Thank you for purchasing our product. Please, operate the product after being fully aware of the manual. Please contact us in any inquiries, problems.

Precaution

Note the following matters before the installation of the product. Avoid the following places for the installation.

A high/low temperature

Snow, rain and wet

Using indoor–cameras in the places of +50°C—−10°C can cause troubles and a lowering of its capacity.

Oil, gas

Protect indoor–cameras from humidity or water.

Vibration, shock

They bring on problems or errors of the camera.

Direct light, exposure to the air

Oil and gas damage the camera as they go through the cameras.

Closing to High frequency and electric power lines

In the case of that sets indoor–cameras outside where the weather is changeable, it can make problems.

Setting the camera up around electromagnetic units or power supplier can result problems.
2. INTRODUCTION OF PRODUCT

1). DESCRIPTION AND FEATURES

~Description~
This camera has been designed elegantly for buildings, department stores that need to be in harmony with the interior as a high speed dome camera, including various observation functions.

~Features~

- **High Magnification Zoom Lens**
  Maximum 230x zoom function.
  (Optical zoom 23x, Digital zoom 10x)

- **Horizontal Resolution more than 520TVL supporting**
  Color: more than 520TVL, B/W: more than 570TVL supporting.

- **Minimum Illumination, DAY & NIGHT function**
  Realization of Minimum illumination 0.0007Lux(DSS Control) by the improvement of electric sensibility.
  - Conversion into B/W mode (0.1Lux) in the night by DAY & NIGHT function.

- **Additional functions**
  - **PTZ trace**:
    Realization of identical trace by memorization of P/T/Z motion for 120sec.
  - **Auto swing**:
    Auto observation and repeat function of the designated 2 points, pan and tilt by preset points.
  - **Group**:
    Repeat and auto observation in order by preset speed and delay time that has been thrown 12 preset points into 1 group. (maximum group up to 12)

- **Tour**:
  Operation function by the motions of the sequence group that has been thrown 12 groups into 1 tour.

- **DIS function (STABILIZE)**
  Compensation of broken images.

- **250 Preset positions**
  Observation function of up to 250 preset points designated.

- **4ch alarm inputs**
  Auto moving function to go to the preset point by the sensor.

- **Auto Tilt Move**
  It can make easy to detect the subject which moves to a vertical turn(180°)

- **OSD (On Screen Display)**
  Provides to correct, convert the menu of the camera and ID, Preset, Dome speed on displayed screen.
2). INSTALLATION AND CONNECTION.

2-1. Name and Function of each part

**Indoor Type**

- **A UPPER COVER**
  The camera's body goes to here and a power cable, data cable, video cable, sensor have been connected with this.

- **B CAMERA BODY**
  A main body that has a built-in control units and camera.

- **C LOWER COVER**
  Insert the body into the upper cover, then close the lower cover.

**Outdoor Type**

2-2. Installation

**Indoor Type**

- **SEPARATION OF LOWER COVER**
  Loosen the bolt of the back of lower cover by a screwdriver(+), then turn the cover as above the picture and pull the lower cover to the down.

**Outdoor Type**

- **SEPARATION OF LOWER COVER**
  Loosen the four bolts of the lower cover, then separate.

- **SEPARATION OF UPPER COVER**
  Loosen the three bolts, the round head shaped, of the camera body. The three bolts are not loosened completely and not come up more than 1cm.
2-2. INSTALLATION

Pull the cover up with grabbing the bottom of the camera after loosening the three bolts.

Open the connector cover, then connect POWER, DATA, VIDEO CABLE and SENSOR.

The cover is opened if user loosens the one bolt on the connector cover by using a screwdriver(+).

The bolts are not loosened completely to protect from missing of them.
Be careful that each cable which each function is explained is changed wrong.

Have you connect the power cable in the right direction?
If yes, RED LED, in the middle of the connector, is lighted.
Use AC 24V power source and user can use any power input that is connected with a terminal and a jack. (But, use 1 input)
2-3. Basic Connection

DC 12V/1A adaptor and Junction Box are provided on a purchase. Junction Box consists of 2 data ports. Each data port can be connected with maximum up to 128 cameras and Sub Keyboard terminal.

User can control maximum up to 255 cameras connected by using the exclusive control keyboard. User can connect it maximum up to 1.2km when using TWIST PAIR SHIELD CABLE (AWG23) as a connecting cable.

Reference to the following page

2-4. Connection Diagram

Must use AC 24V power source, current intensity must be less than 1.5A and must use a double winding transformer

Alarm output is tangency output of relay non-load. It can be used up to AC 220V/10A by connecting the load. The switch is automatically turned on when the sensor works and it is possible to cancel by using the controller after a limited time.

The sensor can be connected maximum 4Channels and the camera can be moved automatically to the point by PRESET MODE, if there is any problems.

DATA can be processed by RS485 or RS422 and use parallel connection to use a large quantity of cameras. (Even if it must be used 2–twist paired cable in use of RS422, the terminal port which was connected with RS485 cable port with 1-pair cable when it is not necessary to take a return data from camera.)
3. DIRECTIONS FOR USE

1. DIP SWITCH SETTING

- Set the camera numbers in the state of ADDR, set communication speed, protocol in the state of INIT. This part is each address of camera.

- Set the power of the camera switch-off to control the dip switch and set switch-on after using it. This part is a power switch.

- TERMINAL RESISTOR (DIP SW NO1)
  ~Turn the last camera on the data line as a switch to turn on/off the terminal resistor on. Turn the DIP SW of some of the farthest cameras on in the case of the data lines distributed to several directions.
  (**) The first default is off. (**)

- RS485/RS422 SELECT (DIP SW NO2)
  ~Turn on or off for the suitable data system between RS485 and RS422.
  (**) The first default is RS485 (**)

- ADDRESS/INITIAL SELECT (DIP SW NO3)
  ~Set the DIP SW up in the ADDRESS.
  (~Reference the next page~)

- The first default is ADDRESS (**)~Set the communication speed and Protocol (Demand for the technical inquiry) up in the state of the INITAIL.

- INTERNAL/EXTERNAL (DIP SW NO5)
  ~Use it when selecting INTERNAL and EXTERNAL.
  (**) The first default is INTERNAL (**)

2. HOW TO SET PROTOCOL

<table>
<thead>
<tr>
<th>PROTOCOL</th>
<th>SW1</th>
<th>SW2</th>
<th>SW3</th>
<th>SW7</th>
<th>SW8</th>
<th>SW 'INIT=ADDR'</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-MAX (9600 bps)</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>INIT</td>
</tr>
<tr>
<td>P-P (9600 bps)</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>INIT</td>
</tr>
<tr>
<td>P-P (4800 bps)</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>INIT</td>
</tr>
<tr>
<td>P-P (2400 bps)</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>INIT</td>
</tr>
<tr>
<td>P-D (9600 bps)</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>INIT</td>
</tr>
<tr>
<td>P-D (4800 bps)</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>INIT</td>
</tr>
<tr>
<td>P-D (2400 bps)</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>INIT</td>
</tr>
<tr>
<td>S-T (9600 bps)</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>INIT</td>
</tr>
</tbody>
</table>

① Please the power off.
② Switch Protocol that user wants to change on as above the table.
③ The power on, then the set Protocol and Baud rate are appealed.
④ The power off, if every setting is right. Then the change of Protocol is finished.
⑤ Change NO 3 of S2 to ADDR before the power on, then the power on after setting the address of the camera.
⑥ Try it again with the information as above the table. If something is wrong.
3). SETTING ADDRESS OD DIP SWITCHES
Use DIP switches No.1 to No.8 for ADDRESS, it can be set 1 program to 255 program.

**ADDRESS SETTINGS TABLE**

<table>
<thead>
<tr>
<th>RX NO (DEC)</th>
<th>DIP SWITCH (HEX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON OFF OFF OFF OFF OFF OFF</td>
</tr>
<tr>
<td>2</td>
<td>OFF ON OFF OFF OFF OFF OFF</td>
</tr>
<tr>
<td>3</td>
<td>ON ON OFF OFF OFF OFF OFF</td>
</tr>
<tr>
<td>4</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
<tr>
<td>5</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>6</td>
<td>OFF ON OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>7</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>8</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
<tr>
<td>9</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>10</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
<tr>
<td>11</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>12</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
<tr>
<td>13</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>14</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
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<tr>
<td>15</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
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<tr>
<td>16</td>
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<td>17</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
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<td>29</td>
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<tr>
<td>30</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
<tr>
<td>31</td>
<td>ON OFF OFF OFF ON OFF OFF</td>
</tr>
<tr>
<td>32</td>
<td>OFF OFF ON ON OFF OFF OFF</td>
</tr>
</tbody>
</table>

---

4). HOW TO USE OSD MENU
4-1. How to control OSD menu

**OSD (ON SCREEN DISPLAY) CONTROL**
User can call the main menu up on the screen by OSD menu.
- User can not only set Preset, Group, Tour, Swing, Trace functions of the camera up by the menu, but also set them up by shortening keys

**Accessing OSD MENU**

(1) The menu is displayed on the screen with the key tone when user presses No.1 and menu key.

**< CAMERA SETUP p1 >**

1. ID Set : Press F/F Key
2. OSD Display : ID = Status
3. Back Light : Off
4. AGC level : 20dB
5. Shutter speed : Auto
6. Sharpness level : 010
7. Brightness : 050
8. Flickerless : Off

**NEXT MENU PAGE**

**Cancellation of OSD MENU**

- Right and Left moving of Cursor : JOYSTICK or JOYSTICK
- Feed letters into system : JOYSTICK or JOYSTICK
- Selection of up and down menu :
- Changing of setting :

---

***- No.1 is changed to No.65 and the last No.65 is changed No.128 when No.7 DIP SW is on.
- No.1 is changed to No.129 when No.7 DIP SW is off and No.8 DIP SW on.
- No.1 is changed to No.193 and user can set up to maximum 255 ADDRESS when No.7,8 DIP SW are on.***
4-2. Functional Descriptions of each Menu

1. ID SET
User can set ID of the camera up.
Move to No.1 menu and the screen moves as following when user presses F/F key.

User can choose letters that they want, if user control a joystick up/down/right/left,
and user can reselect the previous letters, if user presses Z/I, Z/O or turn the head of
the joystick to right/left

* • is not displayed on the screen as a blank
letter, user can input letters in Japanese and
in Chinese if user moves the joystick down
continuously.

2. OSD DISPLAY
Set up whether user sets ID and STATUS to display on the screen in normal operating.

ID + Status : ID and Status displayed on the
screen
ID only : Only ID displayed on the screen
Status only : Only status displayed on the
screen
All off : Nothing displayed on the screen

3. BACK LIGHT
Set up backlight compensation mode.

On : It can change a dark subject to a dis-
tinguishable subject by backlight.
Off : Cancellation of backlight compensation
mode.

4. AGC LEVEL
AGC(Automatic Gain Control)– It adjusts
the amount of video amplification to
maintain a full 1-volt peak-to-peak
video signal output automatically.

Range : AUTO, 8dB, 10dB, ....38dB

5. SHUTTER SPEED
As a setting shutter speed mode, it can
distinguished a fast moving subject easily by means of shutter
speed up.

Attention- The illumination of the camera
decreases if shutter speed is up.
* The state of first default is 'AUTO'.
* It can be worked in the state of Flickerless 'off'.

Range : AUTO, 1/125, 1/150, 1/200, ....1/10000

6. SHARPNESS LEVEL
Compensation of the shape of a subject

Range : 0 – 14, Default : 10

7. BRIGHTNESS
Control brightness of a screen.
The screen gets dark because an iris
is closed as the numerical value is low, whereas the screen gets bright because
an iris is opened as the numerical value is high.

Range: 0–99, Default: 50
8. Flickerless

Tremor on the screen is removed in the state of Flickerless ‘ON’, the shutter speed, at the same time, is fixed in 1/120sec in NTSC and in 1/100sec in PAL.

- NEXT MENU PAGE

9. SSNR level

It can remarkably reduce noise of minimum illumination by super noise removable technique and also file size becomes smaller while DVR is being recorded by the effective reduction of noise.

- Off, Low, Middle, High

10. White Balance

It prevents from that white color is changed as illumination, user can set it up in 2 ways.

- INDOOR, OUTDOOR

11. Focus Mode

Change Focus Mode to hand-worked or auto.

- OneShot : Auto Focusing mode works during non-working after zoom is worked.
- Auto : It adjusts the focus automatically as it monitors the screen.
- Manual : User can control the focus by hand-worked.

12. Zoom Max Limit

It is used when user corrects and limits the extensional range of the focus as a function to set the maximum value of zoom.

- Off, x46 – x230

The camera is reset when user is out of Menu mode after end the setting, and the changed magnification is registered in the camera.

13. DSS Control

An object becomes clear as the field value gets higher in illumination, whereas a moving object becomes dim.

- Range : Off, 2 – 128 field

14. Day & Night

An object becomes clear as the field value gets higher in illumination, whereas a moving object becomes dim.

- Auto : DAY & NIGHT mode is worked automatically, if it is dark.
- On : Change into DAY & NIGHT mode by hand-worked
- Off : Set DAY & NIGHT mode ‘off’

Move the joystick down then choose "NEXT MENU PAGE" on the screen to move next page.
15. STABILIZ On/Off
There is some tremble as zoom magnification is high, the function can compensate the tremble.

- On/Off

16. Motion Detection
Set Motion 'On' after move the camera where user wants. It displays the message 'Motion Detected' on the screen when the moving of an object is sensed on the same screen.

17. PRESET SET & RUN PAGE
It is a function to set and operate Preset, Group, Tour.

- User can see the screen when moving the joystick to Right/Left after fixing the cursor on the menu.

PRESET SETUP PAGE
- Preset set CH : 001
- Preset PTZ SET
- Preset Swing SET
- Group SET CH : 001
- Tour SET Group
- Run Function : UNDEF

Press F/F Set Mode

**SET CH:001[PRESET:001]**

- #1#2#3#4#5#6#7#8#9#0#abcde#fghijklmnopq rstuvwxyz[\_/]...abcde...fghijklmnopqrstuvwxyz

Zoom in/Out, OSD Shift
Press SAVE F/F, ESC F/N

F/F Save Return, F/N Select

P/T Swing : TILT/PAN
- Start Preset : 000 (1-255)
- End Preset : 000 (1-255)
- Swing Time : 000 (1-120)
- Swing Speed : 000 (1-64)

Press F/F Save, F/N(ESC)

P/T Swing : TILT: Observe up and down PAN: Observe right and left
- Start Preset: Preset number of the location to be started an observation
- End Preset: Preset number of the location to be ended an observation
- Swing Time: Delay time after moving
- Swing Speed: Move speed

Selection up/down menu

Change of a setting

GROUP SET CH:001

- Preset set CH : 001
- Preset PTZ SET
- Preset Swing SET
- Group SET CH : 001
- Tour SET Group
- Run Function : UNDEF

Press F/F Save, F/N(ESC)
**GROUP SET**
User can set maximum 12 groups. Select a channel then move to next page after pressing F/F key.

- The Preset point in the Group that 12 Preset points are set is observed repeatedly and in order with regular speed and time.

**[P ] :** Set Preset (1~250)

- [S ] : Move speed (1~64)

- [T ] : Delay time

**SUMMARY**

- [ ] Set Preset
- [ ] Set move speed
- [ ] Delay time

### Tour Setup Page

**Tour Set Group :** User can set continual Group motion that can be put 12 Groups in 1 Tour. Move to the setting page if user presses F/F key on this menu.

- The Group user wants to set must be set first.

Setting is only possible when Preset is set first in the state of setting of Swing, Group, Tour; otherwise, it displays the message "Sony Unidentified."**

**Run Function :** Operate one of SWING/GROUP/TOUR/TRACE. (It is operated automatically after end of OSF menu)

### Camera Setup p3

16. Motion Detection : On

17. PRESET SET & RUN PAGE

18. TRACE SET PAGE

19. ALARM CH ON/OFF PAGE

20. ALARM PRESET SET PAGE

### P/T/Z Trace Setup

- Set / Stop order with a control keyboard without menu on the screen.

- Preset channel 1~250 +

- Swing channel 1(PAN) or + 2(TILT) +

- Group channel 1~12 +

- Tour channel +

### Camera Setup p3

16. Motion Detection : On

17. PRESET SET & RUN PAGE

18. TRACE SET PAGE

19. ALARM CH ON/OFF PAGE

20. ALARM PRESET SET PAGE

### Alarm Channel on/off

- CH On/Off : Alarm Input - Each channel can be ON/OFF

- Alarm Relay : It can be set On or not when ALARM OUTPORT operate wrong.

- Active Alarm : It selects ACTIVE OPEN or ACTIVE CLOSE by tangency when something is wrong. It is ACTIVE when ALARM INPUT is OPEN or ACTIVE OPEN. It is ACTIVE when ALARM INPUT is CLOSE in ACTIVE CLOSE.

- Resume Time Set : It can select the delay time that the camera move to the place alarming to observe where wrong signal is sensed. User can set it for 1sec to 180sec and operate GROUP, TOUR, SWING again in a preset time.

### 18. Trace Set Page

User can regenerate and save a change of the unrestricted location of ZOOM In/Out and a position of the camera by hand-worked control with a joystick.

User can see the screen when moves the joystick to Right/Left after fixing the cursor on the menu.

- How to set TRACE

  Move to [SET] after pressing .

  Check – Control scenes that user wants by hand-worked with a joystick after the message "Set Trace: 00%" on the middle of the screen. If user finishes this part.

  Move to [SAVE] with . It goes a higher menu after being saved data if user presses with a display of the message "Save TRACE."
22. AUTO TILT MOVE
The PAN is turned in a 180° degree arc automatically when the angle of the camera moves down to the maximum degree, therefore, it is possible to track objects continuously.

23. SMART PANTILT
It is a function that PANTILT speed is getting slower as Zoom in.
It is hard to observe objects with the high PANTILT speed in operating of Zoom In. This function makes the speed less automatically for the effective observation.

24. MANUAL P/T SPEED
User can control the maximum speed in controlling of up and down. It can be set Low, Medium, Max and one turn (360°/sec) is possible in Max.

25. LANGUAGE
English, Português, Polish

26. FACTORY RESET WARNING
Please be careful of that all setting data of OSD MENU are reset into the first default when operates FACTORY RESET WARNING.
The setting data of Preset, Swing, Group, Tour, Trace, also is deleted all.

4-3. Functional Setting. Operating/Deletion by the Keyboard

1. Preset setting
User can set Preset point up to 250.

Preset setting can be set 1 to 250 sequentially after moves the camera to the place to will be memorized.
2. Swing setting

1. Swing Input

2. Operation of Swing

3. Group setting

2. Preset Move

3. Delete a separate Preset

4. Delete all Preset

2. Swing setting

1. Swing Input

2. Operation of Swing

3. Group setting

"Presets" instruct movement to the fixed point if user presses P-SET button after pressing Preset number that user wants.

"Delete a separate Preset"

Go on in order as follow when the sound is heard in 3 seconds after pressing

Ex) Delete 5th Preset

(Waiting for 3 seconds)

Go on in order as follow when the sound is heard in 3 seconds after pressing

Set the delay time (1~127sec)

Set the move speed (1~64 steps)

Start a Group

Start a Group setting mode

Select a Group in 1~12

Select and Input Preset in 1~250

Select a Group in 1~12 Groups

Repeate input in continual input
4-4. OSD MESSAGE DISCIPTION

1. PRESET MESSAGE

- **CAM-001**
  - Set PST 001
  - User can check that Preset No.1 is saved as an appeared message in Preset set.

- **CAM-001**
  - PRESET 001
  - It is displayed when moving to the preset No.1.

- **CAM-001**
  - Clear PST 001
  - It is displayed when user deletes PRESET No.1. The message 'All clear PRESET' is displayed when user delete PRESET data all at once.

2. SWING MESSAGE

- CAM-001
  - [SWING] PRESET-001
  - It informs user that is RUN SWING mode in SWING RUN.
3. GROUP MESSAGE

CAM-001
GP-01 P002,T001,S64

As the message in the time of operation of GROUP SET, “GP-01” means group No.1, “P002” means PRESET No.2, “T001” means delay time is 1sec and “S64” means move speed is 64.

CAM-001
{Save Group 01}

As the message in the time of completion of GROUP SET, it is displayed GROUP No.1 was saved.

CAM-001
{GROUP[01] PRESET-001}

It is displayed in the time of operation of GROUP RUN, it shows GROUP No.1 will move to No.1

4. TOUR MESSAGE

CAM-001
Set Tour GP-01

As the message in the time of operation of Tour set, “GP-01” means GROUP No.1 and it shows that GROUP No.1 was saved.

CAM-001
{TOUR&GP[01] PRESET-001}

As the message in the time of operation of Tour RUN, it will show that moving to PRESET No.1 in GROUP No.1.

CAM-001
{Clear tour&GRP}

It shows the data in GROUP and TOUR saved was deleted.

5. Spiral SEQ MESSAGE

CAM-001
{RUN SPIRAL}

- RUN SPIRAL : It is the Message in the time of operation of SPIRAL SEQUENCE. It observe all area of an object in three dimensions that SPIRAL SEQUENCE CAMERA moves to upper then down slowly in a spiral direction.

5. TROUBLE SHOOTING

Caution in use
- Make sure that turn the power switch off before installation.
- Avoid the places where is the high/low temperature and humid.
- Use a power supply of AC24 / 1.5A output.
- Please be careful of that you connect respective wires without mismatching in installation.
- Supply to power sources after checking the state of insulation of cables which is connected to the exterior.
- Please keep the product from a strong shock or vibration which is the cause of troubles.

Checking in under using

<table>
<thead>
<tr>
<th>TROUBLE SHOOTING</th>
<th>CHECK POINT</th>
<th>MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power is not turned on.</td>
<td>Does the electric power supply into the product well?</td>
<td>Check that LED at CONNECTOR of UPPER COVER has been lit.</td>
</tr>
<tr>
<td>Does not work in Power On.</td>
<td>In operating, does the LED beside POWER SW light on red?</td>
<td>Check the status of DATA CABLE. if it is not lit. Check ADDRESS and DIP SW of communication speed setting, if it is not lit.</td>
</tr>
<tr>
<td>Poor condition of PAN/TILT</td>
<td>Have you selected to RS485 or RS422 right?</td>
<td>Check the status of OPTION DIP SW No.2</td>
</tr>
<tr>
<td>A image is not clear or black lines are displayed on the screen.</td>
<td>Have you turned the ending terminal register “ON”?</td>
<td>Turn ‘ON’ the ending terminal register of the camera which is set in farthest away.</td>
</tr>
<tr>
<td>A Focus is not clear in the controlling of hand–worked.</td>
<td>Have you changed MINIMUM DISTENCE in the SET MENU?</td>
<td>Change MINIMUM DISTENCE in the SET MODE.</td>
</tr>
<tr>
<td>The message “P/T POSITION ERROR” is displayed continuously.</td>
<td>Is the camera pressed by something heavy or put it between others?</td>
<td>Check that a rotation of the camera’s body works smoothly and remove a object that hinders the operation of the camera.</td>
</tr>
<tr>
<td>The message ‘SORRY NOT MEMORY’ is displayed continuously</td>
<td>Have you set the related functions?</td>
<td>Please refer to the manual book and setting the function you want.</td>
</tr>
<tr>
<td>ALARM RELAY is not changed to ‘ON’ in the state of being alarmed.</td>
<td>Have you set the ALARM RELAY ‘ON’ in the SET MODE?</td>
<td>Make sure ALARM RELAY ‘ON’ in the SET MODE.</td>
</tr>
<tr>
<td>In abnormal condition, even if the sensor is well.</td>
<td>Is it correct ALARM ACTIVE setting status and the sensor is either opened or closed?</td>
<td>Fit ALARM ACTIVE MODE setting with the connection of the SENSOR in the SET MODE. (it means either sensor is opened or closed)</td>
</tr>
<tr>
<td>PRESET point is different or out of moving when the ALARM occurs.</td>
<td>Is it correct ALARM ACTIVE setting status and the sensor is either opened or closed?</td>
<td>Check the status of the ALARM PRESET setting in the SET MODE.</td>
</tr>
<tr>
<td>The warning does not work from the keyboard when the ALARM occurs.</td>
<td>Have you used the exclusive control keyboard?</td>
<td>The warning is only reacted to the exclusive control keyboard.</td>
</tr>
</tbody>
</table>
5. DIMENSIONS

Wall Bracket (DYN-30EWP)

Ceiling Bracket (DYN-20CP)

In-Ceiling Bracket (DYN-20ICB)

Wall Bracket (DYN-20WP)
6. ASSEMBLES

**DYN- SD/EXT/A (Wall sty. DYN-30EWP)**

1. Remove the main body of the camera from the housing.
2. Fix the upper cover into a wall bracket with turning it in the same direction as the picture.
3. Connect the data cable, video cable and power source cable.
4. Unite the transparent bubble to the housing.
5. Unite the body of the camera to the housing.

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- Fix four bolts after connecting each line and block up the hole of the bracket’s body with 34mm BLANK RUBBER.
- Connect the line as above the picture when you set it in the concrete structure such as the wall and connect TAB/P1/11° FLEXIBLE CONNECTOR(28 #).
DYN-SD/EXT/A (Ceiling sty. DYN-20ECP)

1. Remove the main body of the camera from the housing.
2. Fix the pole box on the ceiling.
3. Turn the ceiling pole to connect.
4. Turn the joint couple to connect.
5. Turn the cover couple to connect.

DYN-SD/EXT/A (Ceiling sty. DYN-20ECP)

1. Connect the data cable, video lines and power source cable.
2. Unite the transparent bubble to the housing.
3. Unite the body of the camera to the housing.
4. Turn the cover couple to connect.
# 7. Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DYN- SD/INT/A (INDOOR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal system</td>
<td>NTSC / PAL</td>
</tr>
<tr>
<td>Image sensor</td>
<td>1/4” Sony HAD CCD</td>
</tr>
<tr>
<td>Effective pixels</td>
<td>768(H) X 494(V), 752(H) X 582(V)</td>
</tr>
<tr>
<td>Horizontal resolution</td>
<td>More than 520TVL(Color Mode) / More than 570TVL(B/W Mode)</td>
</tr>
<tr>
<td>Lens</td>
<td>23x Optical zoom, f =3.84 - 88.4mm</td>
</tr>
<tr>
<td>Digital zoom</td>
<td>10x (Total zoom 230x)</td>
</tr>
<tr>
<td>Angle of view</td>
<td>H:52.2” (W) to 2.36”(T), V:40.252” (W) to 1.78” (T)</td>
</tr>
</tbody>
</table>
| Minimum illumination | 0.7Lux @F1.6 (Normal Color Mode)  
0.1 Lux @F1.6 (B/W Mode)  
0.007 Lux@F1.6 (Sens-up Mode) |
| Luminance S/N ratio | More than 50dB (AGC Off) |
| Video output | 1 Vp-p Composite video output 75Ω |
| Focus mode | Auto / Manual / Oneshot |
| Back light | Off / Low / Middle / High |
| DIS | On / Off Selectable |
| SSNR | Off / Low / Middle / High |
| Shutter speed | 1/60 - 1/120,000 sec | 1/50 - 1/120,000 sec |
| White balance | Indoor / Outdoor |
| Alarm in/out | 4 Inputs / 1 Relay Output |
| Pan/Tilt angle | 360° Endless / 92° |
| Pan speed | 0.1” – 180”/sec (64 Levels) |
| Preset point | 250 Presets |
| Preset Speed | Max 180”/sec (64 Levels) |
| Communication system | RS–485 / 422 |
| Operating temperature | – 10°C – 50°C (–14°F – 122°F) |
| Storage temperature | – 5°C – 60°C |
| OSD | Built-in |
| Operating humidity | Less than 90%RH |
| Dimensions | 188.7mm(Diameter) x 216.9(Height) mm |
| Weight | About 3.1Kg (Without adaptor) |
| Construction | ABS body, Clear vandal bubble (PC) |
| Power consumption | 18W (Max) |
| Power supply | AC24V, 60/50 Hz |

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DYN- SD/EXT/A (OUTDOOR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>–40°C – 50°C (~40°F – 122°F)</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>Less than 100%RH</td>
</tr>
<tr>
<td>Dimensions</td>
<td>216.8mm(Diameter) x 317.7(Height) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>About 5.2Kg (Without adaptor)</td>
</tr>
<tr>
<td>Construction</td>
<td>Aluminum body, Clear vandal bubble (PC)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>21W (Max)</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC24V, 60/50 Hz</td>
</tr>
</tbody>
</table>

*It is changeable to improve the quality of the product without a notice.*

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