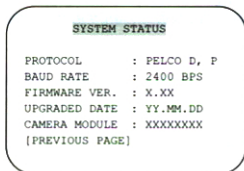
CAMERA ID      : OFF
PRESET ID      : OFF
SECTOR ID      : OFF
COORDINATE     : ON
[PREVIOUS PAGE]
```

← DEFAULT SETTING

OSD MENU SETTING

B-8-4. DOME SET - [NEXT PAGE] - [SYSTEM STATUS]

This page shows the information of this camera.

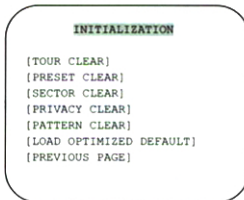


← DEFAULT SETTING

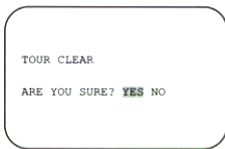
- Protocol and baud rate are shown according to the dip switch setting (Refer to page 36, 37)
- Firmware version and upgraded date will be changed if the dome has been upgraded.
- The camera module type is stated as follows.
 - SDM100 : SAMSUNG 10X ZOOM CAMERA MODULE.

B-8-5. DOME SET - [NEXT PAGE] - [INITIALIZATION]

To clear the current settings select the item that you wish to reset back to factory defaults.



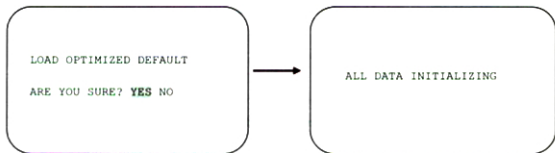
- To clear the memorized data, move the joystick or pan right key until the cursor is on the required item.



OSD MENU SETTING

Press **FOCUS NEAR** button when the cursor is at YES in order to clear memorized data. Then each item such as tour, preset, and sector will flicker for about 2-3 seconds. After this process, the menu is returned to the previous page.

- * Use the above method for [PRESET CLEAR], [SECTOR CLEAR], [PRIVACY CLEAR], [PATTERN CLEAR], [TOUR CLEAR].



- To clear all data and return to factory defaults, move the joystick right or press the pan right key to when the cursor is at [LOAD OPTIMIZED DEFAULT] to enter the next page.
- Move joystick or the pan right keys so that the cursor is over YES, then press the **FOCUS NEAR** button.

"ALL DATA INITIALIZING" is then displayed for about 5-7 seconds and then the menu is returned to the previous page automatically.

B-9. DOME SET - [NEXT PAGE] - SAVE AND EXIT

To save the memorized data and escape this page, move the joystick right or press the pan right key when cursor is at SAVE AND EXIT.

B-10. DOME SET - [NEXT PAGE] - EXIT

In order to escape this page, move the joystick right or press the pan right key when the cursor is at EXIT

OSD MENU SETTING

C. CAMERA SET

CAMERA SET	
FLICKER	: OFF
MIRROR	: OFF
APERTURE	: 10
D ZOOM	: OFF
WB MODE	: AWB MODE
PIC FLIP	: OFF
BLC	: OFF
D/N MODE	: AUTO
DSS MODE	: OFF
EXIT	

← DEFAULT SETTING

C-1. CAMERA SET - FLICKERLESS

The flicker less feature has options of 50Hz and 60Hz.

The default setting is OFF (NTSC: 60Hz / PAL: 50Hz). The flicker less mode only needs to be set when there is a mismatch between the power frequency and camera sync rate.

The default setting is OFF.

C-2. CAMERA SET - MIRROR

This feature literally swaps the image left and right as if looking into a mirror.

The default setting is OFF.

C-3. CAMERA SET - APERTURE

Aperture correction enhances the picture details and sharpness by increasing the gain of the camera. Increase the value to sharpen the image, decrease to soften it. The default setting is 10. (the aperture level is from 01 – 15)

C-4. CAMERA SET - D ZOOM

If enabled digital zoom is applied when the zoom lens has reached its maximum optical zoom in capability. The default setting is OFF.

C-5. CAMERA SET - WB MODE

White balance functions has 4 modes and may need to be changed depending on the situation.

- AWB Mode – 3,200°K to 6,000°K (Default)
- Indoor – up to 3,200°K
- Outdoor – up to 5,800°K
- ATW Mode - 2,000°K to 10,000°K

OSD MENU SETTING

C-6. CAMERA SET - PIC FLIP

The picture flip feature swps the top and bottom of the image, literally inverting it.
The default setting is OFF.

C-7. CAMERA SET - BLC (Back Light Compensation)

The default setting is OFF and BLC modes can be OFF/ON.

- OFF – Backlight compensation is not activated.
- ON – Back light compensation is activated.

This function can be recalled by pushing **93 + preset** button.

C-8. CAMERA SET - D/N MODE

The dome camera can operate in day /night mode and will switch depending on lighting conditions. Alternatively it can be forced into color only mode.
The default setting is AUTO MODE.
This function can be recalled by pushing **94 + preset** button.

C-9. CAMERA SET - DSS MODE (DIGITAL SLOW SHUTTER)

If digital slow shutter is enabled the exposure time of the camera is increased, this allowing more light to be collected and improving low light response. This setting should not be enabled if the dome is touring at night or fast moving objects are likely to be in the scene as smearing is also increased.
The default setting is OFF.

C-10. CAMERA SET - EXIT

To escape this page, move the joystick right or press the pan right key.

OSD MENU SETTING

D. PRESET SET

To enter PRESET SET, move joystick to the right direction.



← DEFAULT SETTING

D-1. PRESET - PRESET NO.

Up to 165 preset positions are available. Use the joystick or pan left/right keys to select the number.

D-2. PRESET - PRESET ID

To create preset titles use the joystick or pan left/right keys to navigate the menu.

The ZOOM TELE button moves to the next character from left to right and ZOOM WIDE button moves to the next character from right to left (Space displays when appears)

D-3. PRESET - PAN: XXX.X TILT: XX.X

Press FOCUS FAR button in order to set preset position then, use the joystick or pan left/right keys to the position where memorized preset number .is needed. Then press FOCUS FAR button again after setting a preset location.

D-4. PRESET - SAVE

Move the joystick right or press the pan right key when the cursor is at SAVE and then the cursor will be located on Preset ID for the continuous preset No. setting.

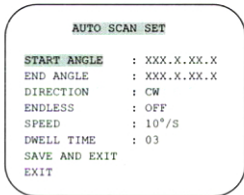
D-5. PRESET - EXIT

To escape this page, move the joystick right or press the pan right button.

OSD MENU SETTING

E. AUTO SCAN SET

- * **F6 + preset** button is working as AUTO SCAN after setting.



← DEFAULT SETTING

E-1. AUTO SCAN - START ANGLE

To set the start position, press **FOCUS FAR** button then move the dome to the required start position. Press **FOCUS FAR** button again is to escape.

E-2. AUTO SCAN - END ANGLE

To set the end position, press **FOCUS FAR** button then move the dome to the required end position. Press **FOCUS FAR** button again is to escape.

E-3. AUTO SCAN - DIRECTION

Auto Scan directions are available as CW or CCW.

- CW: Clock wise direction (Default)
- CCW: Count Clock Wise Direction.

E-4. AUTO SCAN - ENDLESS

Auto Scan can be set to endless rotation by enabling the endless option.

The default setting is OFF.

E-5. AUTO SCAN - SPEED

Auto scan speed can be programmed from 05°/S up to 35°/S. The default setting is 10°/S.

E-6. AUTO SCAN - DWELL TIME

The dwell time at the start and end points can be programmed from 1 second to 30 seconds.

The default setting is 03 seconds.

E-7. AUTO SCAN - SAVE AND EXIT

To save the memorized data and escape this page, move the joystick right or press the pan right key when the cursor is at SAVE AND EXIT.

E-8. AUTO SCAN - EXIT

To escape this page, move the joystick right or press the pan right key.

F. TOUR SET

8 Programmable tours can be set and each tour can have up to 64 preset steps. After setting up the tours the **71-78 + preset** buttons launch group tours # 1-8

TOUR SET	
TOUR NO	: 01
TOUR TITLE	: TOUR01
TOUR STEP	: 01
PRESET NO.	: 01
DWELL TIME	: 03
SPEED	: 200°/S
SAVE	
EXIT	

← DEFAULT SETTING

F-1. TOUR SET - TOUR NO.

Up to 8 group tours can be programmed.

F-2. TOUR SET - TOUR TITLE

To set a tour title, use the joystick left/right or pan left/right keys.

Each title can have up to 16 characters.

Press **ZOOM TELE** button to move the next character from left to the right and **ZOOM WIDE** button to move the next character from right to left (Space displays when appears) The tour title is not displayed on the monitor and is only for the reference of user.

F-3. TOUR SET - TOUR STEP

Each tour group consists of up to 60 preset steps with different dwell time and speed.

It is possible to match any preset # for any tour step.

F-4. TOUR SET - PRESET NO.

For each tour step it is possible to select any preset number up to 64.

The default setting is **BLK**

F-5. TOUR SET - DWELL TIME

Dwell time can be programmed from 1-99 seconds. The default setting is **03 seconds**.

F-6. TOUR SET - SPEED

Each tour step can be set with a different speed up to 200°/S and it is selectable from 10°/S.

The default setting is **200°/S**.

F-7. TOUR SET - SAVE

To save the memorized data and escape this page, move the joystick right or press the pan right key when cursor is at **SAVE**

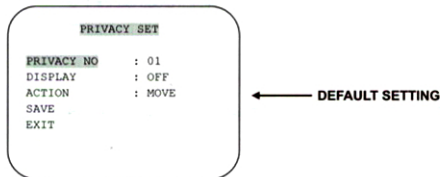
F-8. TOUR SET - EXIT

To escape this page, move the joystick right or press the pan right key.

OSD MENU SETTING

G. PRIVACY SET

4 Privacy masking zones can be set.



G-1. PRIVACY SET - PRIVACY NO.

Up to 4 privacy masking zones can be set.

G-2. PRIVACY SET - DISPLAY.

Move the joystick right or left or press pan right/left to set ON in order to show the selectable block in the center of the monitor. This block appears as a translucent square with blue color when set ON. The default setting is OFF.

G-3. PRIVACY SET - ACTION (MOVE / ADJUST)

To set the blocking area, press **FOCUS FAR** button when MOVE MODE is displayed. Then use the joystick or pan keys to the user defined area in order to set the blocking area. Then press **FOCUS FAR** button again to escape from MOVE MODE.

To adjust the size of the blocking area, move the joystick or use the pan keys when the cursor is on ACTION. After it has changed to ADJUST MODE, press **FOCUS FAR** button in order to adjust the size of the blocking area. The size of the blocking area can be adjusted by using joystick up/down or left right – or the pan and tilt keys. After adjusting the size of the blocking area, press **FOCUS FAR** button to escape the ADJUST mode.

- ADJUST : You can change the masking size by using the joystick or pan keys
- MOVE : You can move the masking area by using the joystick or pan keys (Default)

G-4. PRIVACY SET - SAVE

After setting the privacy masking zone, to save the data, move the joystick right or pan right key when the cursor is on SAVE. After saving the data, the cursor moves to PRIVACY NO.2 automatically to prepare for the next privacy masking zone.

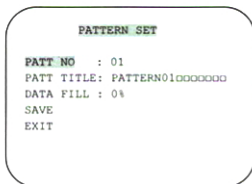
G-5. PRIVACY SET - EXIT

To escape this page, move the joystick right.

H. PATTERN SET

8 programmable patterns are available, each with a programmable title.

After setting up each pattern # 1-8, 81-88+ preset buttons will recall Patterns # 1-8.



← DEFAULT SETTING

H-1. PATTERN SET - PATT NO.

Up to 8 programmable user-defined patterns are available.

H-2. PATTERN SET - PATT TITLE

To set PATTERN TITLE move Joystick left/right or use the pan keys.

Press ZOOM TELE button moves to the next character from the left / right and ZOOM WIDE button moves to the next character from the right / left (Space displays when appears)

The pattern title is not displayed on the monitor, but only for the reference of the user.

H-3. PATTERN SET - DATA FILL

To memorize a pattern, press FOCUS FAR button in order to start the process.

The progress is shown as % filled. Press FOCUS FAR button again in order to escape.

H-4. PATTERN SET - SAVE

To save the memorized pattern data, move the joystick right or press the pan right key when the cursor is on SAVE. Then the cursor moves to the PATT NO.02 in order to prepare for the next pattern.

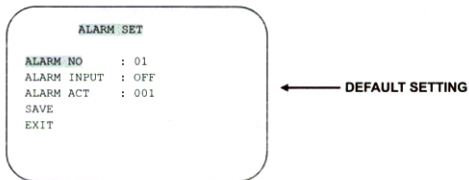
H-5. PATTERN SET - EXIT

To escape this page, move the joystick right or press the pan right key.

OSD MENU SETTING

I. ALARM SET

4 Alarm inputs are available and each input can activate presets, group tours or patterns.



I-1. ALARM SET - ALARM NO.

Up to 4 alarms are selectable by using joystick right or pressing the pan right key when the cursor is on ALARM NO.

I-2. ALARM SET - ALARM INPUT

Alarm inputs can be programmed as NC (Normally Close) or NO (Normally Open). The default setting is OFF.

I-3. ALARM SET - ALARM ACT

Active alarms can trigger modes such as presets, Group tours 1-8, and Patterns 1-8. Use the joystick or pan keys to select any preset number, group tour no. or pattern no.

I-4. ALARM SET - SAVE

After setting up the alarm features, to save the data move the joystick right or press the pan right key when the cursor is on SAVE. After saving the data, the cursor moves to Alarm NO.2 automatically to prepare for the next alarm.

I-5. ALARM SET - EXIT

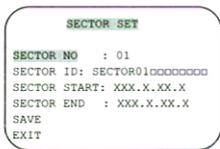
To escape this page, move the joystick right or press the pan right key.

* Before activating Alarms, you must set ALARM ENABLE at DOME SET - ALARM - ENABLE (Refer to page 23)

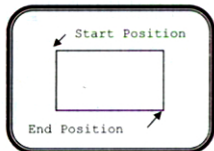
OSD MENU SETTING

J. SECTOR SET

Up to 8 programmable sectors are available, each with a 16 character title. This feature allows the various areas of the domes 360° rotation to be given logical titles. When the dome is moved the relevant title for each area is displayed as the dome passes through the area.



DEFAULT SETTING



J-1. SECTOR SET - SECTOR NO.

Up to 8 programmable sectors are available.

J-2. SECTOR SET - SECTOR ID

To set a SECTOR ID, use the joystick or pan left/right keys.

Press ZOOM TELE button to move to the next character from left to right and ZOOM WIDE button to move to the next character from right to left (Space displays when appears)

J-3. SECTOR SET - SECTOR START

To set a SECTOR START position, press FOCUS FAR button then move the joystick or pan keys to set the position. Press FOCUS FAR button again to escape.

J-4. SECTOR SET - SECTOR END

To set a SECTOR END position, press FOCUS FAR button then move the joystick or pan keys to set the position. To press FOCUS FAR button again to escape.

J-5. SECTOR SET - SAVE

After setting the SECTOR positions, to save the data move the joystick right or press the pan right key when the cursor is on SAVE. After saving the data, the cursor moves to SECTOR NO.2 automatically to prepare for the next SECTOR.

J-6. SECTOR SET - EXIT

To escape this page, move the joystick right or press the pan right key.

K. EXIT

To escape OSD Main Menu, move joystick to the right or left direction then this camera is Ready to operate.

DIP SWITCH SETTING

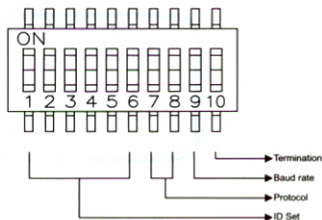
110110XXXX 23

A. FACTORY DEFAULT SETTING

The dome cameras RS 485 address is set using switches 1-6 of DIP SW1, refer to the table below...

Open the camera case to set ID using DIP SW1.

★ Factory default: Camera ID = 1, PELCO-D Baud Rate:



B. ID SETTING (1-ON, 0-OFF) (1→10)

DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
10000XXXX	1	11101XXXX	23	10110XXXX	45
01000XXXX	2	00011XXXX	24	01110XXXX	46
11000XXXX	3	10011XXXX	25	11110XXXX	47
00100XXXX	4	01011XXXX	26	10011XXXX	48
10100XXXX	5	11011XXXX	27	10001XXXX	49
01100XXXX	6	00111XXXX	28	01001XXXX	50
11100XXXX	7	10111XXXX	29	11001XXXX	51
00010XXXX	8	01111XXXX	30	00101XXXX	52
10010XXXX	9	11111XXXX	31	10101XXXX	53
01010XXXX	10	00001XXXX	32	01101XXXX	54
11010XXXX	11	10000XXXX	33	11101XXXX	55
00110XXXX	12	01000XXXX	34	00011XXXX	56
10110XXXX	13	11000XXXX	35	10011XXXX	57
01110XXXX	14	00100XXXX	36	01011XXXX	58
11110XXXX	15	10100XXXX	37	11011XXXX	59
00001XXXX	16	01100XXXX	38	00111XXXX	60
10001XXXX	17	11100XXXX	39	10111XXXX	61
01001XXXX	18	00010XXXX	40	01111XXXX	62
11001XXXX	19	10010XXXX	41	11111XXXX	63
00101XXXX	20	01010XXXX	42		
10101XXXX	21	11010XXXX	43		
01101XXXX	22	00110XXXX	44		

DIP SWITCH SETTING

C. PROTOCOL SETTING

7th–8th dip switches are used for Protocol Setting.

Factory Default: Pelco-D or Pelco-P (Auto detection)

DIP SW1- 7	DIP SW1- 8	
OFF	OFF	Pelco-D or Pelco-P
ON	OFF	VICON
OFF	ON	SAMSUNG
ON	ON	I3DVR

D. BAUD RATE SETTING

The 9th Dip Switch is used for BAUD RATE setting.

DIP SW can be changeable to 2400bps, 9600bps.

Factory Default: 2400bps. (If user selects Vicon protocol, then Baud rate is automatically set as 4800bps.

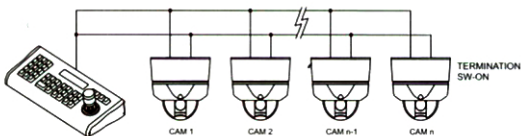
DIP SW1 9 th	BAUD RATE
OFF	2400bps(Default) 4800bps(VICON)
ON	9600bps

E. 485 TERMINATIONS

10th Dip Switch is used for 100Ω termination.

Set on 10th Dip Switch only for the last looped camera from the controller.

Even in case of only one camera, set on 10th Dip Switch of the camera.



TROUBLE SHOTING

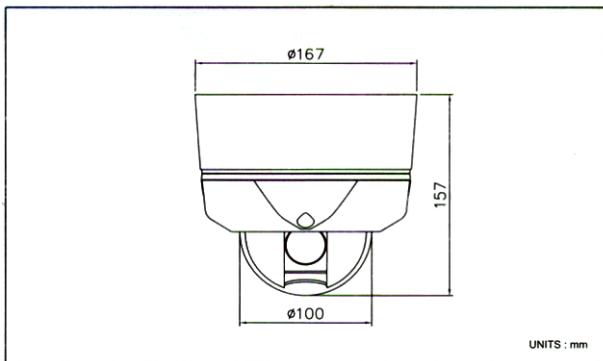
If you have trouble setting up or operating the camera, refer to the following.

PROBLEM	SOLUTION
No operation	Check if the power supply is DC12V or AC24V. Check if RS-485 communication cable is connected correctly. Check camera ID setting. Check the RS 485 termination.
No picture	Check if all the cables are connected correctly. Check if the monitor is adjusted correctly. Check for video locally at the dome.
Dark screen	Check video termination and monitor settings
Abnormal camera operation	Check if PSU voltage level at the dome Check the RS 485 termination.

SPECIFICATIONS

MODEL			10X A/F CAMERA MODULE
PAN /TILT	Pan Rotation Angle		360° Endless
	Pan Speed	Manual Preset	Max 150° /sec Max 200° /sec
	Tilt Rotation Angle		0° ~ 90°
FUNCTIONS	Tilt Speed	Manual Preset	Max 150° /sec Max 150° /sec
	Presets		165 positions with a 16-character label available for each position
	Privacy Masking Zones		4 Programmable privacy masking zones
	Pattern		8 Programmable pattern tour
	Sector		8 Programmable sectors
	Group Scanning		Max.8 Programmable group tours (each one consisting of up to 60 preset steps with different steps)
	Auto scan		Programmable Auto scan
	Password Protection		Yes
	Alarm Input		4 alarms OFF/NC/NO (with various programmable states)
	Alarm Actions		Activate preset, tour and patterns
POWER	Auto Flip		ON / OFF
	OSD Menu		Multiple Languages on screen
	Communication		RS-485
POWER	Protocol		Pelco D/P, VICON, SAMSUNG
	Power Consumption	24V AC 12V DC	650mA, 16W MAX (1.1A, 30W with Heater) 750mA, 10W MAX (1.3A, 16W MAX with Heater) 24V AC 650mA (1.1A with Heater) 12V DC 750mA (1.3A with Heater)
OTHERS	Power Supply		Anti-vandal bubble (Poly carbonate), Body (Aluminum)
	Construction		Stepper Motor
	Motor Type		-10°C ~ 50°C (-40°C ~ 60°C with heater)
	Operating Temperature		IP66, CE, FCC
	Certifications		1/4" Sony Super HAD CCD
CAMERA MODULE	Image Sensor		811(H) * 508(V) 410K 795(H) * 596(V) 470K 768(H) * 494(V) 380K 752(H) * 582(V) 440K
	Total Image Pixels	NTSC PAL	500TV Lines
	Number Of Effective Pixels	NTSC PAL	10x Optical Zoom f=3.8 ~ 38.0mm (F1.8)
	Horizontal resolution		10x (100x with optical)
	Lens	Optical Digital	Auto/ Day/ Night ON / OFF
	Day & Night (ICR)		0.7Lux / F1.8 (50IRE)
	Digital Slow Shutter		0.02Lux / F1.8(50ICE) On DSS mode
	Min. Illumination	Normal mode Night mode	More than 50dB
	Luminance S/N Ratio		Composite video output 75Ω Terminated
	Video Output		ON / OFF
	BLC		ON / OFF (1/100)
	Flicker less	NTSC PAL	ON / OFF (1/120)
WHITE BALANCE		ATW/AWC/INDOOR/OUTDOOR	

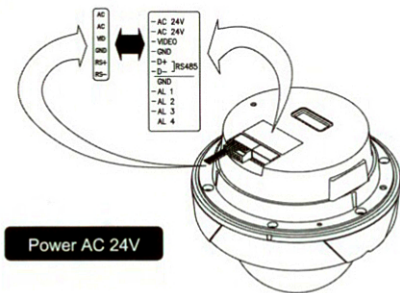
DIMENSIONS



Mini Dome 10X Installation Manual

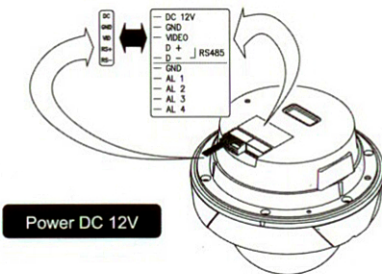
[Power]

◆ Label for AC 24V.



※ Make sure to connect power with Terminal block by description label

◆ Label for DC 12.



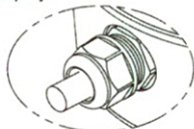
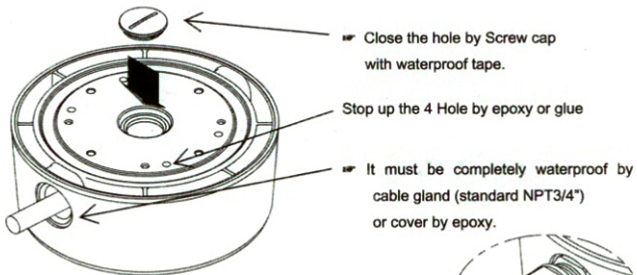
※ Make sure to connect power with Terminal block by description label

Mini Dome 10X Installation Manual

[Junction Box]

◆ In case of the cable install outside of junction.

- In case of It expose the cable to side of junction



- In case of It expose the cable to top of junction box.

☞ Stop up the 4 Hole by epoxy or glue

☞ Stop up the space of hole by epoxy or glue

☞ Close the hole by Screw cap with waterproof tape.

