TVCC75100
TVCC75200

User manual

Version 6/2011

Original English user manual. Keep for future use.

GB Introduction

Dear Customer,

Thank you for purchasing this product.

This product meets the requirements of the applicable European and national guidelines. The corresponding declarations and documents can be obtained from the manufacturer (www.abus-sc.com).

To maintain this condition and to ensure risk-free operation, you as the user must observe these operation instructions!

Before initial start-up, read through the complete operating instructions observing operating and safety instructions.

If you have any questions, please contact your installer or your local dealer!

Disclaimer

This user manual was prepared with greatest care. If you should notice omissions or inaccuracies, please inform us about these on the back of this manual given address.
The ABUS Security-Center GmbH & Co. KG assumes no liability for technical and typographical faults and reserves the right to make at any time modifications to the product or user manual without a previous announcement.
The company is not liable or responsible for direct and indirect subsequent damages which are caused in connection with the equipment, the performance and the use of this product.
No guarantee for the content of this document is taken.

Important safety instructions

The warranty will expire for damage due to non-compliance with these operating instructions. We shall not be liable for any consequential loss!

We do not accept liability for damage to property or personal injury caused by incorrect handling or non-compliance with the safety-instructions. In such cases the warranty will expire.

Dear customer,
The following safety instructions are intended not only for the protection of your health, but also for the protection of the device. Please read through the following points carefully:

- There are no parts on the inside of the product which need to be serviced. Apart from this, the license (CE) and the guarantee/warranty will lapse if you open/take the product apart.
- The product will be damaged even it falls from a low height.
- This device can be used in inside as well as outside.
- During the installation of the camera please take care that direct sunlight cannot fall onto the image sensor of the device. Please follow the installation instructions in the corresponding chapter of this user manual.

Avoid using the device under the following unfavorable ambient conditions:

- wetness or excessive air humidity
- extreme cold or heat
- direct sunlight
- dust or combustible gases, vapors or solvents
- strong vibration
- strong magnetic fields, such as those found in the vicinity of machinery or loudspeakers
- The camera should not positioned with opened iris towards the sun – this can lead to the destruction of the sensor.
- the camera may not be installed on unstable surfaces

General safety instructions:

- Do not leave packaging material lying around carelessly. Plastic/ foil/bags and polystyrene parts etc. could become dangerous toys for children.
- For safety reasons don't give the camera into child hands due to them being able to swallow small parts.
- Please do not insert objects through the openings into the device.
- Use only accessories which are specified by the manufacturer.
  Please do not connect incompatible parts to the device.
- Please pay attention to the safety instructions and user manuals of the other connected devices.
- Check the device for damages before installation. If this should be the case please do not use it.
- Please adhere to the operational voltage limitations listed in the technical data. High voltage could destroy the device and pose a health hazard (electric shock).

During the installation into an existing video surveillance system make sure that all devices are disconnected from the low and supply voltage circuit.

If in doubt allow a professional electrician to mount, install and wire-up your device.
Improper or make-do electrical connection to the mains does only represent at threat to you but also to other persons.
Wire-up the entire system making sure that the mains and low voltage circuit remain separated and cannot come into contact with each other in normal use or due to any malfunctioning.

Table of contents

1. Scope of Delivery

No.	Item	Qty.
1	Pan / Tilt dome camera	1
2	Ceiling Mount Bracket	1
3	24 V AC Power Supply	1
4	Wrench	1
5	Screws (Ø 3x6 screw)	2
6	Screws (Ø 4x16 screw)	5
7	Safety Wire	1
8	Manual	1
9	Ceiling cover	1
10	Cable ties	5
11	Terminal Block 2 PIN	2
12	Terminal Block 3 PIN	1
13	Terminal Block 5 PIN	1
14	Terminal Block 6 PIN	1

2. Features

The Pan/Tilt dome camera has among other the following functions:

- Speedy response with 27 respectively 36 times continuous auto-focus zoom lens and 12 times Digital Zoom
- Up to 560 TVL resolution
- Password protection
- Low-Noise-Technology for extremely quiet movement with 0,024° accuracy
- Slip ring for long life time (20 million rotate ring tested)
- Advanced DSP camera, including Auto White Balance, Backlight Compensation and Auto Iris Control
- 165 Preset Points Setup
- 8 programmable group tours, each one with up to 60 preset steps
- Continuous Auto Focus
- 350°/sec pan and 250°/sec tilt speed on preset
- Built in 4 Alarm Inputs and 2 Relay outputs (NO/NC)
- Remote control via RS-485 (up to 127 Speed Dome Cameras controllable)
- Power misconnection protection on terminal
- Changeable IR-filter for true day/night
- Supports PECLCO (D and P) and Maxpro protocol

3. Components Naming

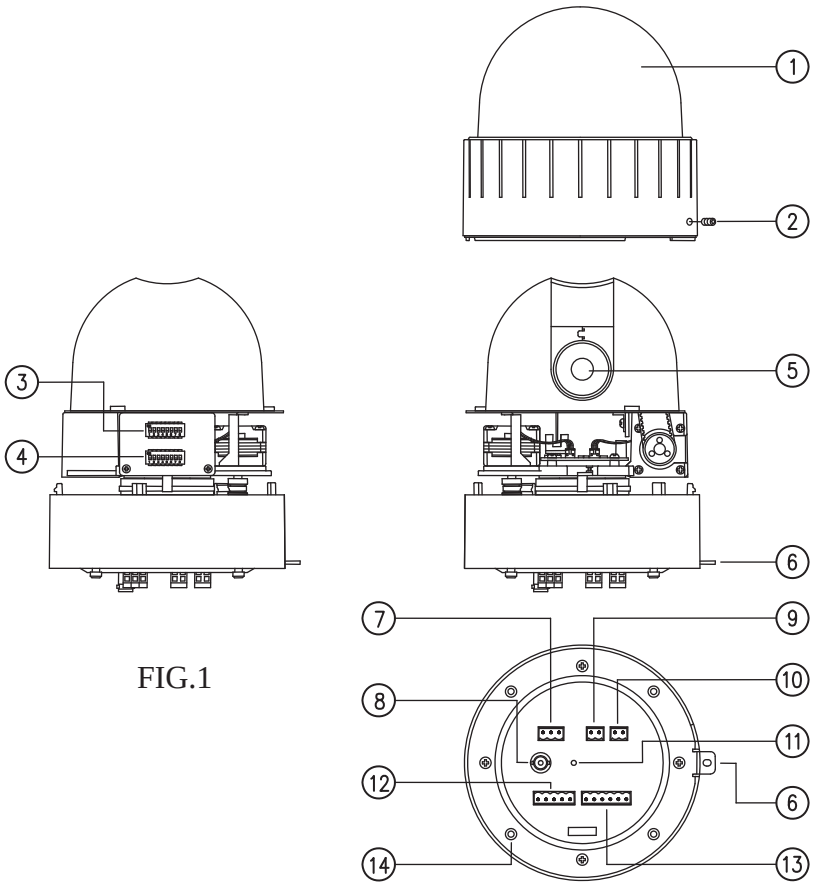


FIG.1

1. Bubble	8. Video Output
2. Lock Screw	9. Loop RX
3. DIP Switch 1	10. Loop TX
4. DIP Switch 2	11. Power LED
5. Camera	12. Aux terminal
6. Lock Holder	13. Alarm terminal
7. Power input	14. Mount Holder

4. Installations Instructions

4.1 Connection Method

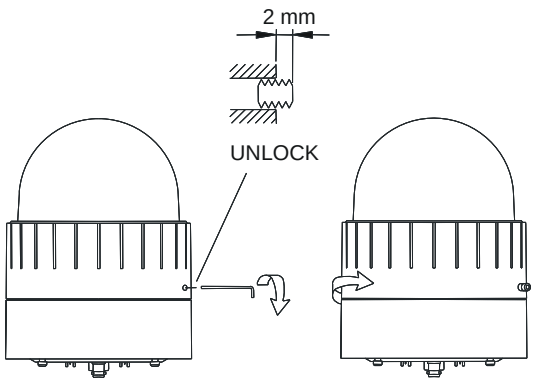


FIG.2

FIG.3

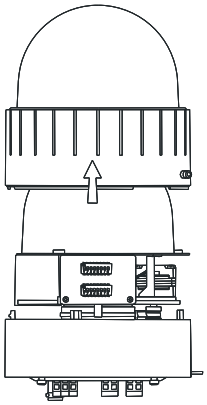


FIG.4

1. To separate camera body loosen Lock Screw (2 mm), turning the wrench counterclockwise. (Don't pull the screw out) (FIG. 2)
   Separate the upper body from the lower body by turning counterclockwise. (FIG. 3, 4)
2. After separating set DIP switches (Refer to the page 78)

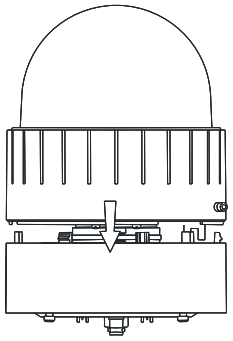


FIG.5

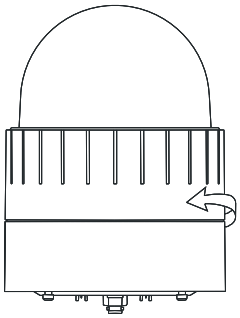


FIG.6

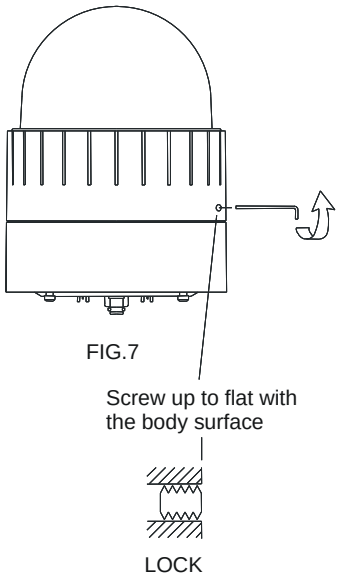


FIG.7

3. To assemble camera body rotate the upper body clockwise to assemble both bodies. (FIG. 5, 6). Screw up turning the wrench clockwise. (FIG. 7)
   Don't screw to tight, it can cause defects.

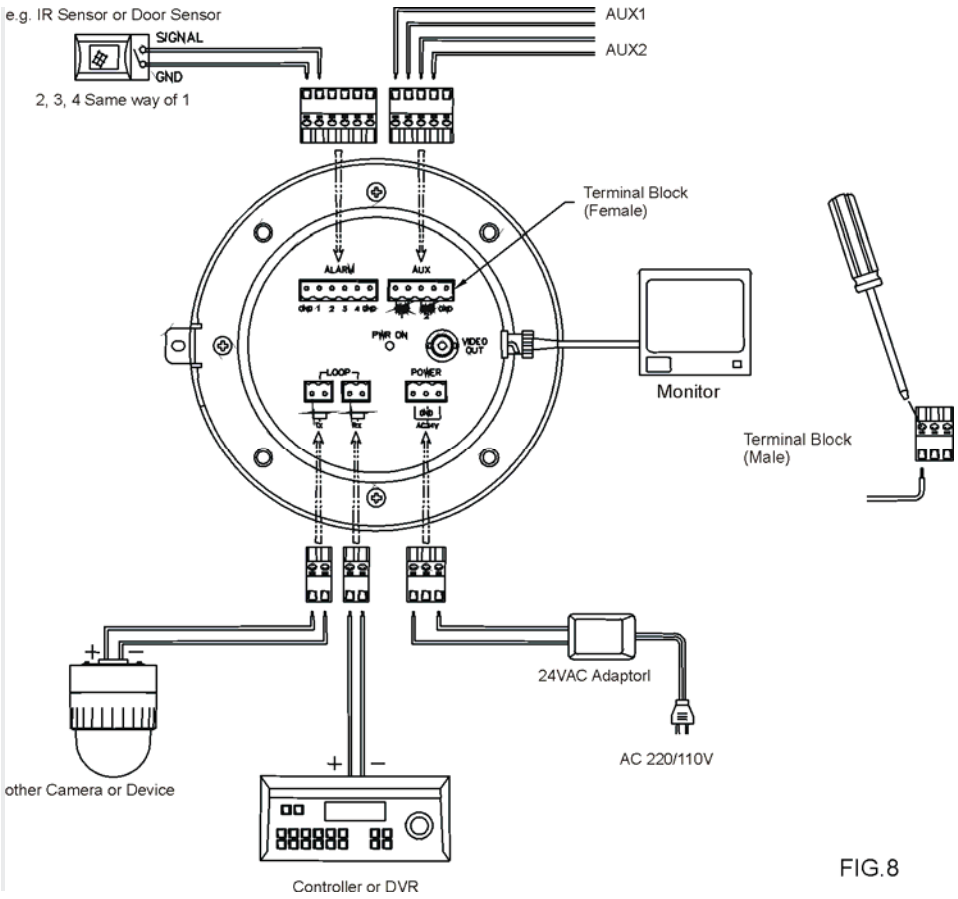


FIG.8

1. Alarm**:** 4 Alarm inputs
2. AUX: DC 12 V with up to 1 A can be used at the AUX terminal.
   Possible applications using AUX are e.g. turning on a light or remote control.
3. TX: TX transmits data signal received from RX to other equipment.
   TX is convenient terminal for daisy chain connection.
4. RX: RX receives control signal from controller or DVR.
5. Video out: BNC connector (1Vp-p)
6. Power: AC 24 V 1.0 A adaptor
   * Do not connect power supply to the middle screw of the power terminal.
   Middle screw is for grounding only.
7. Power ON LED

4.2 Ceiling mount type

The Ceiling mount type is for suspended ceilings with at least 4 cm distance between structural slab and ceiling. The complete camera body will be visible.

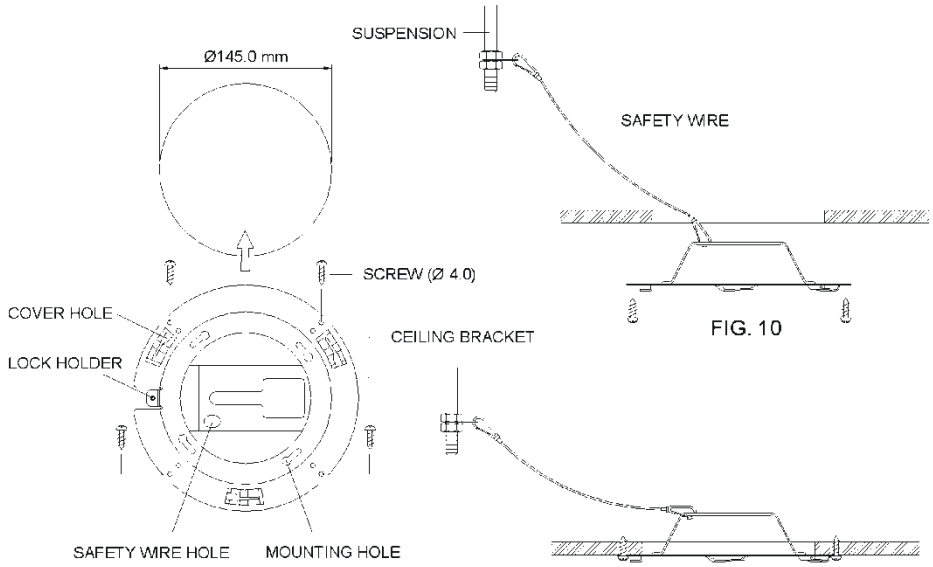


FIG. 9

FIG. 10

FIG. 11

1. Select a ceiling board which is strong enough to hold a weight of approximately 2 kg.
2. Prepare a Ø 145 mm hole in the ceiling board. (FIG. 9)
   Fix the safety wire to a suspension to prevent camera from falling.
   Fix the other side of safety wire to the safety wire hole. (FIG. 10)
3. Fix the Ceiling Mount to the Ceiling with 4 screws (Ø 4.0 mm tapping screw). (FIG. 11)
4. Tie the wire using the cable ties. (FIG. 12)
5. Mount the wires through the square hole.
   Place the Camera Mount Holder in the Bracket Mount Hole. (FIG. 12)
   To insert them easily, keep 10° interval of Lock Holder1 and Lock Holder2. (FIG. 13)

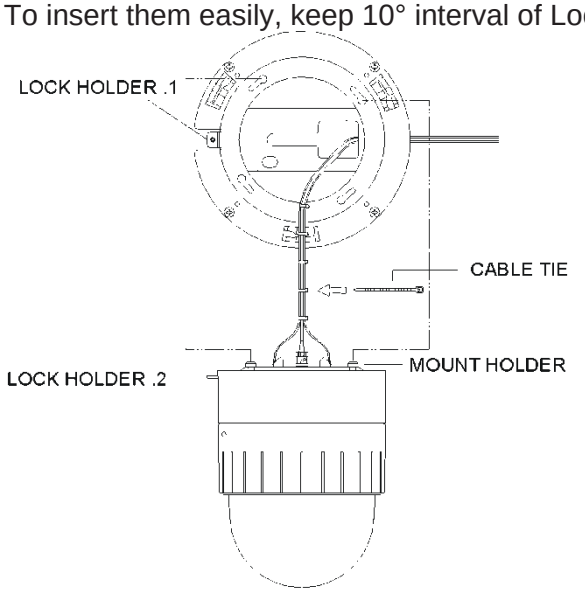
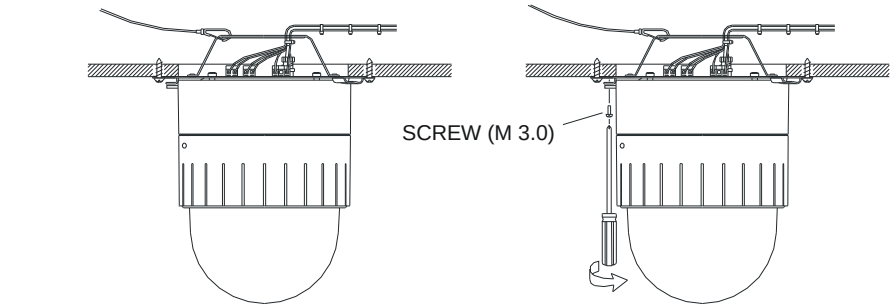


FIG.12

6. To assemble, rotate the Camera clockwise 10°. (FIG. 13)
7. Screw up Lock Holders with screws (M3).



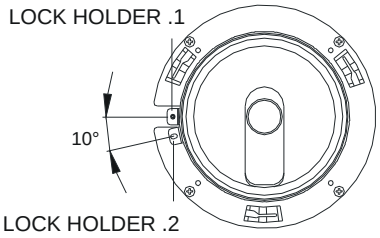


FIG.13

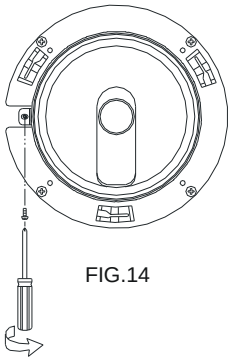


FIG.14

8. Assemble the Cover.
   Fix three Cover Locks to three Cover Holes rotating clockwise. (FIG. 15)

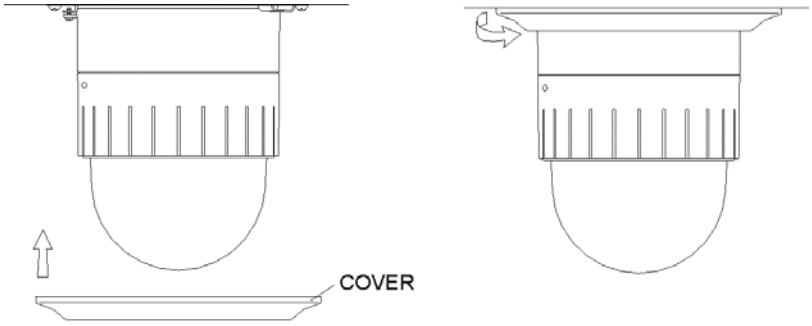
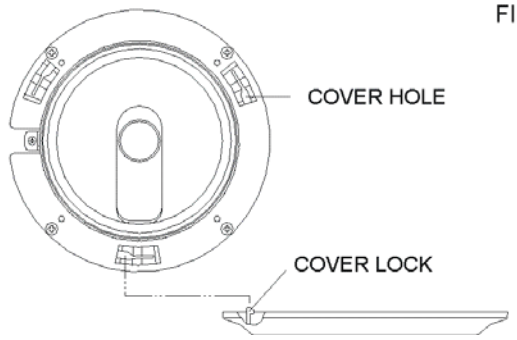
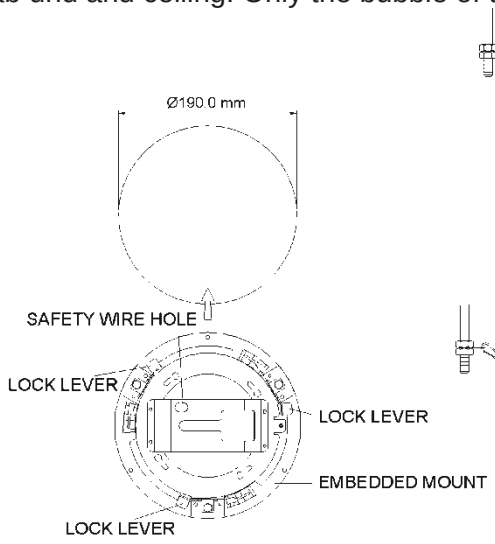


FIG.15



4.3 Embedded Mount Type

TV7607 (Embedded mounting frame) is not scope of delivery.
Embedded mount frame is for suspended ceilings with at least 14 cm distance between structural slab und and ceiling. Only the bubble of the camera will be visible.



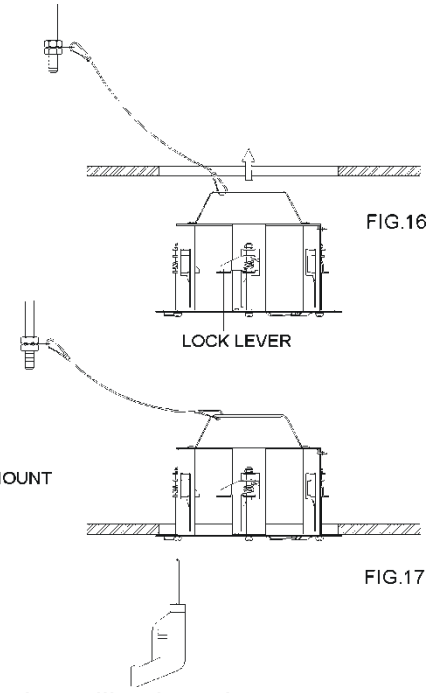


FIG.16

FIG.17

1. Prepare an Ø 190 mm hole in the ceiling board.
   Fix the safety wire to a suspension to prevent camera from falling.
   Other side of safety wire is fixed to the safety wire hole. (FIG. 16)
2. Fold the Lock Levers and insert the Bracket into the Ceiling Hole.
   Fix the Bracket to the ceiling using the driver. (FIG. 17)
3. Hereafter installation is the same way as the Ceiling Mount Type.
   (Refer to the page 51 and 52)

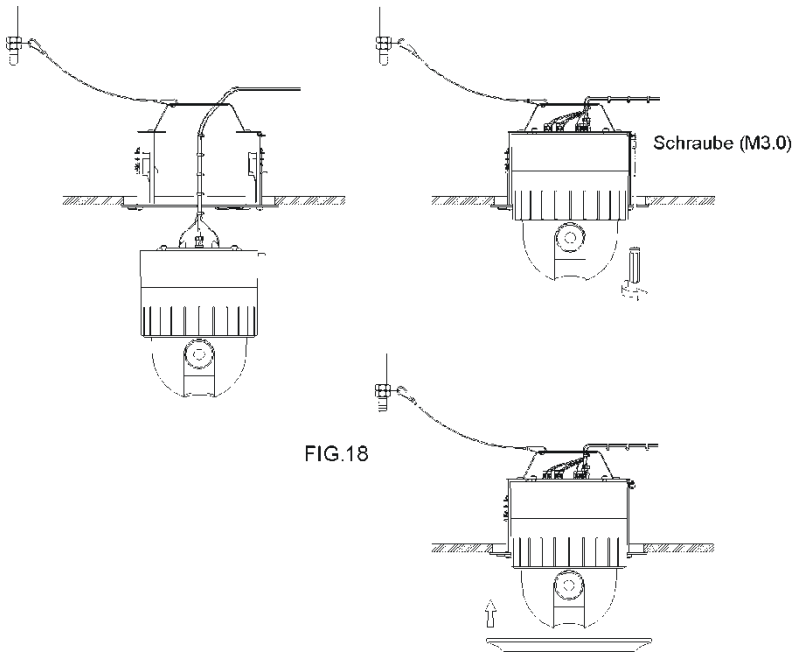
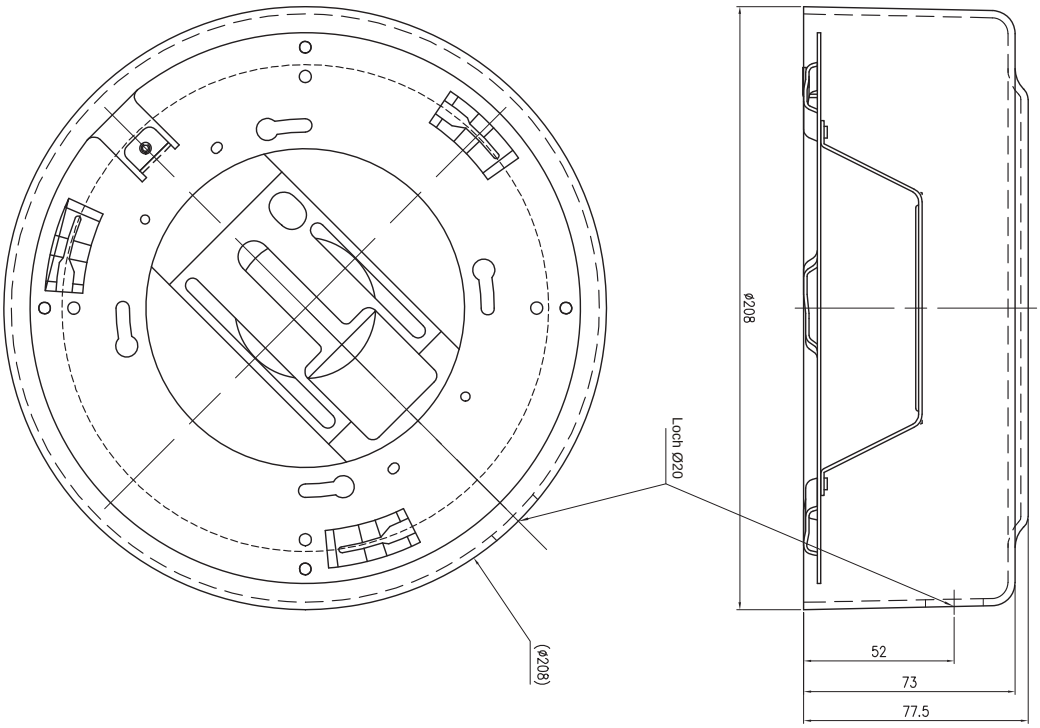


FIG.18

4.4 Indoor Adaptor

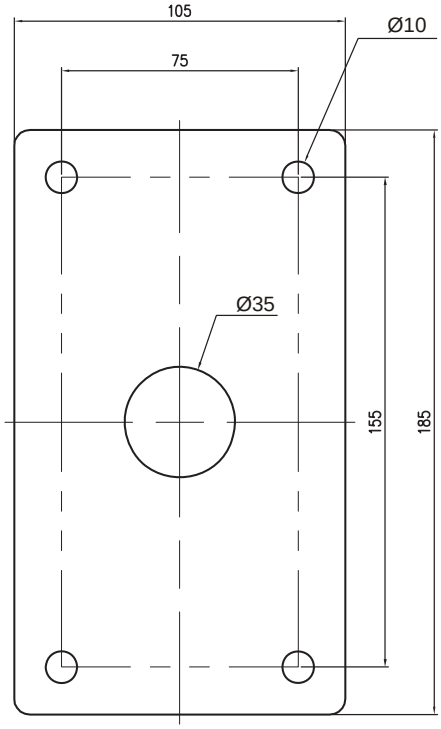
Indoor Housing Adaptor (TV7608) is not in scope of delivery. Indoor adaptor is for on-ceiling mounting of cameras.



1. Hold the indoor adapter with the open side facing down in the position you would like to mount the camera on the ceiling. Use a pen to mark the three drill holes on the ceiling.
2. Drill the three holes and insert a wall plug which is suitable for the ceiling material. Make sure that the wall plug is able to bear a load of approx. 3 kg.
3. Fit the indoor adapter exactly on the drill holes and fasten the adapter with appropriate screws. Use nuts to prevent slipping.
4. Connect the individual lines to one another using the cable strap and guide the cable through the opening in the indoor adapter.
5. Use the four screws supplied to attach the retaining plate of the mount type (included in the camera's scope of delivery) to the indoor adapter. To do this, place the mount type plate on the indoor adapter so that the external drill holes of the plate are exactly on the four spacer threads of the indoor adapter and screw the four screws in.
6. Proceed in the same way as points 6 to 8 on pages 216 and 217.

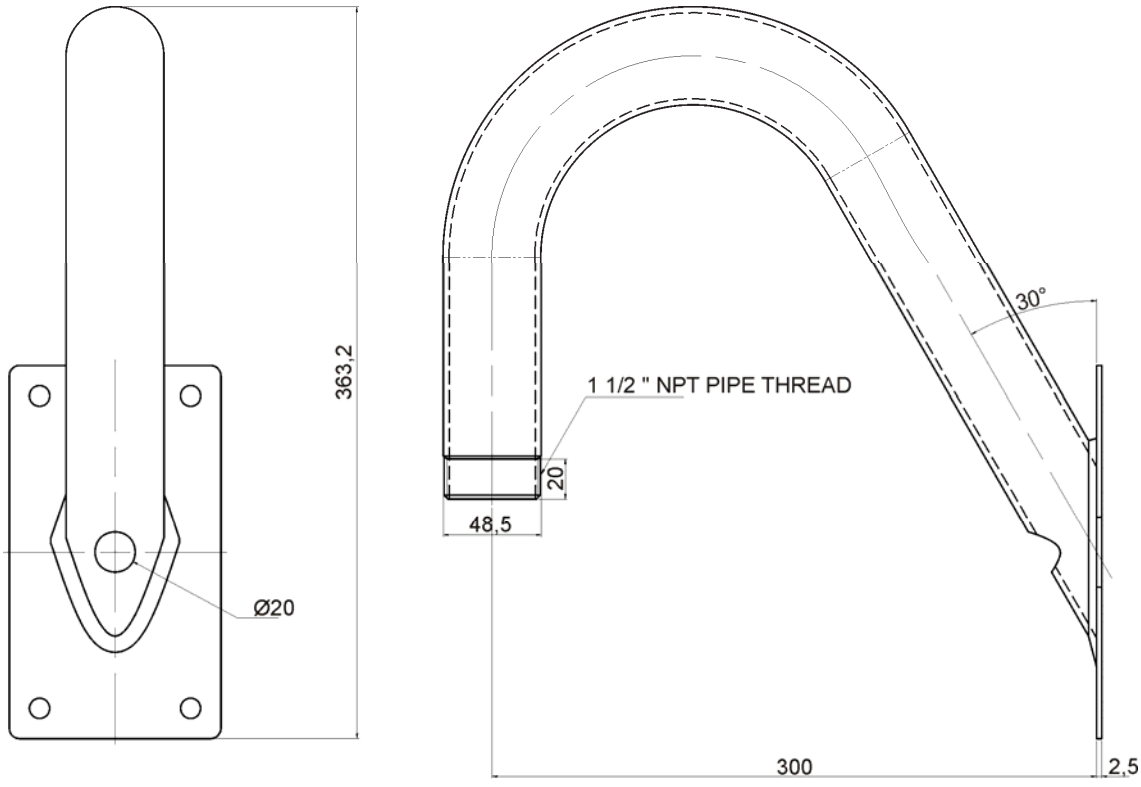
4.5 Dropped ceiling mount bracket or Goose neck mount bracket

In combination with Indoor Adaptor (TV7608) it is possible to use Dropped ceiling mount bracket (TV7609) or Goose neck mount bracket (TV7612) indoor.
These optional accessories are not in scope of delivery.

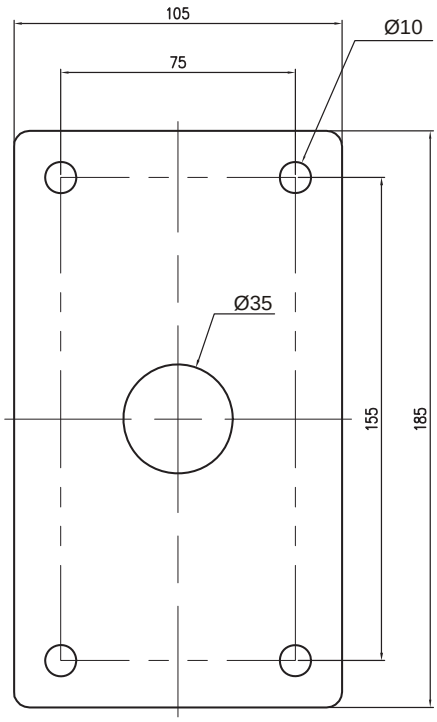


Drilling distances TV7612

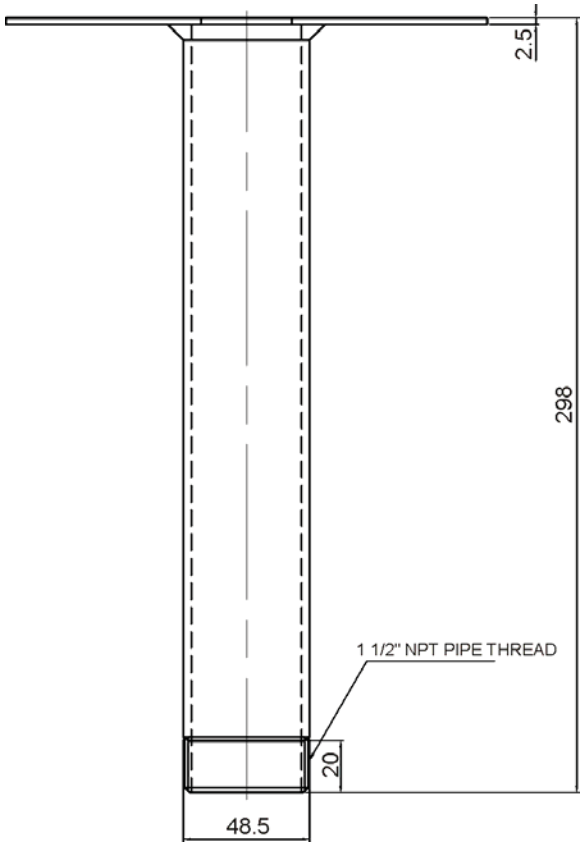
Dimensions TV7612



Drilling distances TV7609



Dimensions TV7609



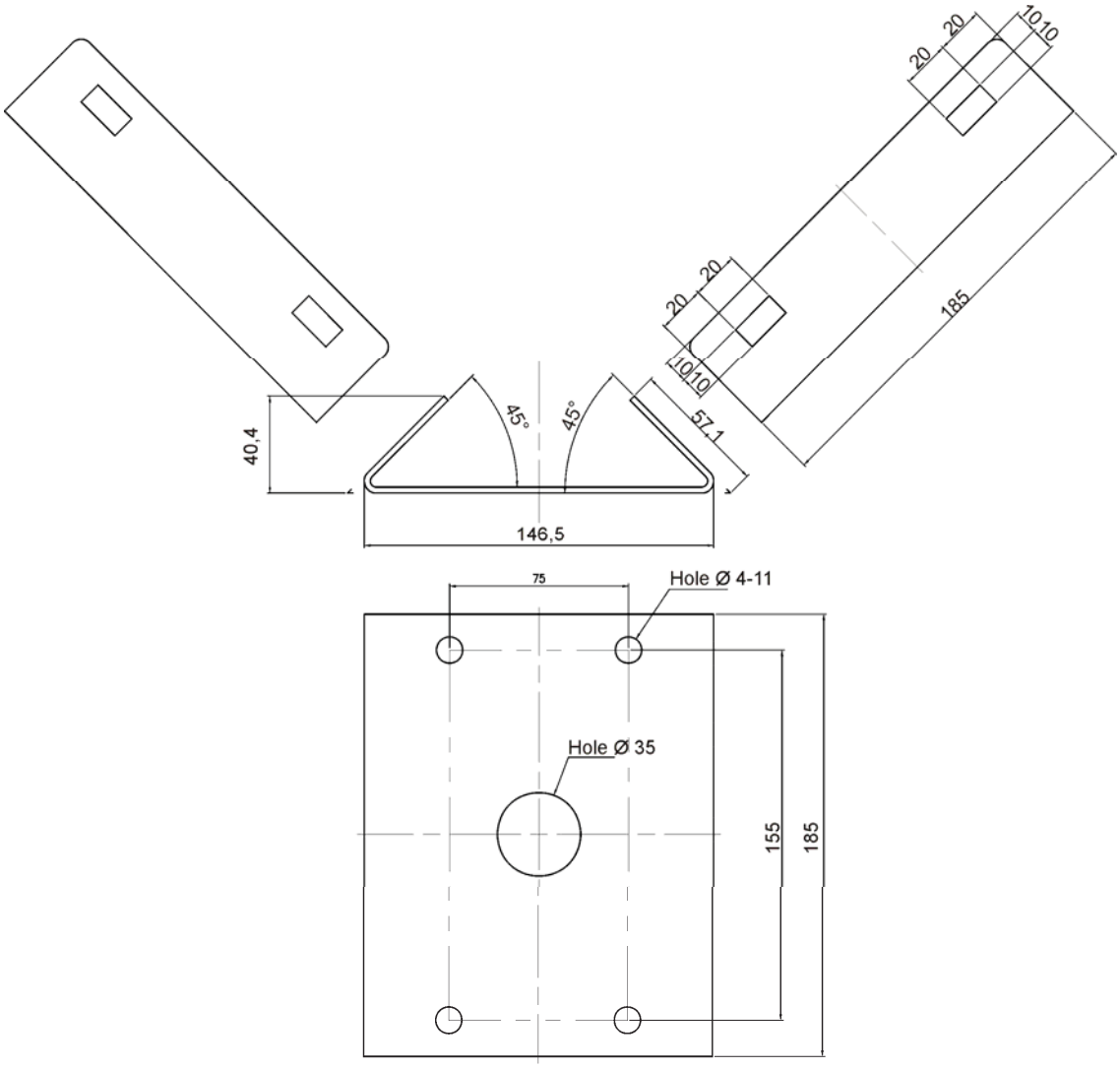
1. Mark the drill holes with a pen. Note the correct drilling distances. In addition, ensure the drill holes are horizontally aligned for the goose neck mount bracket (TV7612) exactly. Remember that the wall or ceiling selected for mounting must be strong enough to bear loads of up to approx. 6 kg.
2. Use a drill bit with a sufficiently large diameter. Insert suitable wall plugs. Note that the wall plugs and screws must bear a load of approx. 6 kg. The wall plugs and screws must also be able to withstand strong drawing forces for the goose neck mount bracket (TV7612).
3. Connect the individual wires together with a cable clip.
4. Depending on the way the cables are laid (flush or surface), the cables can be guided directly through the retaining plate or through the side cable feed.
5. Screw one of the two threaded rings (included in the indoor adapter's delivery scope) onto the thread of the goose neck mount/ceiling bracket. Place the indoor adapter on the thread with the opening facing down and attach the indoor adapter, by screwing the second threaded ring *firmly* onto the thread.
6. Use the four screws provided to attach the retaining plate of the mount type (included in the camera's scope of delivery) to the indoor adapter. To do this, place the mount type plate (in the camera's delivery scope) on the indoor adapter so that the external drill holes of the plate are exactly on the four spacer threads of the indoor adapter and screw the four screws in.
7. Screw in the ceiling bracket and the goose neck mount with suitable screws to the ceiling/wall.
8. Proceed in the same way as in points 6 to 8 on pages 216 and 217.

4.5 Additional Accessories

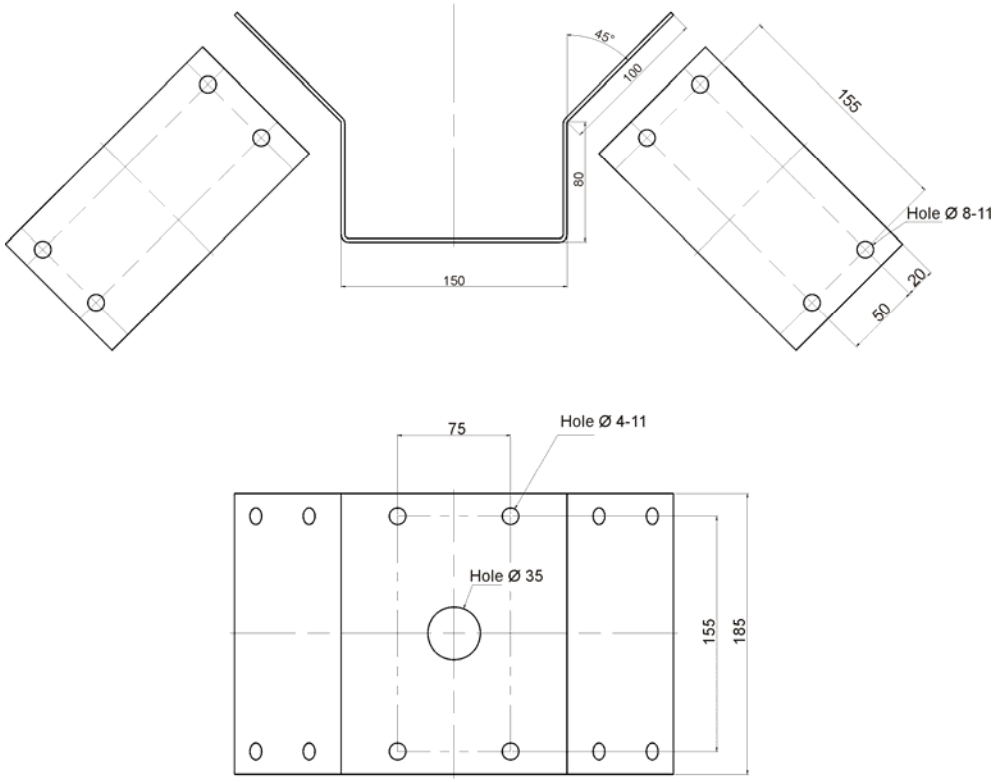
Following accessories are not in scope of delivery!
The outdoor housing (TV7606) offers the possibility, to use the High Speed Motor Dome in outdoor weathering (Protection class IP66). It is possible to use the outdoor housing with a Wall mount bracket (scope of delivery), a Dropped ceiling mount bracket and or a Goose neck mount bracket. For further information please refer to installation manual of outdoor housing.

Goose neck mount bracket and Wall mount bracket (TV7613) can be combined with Pole mount adapter (TV7610) and Corner mount adaptor (TV7611).

Dimensions TV7610 Pole mount adapter



Dimensions TV7611 Corner mount adaptor



5. Quick Guide Control Devices

Basically you can control High Speed Motor Domes with all RS485 devices that can handle Pelco P or Pelco D protocol.
Please refer to respective instruction manual for the connection method and further information.

5.1 Control using Operator Panel TV7605

See all information about the connection method and other information in instruction manual of TV7606. This operator panel is designed specially for TV7600-TV7604 and supports all functions.

5.2 Control using TV3000-TV3031 recorders

You can also control your high-speed motor dome with the HDVR.

This requires the following actions.

1. Connect the RS-485 lines to the interface for controlling on the HDVR.

2. Link up the analogue camera to the software. Refer to the operating manual for more details.

3. Activate the Pan/Tilt control.

4. Select ABUS Security-Center as the protocol type.

5. Enter the ID for the camera.

6. Select COM 3 as the port interface.

7. Settings for the interface: Enter the baud rate used by your camera.
   The remaining settings do not need to be changed.

8. Click on Save and Apply to accept the changes.

You can then control the high-speed motor dome with the VMS software.

To go to the configuration menu of your camera, right-click with the mouse on the preview image. Now select the Pan/Tilt configuration menu item.

You are in the configuration menu of the camera and can navigate in the menu using the arrow keys.

6. Quick Operating Keys

This dome provides three protocols: Pelco D, Pelco P and Maxpro.
These protocols are provided by several DVRs (e.g. TV3000-TV3031) and other controllers so that the domes can be controlled with these devices.
Default setting of this dome is Pelco D / P (auto detection) with 2400 bps (bits per second).
In this manual relates to controller TV7605. It is possible to operate cameras with other controller, but keys could have other names.

7.1 Pelco D/P Protocols

The dome has a lot of shortcuts to support following functions:
Number 1~64 and 100~200 are for Preset-Positions, other keys are for function operations.
For example, to enter OSD MENU, press the button 95 + PRESET.

Quick Operation Key Table 1

Number	Note	Function
1~64,100~200 +Preset	Preset	Executing Preset 1 ~ 64, 100~200
67 +Preset	Auto Flip	Selectable On/Off in Auto Flip mode
69 + Preset	DSS	Selectable On/Off in Digital Slow Shutter function
80~85 + Preset	Pattern	Executing Pattern #1 ~ #6
86 + Preset	Auto Scan	Executing Auto Scan
87~89 + Preset	Group Tour	Executing Group Tour #1 ~ #3
90 + Preset	OSD	Entering OSD Main Menu
91 + Preset	Zero Position	Searching Pan / Tilt Zero Position
92 + Preset	Freeze	Select Freeze image when camera is working
93 + Preset	BLC	Selectable On/Off in BLC function
94 + Preset	Day / Night	Selectable Day / Night / Auto Mode
95 + Preset	OSD	Entering OSD Main Menu
96 + Preset	Focus Adjust	Focus adjust
97 + Preset	Vibration Correction	Selectable On/Off in Vibration Correction function
98 + Preset	AUX 1	Selectable On/Off in Aux1
99 + Preset	AUX 2	Selectable On/Off in Aux2

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: “Status Report” is displayed, if user wants to remove this screen, press Focus Near button.
- 70 + preset: This feature provides picture stabilization image. This feature is available only by entering the preset number and is not included in OSD main menu.
- 92 + preset: With this feature it is possible to freeze the current picture during tour, auto scan or pattern operation. When 92 + preset button has been pressed, the image stops but the camera is still working as per operation such as tour, pattern or auto scan. To return to operating image, press 92 + preset button again. This feature is available only by enter the preset number and is not included in OSD main menu.

7.2 Maxpro Protocol

If you want to choose Maxpro Protocol, the user must change the dip switch first.
Baud Rate: 9600 (Maxpro default)
Maxpro protocol is almost same as Pelco D/P protocol operating system but some special features are different way as noted below:

Quick Operation Key Table 1

Number	Note	Function
1~64,100~200 +Preset	Preset	Executing Preset 1 ~ 64, 100~200
67 +Preset	Auto Flip	Selectable On/Off in Auto Flip mode
69 + Preset	DSS	Selectable On/Off in Digital Slow Shutter function
80~85 + Preset	Pattern	Executing Pattern #1 ~ #6
86 + Preset	Auto Scan	Executing Auto Scan
87~89 + Preset	Group Tour	Executing Group Tour #1 ~ #3
90 + Preset	OSD	Entering OSD Main Menu
91 + Preset	Zero Position	Searching Pan / Tilt Zero Position
92 + Preset	Freeze	Select Freeze image when camera is working
93 + Preset	BLC	Selectable On/Off in BLC function
94 + Preset	Day / Night	Selectable Day / Night / Auto Mode
95 + Preset	OSD	Entering OSD Main Menu
96 + Preset	Focus Adjust	Focus adjust
97 + Preset	Vibration Correction	Selectable On/Off in Vibration Correction function
98 + Preset	AUX 1	Selectable On/Off in Aux1
99 + Preset	AUX 2	Selectable On/Off in Aux2

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

7. Diagnostic

When power supply is connected to the camera, POWER ON LED on the underside glows and DIAGONOSTIC is started.
The following messages are displayed on the monitor.

```
CAMERA ID : 001
   BAUD RATE : 2400 BPS

   WAITING…
```

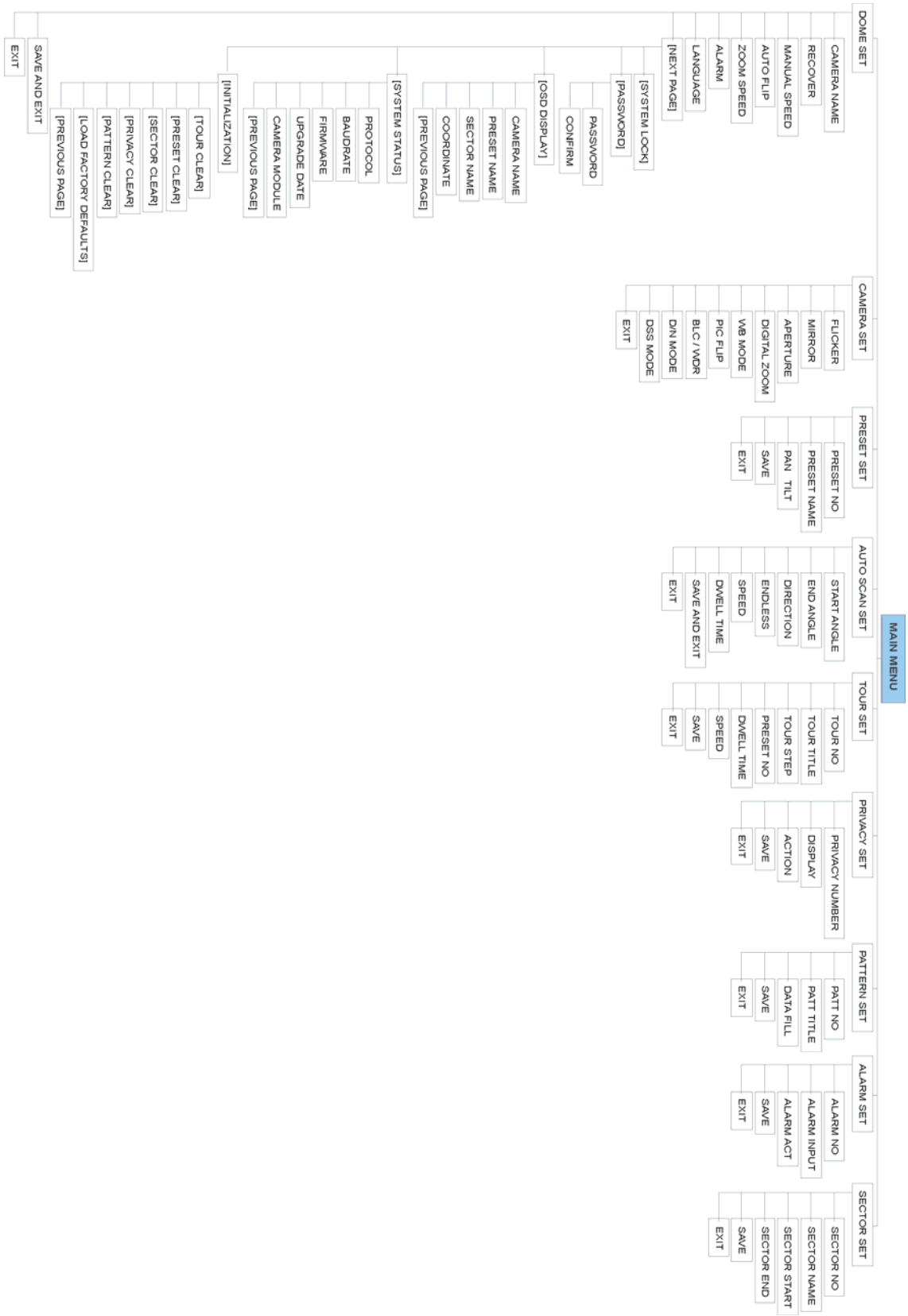
```
PAN ORIGIN          TEST OK
TILT ORIGIN         TEST OK
TX CONNECTION   TEST OK
CAMERA COMM     TEST OK
```

1. Pan Origin Test
   Zero point of Pan is found after Pan test.
2. Tilt Origin Test
   Zero point of Tilt is found after Tilt test.
3. TX Connection Test
   TX Connection Test takes about 60 seconds.
   Set camera ID in DVR or controller and press any key.
   "OK" will be displayed if camera receives any command by DVR or controller during that 60 seconds addressed to ID of camera (not necessary for function).
   (ID is displayed at start-up, refer to page 78 according ID setting).
   * If "No Tested" is displayed
   - the camera did not receive any signal from DVR or controller
   - wrong connecting way such as the protocol, baud rate or RS-485 connection. The user may check the installation way carefully.
4. Camera Comm. Test
   Communication test with the camera is automatically checked.
   OK should be displayed in these four tests in the first installation.

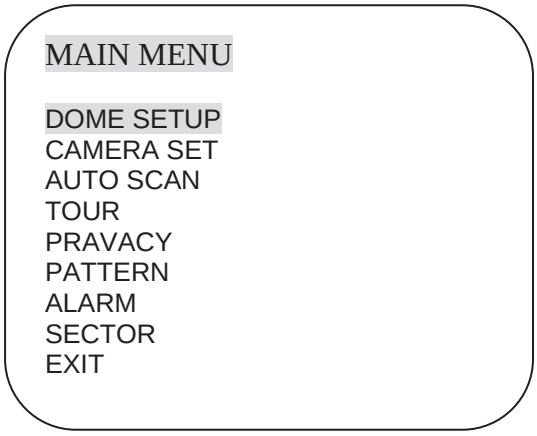
After all tests above are done, **"NOW EEPROM CHECKING"** and **"ALL DATA INITIALIZING"** is displayed and the camera is ready to operate.

8. OSD Menu Setting

8.1 OSD Menu Table



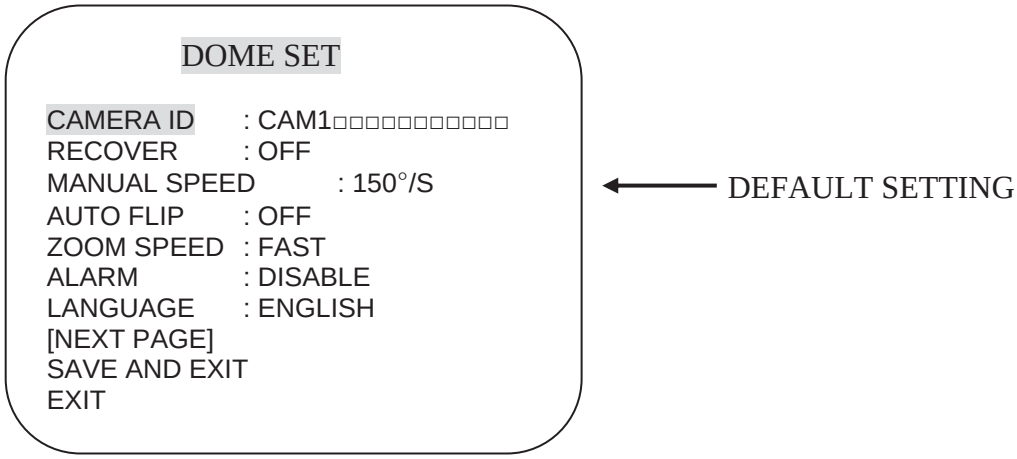
To enter OSD Menu, press the MENU button or 95+Preset (Maxpro 90+Preset) and Menu is displayed:



- Move the joystick up or down to move to the position and left or right to make selection or change values.

8.2 Dome Setup

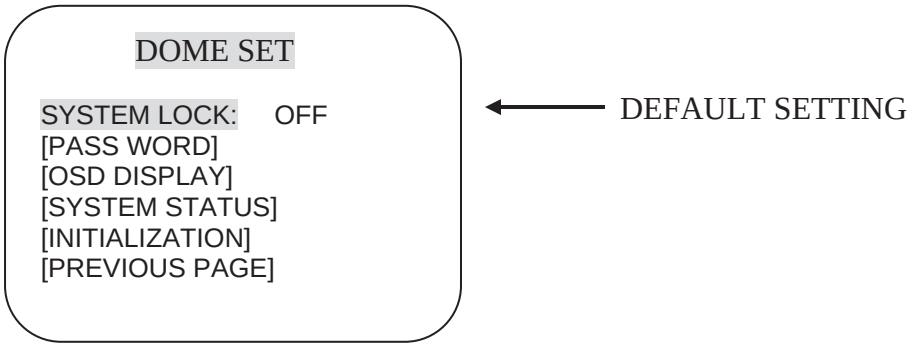
To enter Dome setup, move the joystick rightwards when cursor is on dome setup.



1. **DOME SET – CAMERA NAME**
   To set camera name, select up to 16 characters moving Joystick to the left or right.
   Press ZOOM TELE button to move to the next character from the left to the right and ZOOM WIDE button to move to the prior character from the right to left.
   Space is displayed when "□" appears.

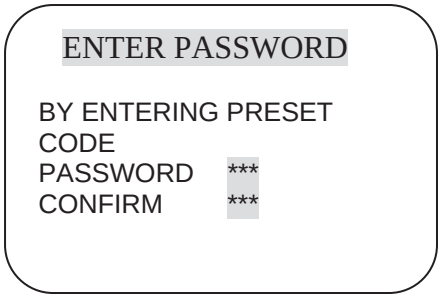
2. **DOME SET – RECOVER**
   This feature allows the dome to activate the last specified operation (auto scan, group tour, preset, pattern or sectors) after a programmed time of inactivity or restart after power shut down.
   The procedure is as following: define any operation and then go to DOME SET and change RECOVER to any value. Recover time can be programmed from 15 second to 99 seconds and the default setting is OFF.

3. **DOME SET – MANUAL SPEED**
   Manual Speed of Pan/Tilt is selectable from 100°/sec up to 200°/sec. The default setting is 150°/sec.
4. **DOME SET – AUTO FLIP**
   Auto Flip is available. Move joystick rightwards or leftwards for selecting ON or OFF. The default setting is OFF. This feature also can be enabled with 67 + preset button.
5. **DOME SET – ZOOM SPEED**
   Zoom speed is selectable between FAST or SLOW mode. Move joystick to the right direction for selecting FAST or SLOW. The default setting is FAST.
6. **DOME SET – ALARM**
   All alarms inputs are available after set as ENABLE. Move joystick to the right or left direction to select ENABLE/DISABLE. The default setting is DISABLE and this feature can be enabled with 97 + PRESET button.
7. **DOME SET – LANGUAGE**
   Several languages are available: German, English, French, Dutch and Danish. Move joystick rightwards or leftwards to select language. The default setting is GERMAN.

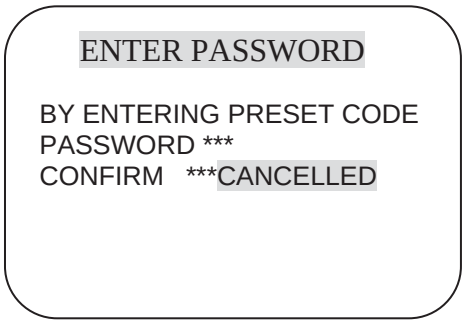


8. **DOME SET – [NEXT PAGE] – SYSTEM LOCK**
   Password protection helps to keep stored settings. It prevents changes by anybody without password. In order to enter [PASSWORD] page, system lock status must be ON. Move joystick to rightwards or leftwards to select ON. The default setting is OFF.

9. **DOME SET – [NEXT PAGE] – [PASSWORD]**
   To enter this page for setting a password, move joystick to the right. The password is selectable between number 001 and 255. Confirm with PRESET button. The default setting is BLANK.



Press any number from 001~255 and preset button twice on password typing field and on confirm field. Then “CONFIRMED” is displayed on the monitor and the menu will change to the previous page automatically.



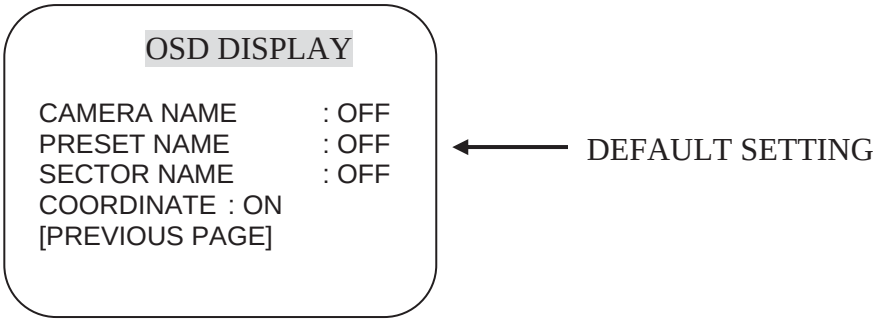
<CONFIRMED> <CANCELLED>

If user enters different numbers between PASSWORD and CONFIRM, “CANCELLED” is displayed on the monitor and the menu will return to the previous page automatically if user fails 3 times.

- After setting a Password, the operator has to type in memorized password in order to enter OSD MAIN MENU, or to change any stored settings, e.g. Pattern, Tour etc.
- The operator must remember the password for the operation since the manufacturer does not provide a master password.
- Do not forget to leave menu with SAVE AND EXIT on first page.

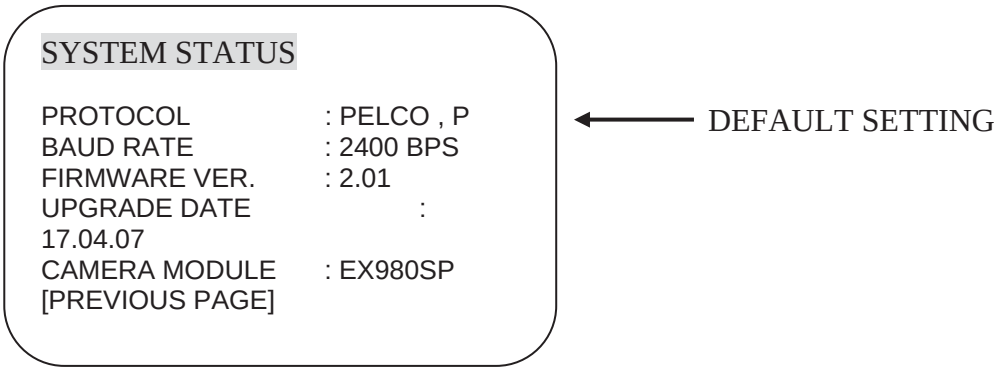
10. **DOME SET – [NEXT PAGE] – [OSD DISPLAY]**

Various information are displayed on monitor after set ON in this menu. It can be hidden when OFF is selected. Move joystick rightwards or leftwards in order to select OFF/ON when the cursor is located on mentioned item.



11. **DOME SET – [NEXT PAGE] – [SYSTEM STATUS]**

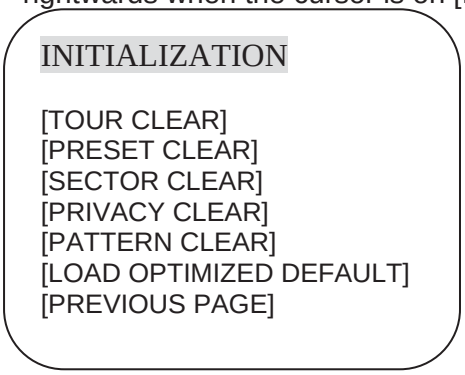
A variety of system information is displayed at SYSTEM STATUS.



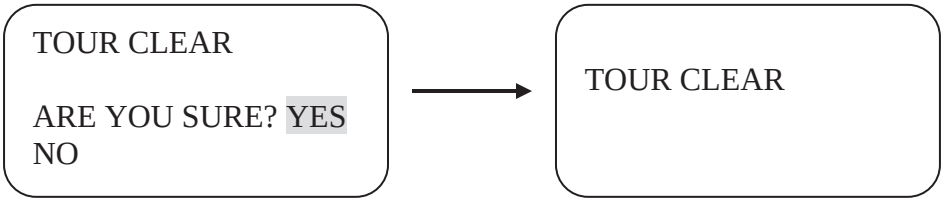
- Protocol and baud rate are shown due to the dip switch setting (Refer to page 245)
- Firmware version and upgrade date will change after upgrade.
- Upgrade date format is DD.MM.YY.

12. **DOME SET – [NEXT PAGE] – [INITIALIZATION]**

    To clear all stored settings for tour, preset, sector, privacy or pattern, move joystick rightwards when the cursor is on [INITIALIZATION].

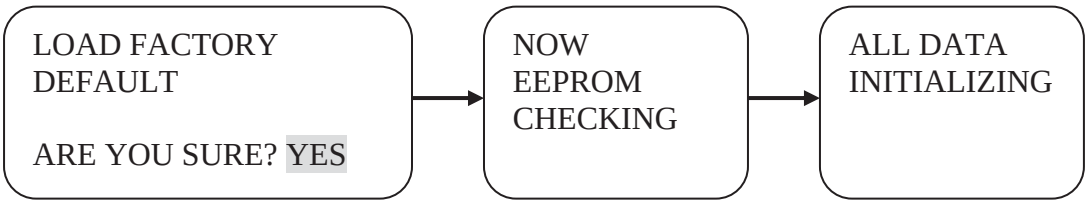


To clear memorized data, move joystick rightwards when cursor is on concerning item.



Press FOCUS NEAR button when the cursor is at YES to clear memorized data. Each item flickers for about 5~10 seconds such as tour, preset and so on. After this process, the menu returns to the previous page.

- [PRESET CLEAR], [SECTOR CLEAR], [PRIVACY CLEAR], [PATTERN CLEAR] has the effect of [TOUR CLEAR] too, because each tour consists is a combination of presets, sector.



- To clear all data and to return to factory default, move joystick rightwards when cursor is at [LOAD FACTORY SETTINGS] to enter the above page.
- Move joystick to the right or left direction in order to select YES, press FOCUS NEAR button.
- “NOW EEPROM CHECKING” and “ALL DATA INITIALIZING” is displayed about 5~7 seconds and the menu returns to the previous page automatically.

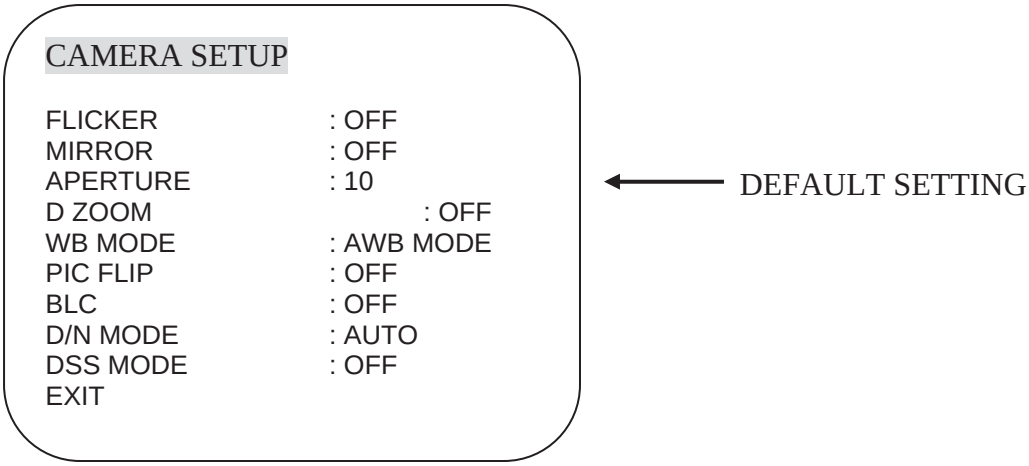
13. **DOME SET – [NEXT PAGE] – SAVE AND EXIT**

    To save the stored data and escape this page, move joystick to the right direction when cursor is at SAVE AND EXIT.

14. **DOME SET – [NEXT PAGE] – EXIT**

    To escape this page without saving, move joystick to the right direction when cursor is at EXIT.

8.3 Camera Set



1. **CAMERA SET – FLICKERLESS**

   Flickerless feature is selected between 50Hz and 60Hz. The default setting is OFF. Set flicker mode ON when power source frequency does not conform to the frequency of video system (NTSC: 60 Hz / PAL: 50 Hz). The default setting is OFF.
   This feature is only necessary whether a PAL camera is used in countries with 60Hz power source frequency for example.

2. **CAMERA SET – MIRROR**
   This feature mirrors the picture image. Left and right side of picture are inverted when setting is ON. The default setting is OFF.

3. **CAMERA SET – APERTURE**
   Aperture enhances picture detail by increasing gain of the camera and sharpening the edges in the picture. The default seeting is 10 (the aperture level is adjustable from 01 ~ 15).

4. **CAMERA SET – DIGITAL ZOOM**
   Move joystick rightwards in order to set ON, whether you want to activate digital zoom. The default setting is OFF.

5. **CAMERA SET – WB MODE**

   4 different white balance modes for varied conditions of vicinity illumination are available. The default setting is AWB and it is possibly to change the mode option according to the lighting conditions as below:

- 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

6. **CAMERA SET – PIC FLIP**

   Picture flip feature mirrors picture horizontally. Top and bottom of picture inverted when setting is ON. Move joystick to the right or left to select OFF/ON. The default setting is OFF.

7. **CAMERA SET – BLC (not TVCC75200)**

   The default setting of backlight compensation is OFF and the camera provides modes OFF/ON.
   OFF – Backlight compensation is not activated.
   ON – Back light compensation is activated.
   BLC also can be switched ON/OFF with 93 + PRESET button.

   CAMERA SET – WDR (only TVCC75200)

   Huge contrasts in picture (e.g. sunlight throu window or artificial light sources) can lead to incorrect display of picture. If areas in with intense light sources has to be observed, select WDR setting ON.

8. **CAMERA SET – D/N MODE**

   IR filter is changeable due to the lighting conditions as AUTO – NIGHT MODE – DAY MODE. The default setting is AUTO MODE. Auto mode switches automatically between day- and night mode due to changing lighting conditions.
   D/N mode also can be changed with 94 + PRESET button.
   Notice: Night mode provides only black and white pictures and is suitable with IR LED illumination.

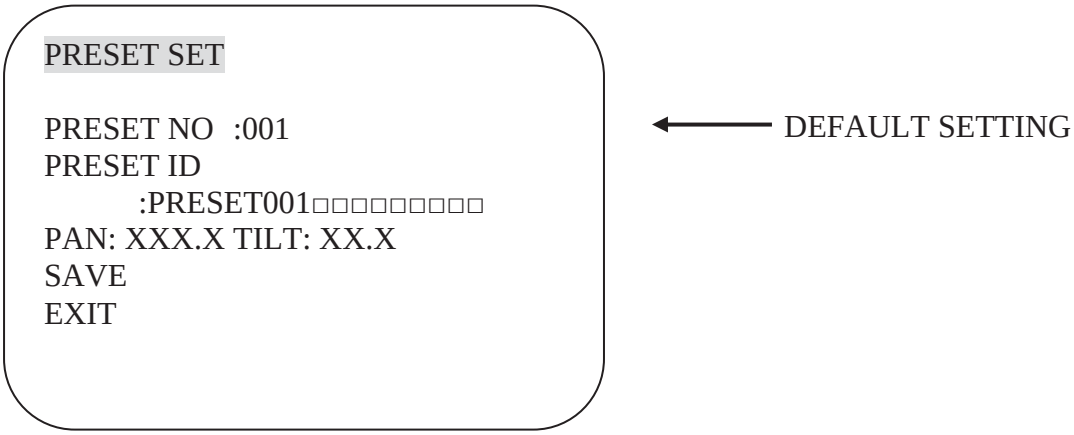
9. **CAMERA SET – DSS MODE (DIGITAL SLOW SHUTTER)**

   Digital slow shutter slows the picture frame rate and increases the camera sensitivity under low light conditions. The picture will develop a granular appearance and motion may show some lag, resulting in streaking on fast moving objects.
   The default setting is OFF. This feature can be changed with 69 + PRESET button.

10. **CAMERA SET – EXIT**
    To escape this page, move joystick rightwards.

8.4 Preset settings

Presets are saved positions, which can be recalled by a shortcut. Alternatively is is possible to store data out of menu. Type in any number (1~64 and 100~200) and hold PRESET button for at least two seconds. The actual camera position will be saved under this number and a confirmation is shown on screen.
To enter PRESET SETUP, move joystick rightwards when cursor is on PRESET SET.

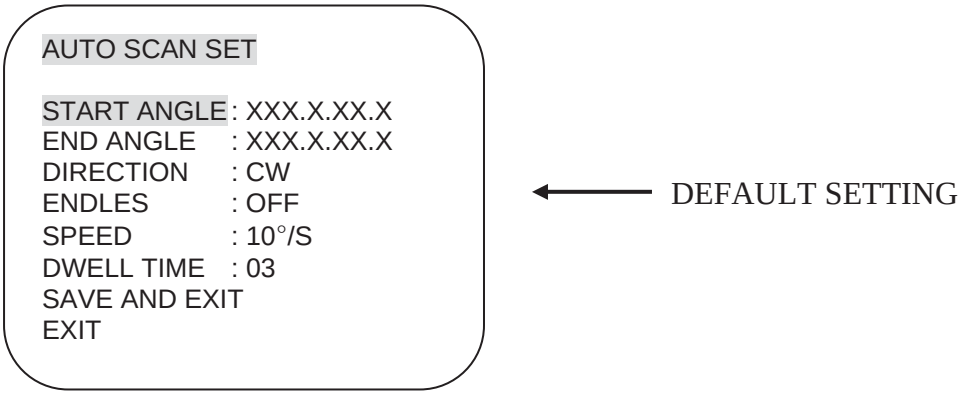


1. **PRESET – PRESET NO.**
   Up to 165 numbers (1~64, 100~200) of preset positions are available. Move joystick to the right or left direction to select preset no.
2. **PRESET – PRESET NAME**
   To set preset name, select up to 16 characters moving Joystick to the left or right.
   Press ZOOM TELE button to move to the next character from the left to the right and ZOOM WIDE button to move to the prior character from the right to left.
   Space is displayed when □ appears.
3. **PRESET – PAN: XXX.X TILT: XX.X**
   Press FOCUS FAR button in order to set preset position, then use the joystick to the position which is needed memorized preset no. Then press FOCUS FAR button again after setting a position of preset location.
4. **PRESET – SAVE**
   Move joystick to the right direction when the cursor is at SAVE to save the memorized preset data and name. Then the cursor is jumps on preset name for the continuous preset no. setting.
5. **PRESET – EXIT**
   To escape this page, move joystick to the right direction.

Attention:
The camera comes with two light barriers to calibrate pan/tilt coordinates. If the light barriers are not crossed for a long period, it could lead to inaccuracy and the camera could not approach the preset positions exactly anymore.
Therefore the camera should cross the light barriers at 0° tilt and 180° pan in every tour or pattern.

8.5 Auto Scan Set

66 + preset (Maxpro: 86+Preset) button starts AUTO SCAN after setting.



1. **AUTO SCAN – START ANGLE**

   To set start angle, press FOCUS FAR button and move joystick to the starting angle which is needed to be memorized. Press FOCUS FAR button again to escape.

2. **AUTO SCAN – END ANGLE**

   To set end angle, press FOCUS FAR button and move joystick to the starting angle which is needed to be memorized. Press FOCUS FAR button again is escape.

3. **AUTO SCAN – DIRECTION**

   Auto scan direction of rotation can be set clockwise or counterclockwise.
   CW: Clockwise direction (Default)
   CCW: Counterclockwise direction

4. **AUTO SCAN – ENDLESS**

   Auto Scan rotation can be set endless. Move joystick rightwards in order to select ON. The default setting is OFF.

5. **AUTO SCAN – SPEED**

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

6. **AUTO SCAN – DWELL TIME**

   This menu item is the delay time when an angle is arrived and the dome starts to drive back to another angle.
   This menu item does not affect when endless is adjusted.
   Move joystick to the left or right in order to adjust dwell time. Dwell time can be adjust from 01 second to 99 seconds and the default setting is 03 seconds.

7. **AUTO SCAN – SAVE AND EXIT**

   To save the changed data and return to the main menu, move the joystick to the right with the cursor on SAVE AND EXIT.

8. **AUTO SCAN – EXIT**

   To exit the AUTO SCAN menu without saving the changes, select EXIT.

9. **AUTO SCAN – SAVE AND EXIT**

   To save the memorized data and escape this page, move joystick to the right direction when cursor is at SAVE AND EXIT.

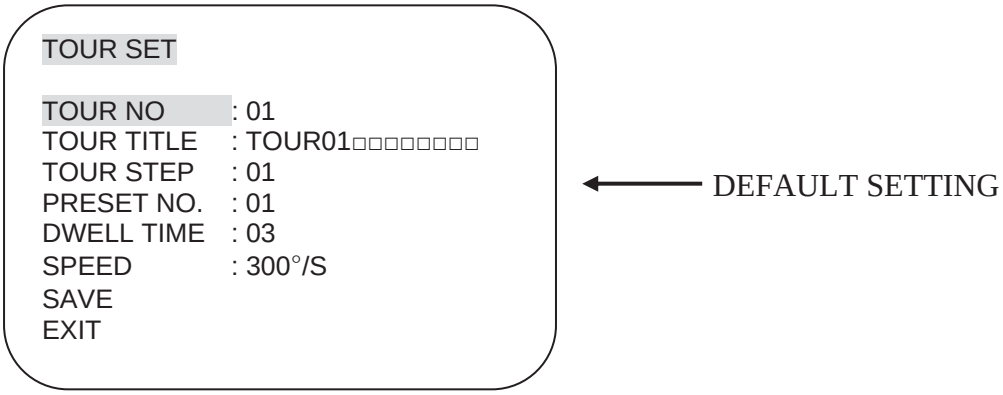
10. **AUTO SCAN – EXIT**

    To escape this page without saving, move joystick rightwards here.

8.6 Tour Set

8 programmable tours can be set and each tour is capable to memorize up to 60 preset steps. After setting the data to each tour group, 71~78 + preset buttons are working as group tour # 1~8.

- Maxpro protocol provides only three quick operation keys (87~89 + preset) for group tour, but it is possible to set up to group tours #8.



1. **TOUR SET – TOUR NO.**

   Up to 8 group tours are available to set by the joystick.

2. **TOUR SET – TOUR TITLE**

   To set tour title, select up to 16 characters moving Joystick to the left or right.
   Press ZOOM TELE button to move to the next character from the left to the right and ZOOM WIDE button to move to the prior character from right to left.
   Space is displayed when □ appears. Tour title is not displayed on the monitor, it is only for the reference of menu controller.

3. **TOUR SET – TOUR STEP**

   Each tour group consists of up to 60 preset steps for sequential images with different dwell time and speed. It is possibly to match any preset # for each tour step.

4. **TOUR SET – PRESET NO.**

   Connect with tour step #1 ~60; it is possible to select any preset no. from 1 to 64 and 100 to 200. The default setting is BLK for blank, which means tour step is not assigned to any preset number.

5. **TOUR SET – DWELL TIME**
   Each Tour step has its own dwell time from 01 second up to 99 seconds.
   The default setting is 03 seconds.

6. **TOUR SET – SPEED**

   Motional speed can be separately set for each tour step. Auto scan speed can be adjusted from 10° per second up to 300° per second. Move joystick to the right or left to select tour speed.
   The default setting is 300°/S.

7. **TOUR SET – SAVE**

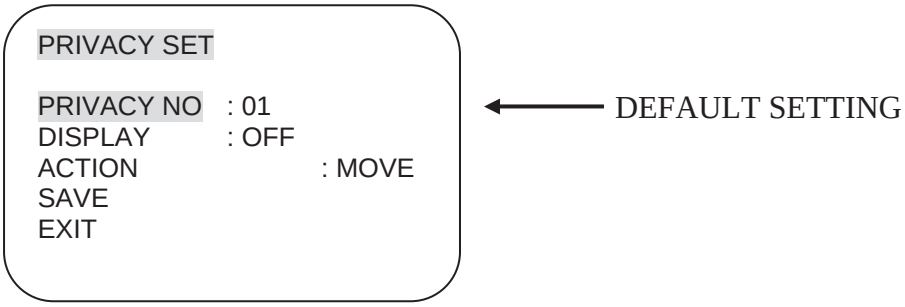
   To save the memorized data, move joystick rightwards when cursor is at SAVE. The cursor will automatically move to the next tour step then.

8. **TOUR SET – EXIT**

   Move joystick to the right to return to main menu.

8.7 Privacy Set

24 Privacy masking zones make it easy to block out confidential areas (e.g. keyboard entries) and will be shown as blue squares.



1. **PRIVACY SET – PRIVACY NO**.

   Up to 24 privacy masking zones (TVCC75200) respectively 4 (TVCC75100) are available.

2. **PRIVACY SET – DISPLAY**

   Move joystick to the right or left to switch on the selectable block in the central of the monitor. This block is appearing as a translucency square with blue colour after set ON. The default setting is OFF.

3. **PRIVACY SET – ACTION (MOVE / ADJUST)**

   To set the blocking area, press FOCUS FAR button when the cursor is on MOVE MODE.
   Use Joystick to move to position where masking zone should be.
   Then press FOCUS FAR button again to escape of MOVE MODE.
   To adjust size of blocking area, move joystick to the right when the cursor is on ACTION.
   After Move mode changed to ADJUST MODE, press FOCUS FAR button in order to adjust the size of blocking area. Use the joystick to adjust the size of blocking area. After adjusting size of blocking area, press FOCUS FAR button to escape ADJUST mode.

4. **PRIVACY SET – SAVE**

   To save the data after set the privacy masking zone, move joystick to the rightwards when the cursor is on SAVE. After saving of data, the cursor automatically jumps to PRIVACY NO.2 to prepare the next privacy masking zone.

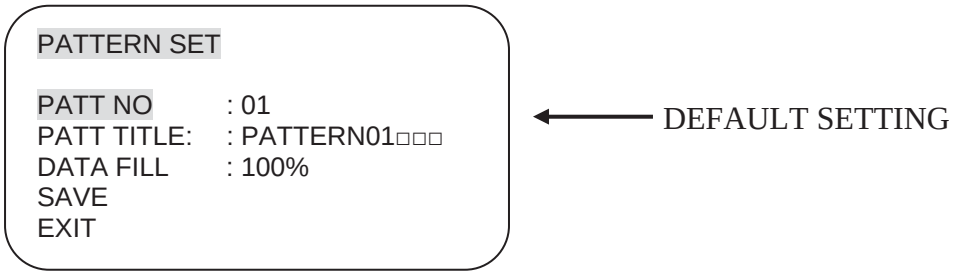
5. **PRIVACY SET – EXIT**

   Move joystick to the right to return to main menu.

8.8 Pattern Set

8 programmable patterns are available with 16 characters for title.
After setting the data of each pattern, 81~88 + PRESET buttons are working as Pattern # 1~8.

- Maxpro protocol provides 6 quick operation keys (80~85 + preset) for patterns, but it is possible to set up to pattern #8.



1. **PATTERN SET – PATT NO.**

   Up to 8 programmable user-defined patterns are available to set by joystick movement.

2. **PATTERN SET – PATT TITLE**

   To set pattern title, select up to 16 characters moving Joystick to the left or right.
   Press ZOOM TELE button to move to the next character from the left to the right and ZOOM WIDE button to move to the prior character from right to left.
   Space is displayed when □ appears. Pattern title is not displayed on the monitor, it is only for the reference of menu controller.

3. **PATTERN SET – DATA FILL**

   Press FOCUS FAR button to start recording process. The dome saves all joystick movements to its memory during this time. A number on monitor shows the percentage of filled memory. Press FOCUS FAR button again in order to escape.

4. **PATTERN SET – SAVE**

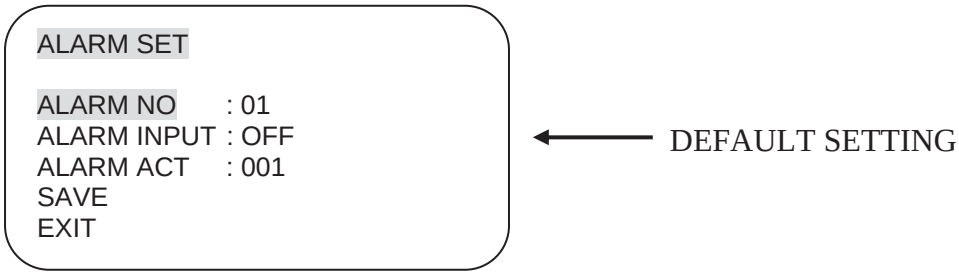
   To save the filled data, move joystick to the rightwards when the cursor is on SAVE. This may take several seconds. Then the cursor moves to the following pattern no in order to prepare next pattern.

5. **PATTERN SET – EXIT**

   Move joystick to the right to return to main menu.

8.9 Alarm Set

4 Alarm inputs are available and each of them is able to activate a preset, group tour or pattern.



1. **ALARM SET – ALARM NO.**

   Up to 4 alarm inputs are selectable by moving joystick right or left when cursor is on ALARM NO. This number represents the corresponding alarm input on the rear side of speed dome.

2. **ALARM SET – ALARM INPUT**

   The alarm inputs supports 3 different connection states: NC (Normally Close), NO (Normally Open) or OFF (disabled)
   The default setting is OFF

3. **ALARM SET – ALARM ACT**

   Alarm inputs can activate various surveillance modes. Preset number from1~64 and 100~200, Group tour 1 to 8 and Pattern 1 to 8 are available. Move joystick right or left to select desired preset position, group tour no. or pattern no.

4. **ALARM SET – SAVE**

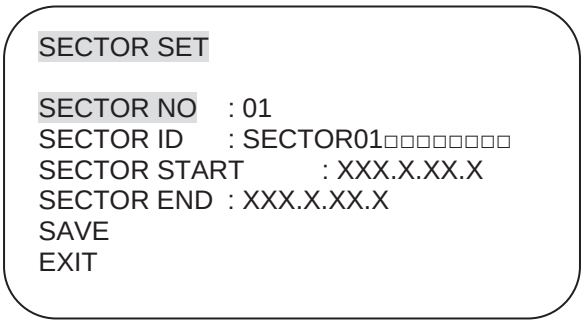
   After setting the alarm input state and activation, move joystick rightwards when the cursor is on SAVE in order to save changes. After saving, the cursor jumps to the following alarm no. to set the next alarm.

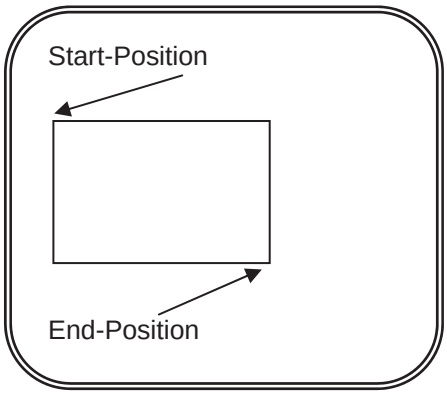
5. **ALARM SET – EXIT**

   Move joystick to the right to return to main menu.
   * Before activating the Alarm, the user must set ALARM ENABLE at DOME SET – ALARM

8.10 Sector

Up to 8 programmable sectors are available with 16 characters each.
This feature is useful to entitle certain locations such as a parking zone.





1. **SECTOR SET – SECTOR NO.**

   Up to 8 programmable sectors are available to set.

2. **SECTOR SET – SECTOR NAME**

   To set SECTOR NAME, move joystick right or left to change each digit.
   Press ZOOM TELE button to moves to the next character from the left to the right and ZOOM WIDE button to move to the prior character from the right to left.
   Space is displayed when □ appears.

3. **SECTOR SET – SECTOR START**
   To set start position of sector, press FOCUS FAR button. Use the joystick to go to the start position of sector. Press FOCUS FAR button again to escape.

4. **SECTOR SET – SECTOR END**

   To set end position of sector, press FOCUS FAR button. Use the joystick to go to the end position of sector. Press FOCUS FAR button again to escape.

5. **SECTOR SET – SAVE**

   After setting the sector start- and end position, move joystick rightwards when the cursor is on SAVE in order to save changes.
   After saving, the cursor jumps to the following sector no. to set the next sector.

6. **SECTOR SET – EXIT**

   Move joystick to the right to return to main menu.

8.11 Exit

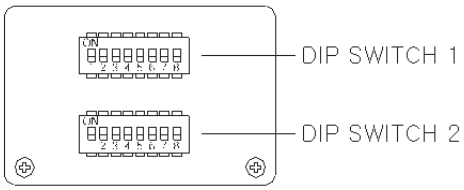
To escape OSD Main Menu, move joystick right or left when cursor is on exit. Camera is ready to operate then.

9. DIP Switch Setting

9.1 ID Setting

Set an ID for the camera which you can use for accessing from a controller or DVR. An ID may only be assigned once!
Once you have opened the camera cover, you can set the ID (e.g. using a small flat screwdriver) on DIP switch 1 by pushing the pins up or down.

- Default setting: camera ID = 1



(1-ON, 0-OFF)

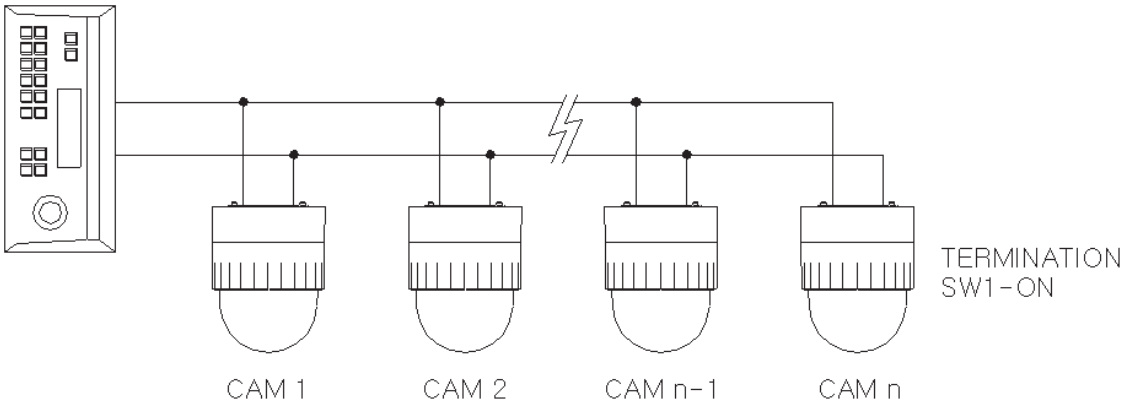
DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
10000000	1	00000100	32	11111100	63
01000000	2	10000100	33	00000010	64
11000000	3	01000100	34	10000010	65
00100000	4	11000100	35	01000010	66
10100000	5	00100100	36	11000010	67
01100000	6	10100100	37	00100010	68
11100000	7	01100100	38	10100010	69
00010000	8	11100100	39	01100010	70
10010000	9	00010100	40	11100010	71
01010000	10	10010100	41	00010010	72
11010000	11	01010100	42	10010010	73
00110000	12	11010100	43	01010010	74
10110000	13	00110100	44	11010010	75
01110000	14	10110100	45	00110010	76
11110000	15	01110100	46	10110010	77
00001000	16	11110100	47	01110010	78
10001000	17	00001100	48	11110010	79
01001000	18	10001100	49	00001010	80
11001000	19	01001100	50	10001010	81
00101000	20	11001100	51	01001010	82
10101000	21	00101100	52	11001010	83
01101000	22	10101100	53	00101010	84
11101000	23	01101100	54	10101010	85
00011000	24	11101100	55	01101010	86
10011000	25	00011100	56	11101010	87
01011000	26	10011100	57	00011010	88
11011000	27	01011100	58	10011010	89
00111000	28	11011100	59	01011010	90
10111000	29	00111100	60	11011010	91
01111000	30	10111100	61	00111010	92
11111000	31	01111100	62	10111010	93

DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
01111010	94	00101001	148	01010011	202
11111010	95	10101001	149	11010011	203

00000110	96	01101001	150	11010011	203
10000110	97	11101001	151	00110011	204
01000110	98	00011001	152	10110011	205
11000110	99	10011001	153	01110011	206
00100110	100	01011001	154	11110011	207
10100110	101	11011001	155	00001011	208
01100110	102	00111001	156	10001011	209
11100110	103	10111001	157	01001011	210
00010110	104	01111001	158	11001011	211
10010110	105	11111001	159	00101011	212
01010110	106	00000101	160	10101011	213
11010110	107	10000101	161	01101011	214
00110110	108	01000101	162	11101011	215
10110110	109	11000101	163	00011011	216
01110110	110	00100101	164	10011011	217
11110110	111	10100101	165	01011011	218
00001110	112	01100101	166	11011011	219
10001110	113	11100101	167	00111011	220
01001110	114	00010101	168	10111011	221
11001110	115	10010101	169	01111011	222
00101110	116	01010101	170	11111011	223
10101110	117	11010101	171	00000111	224
01101110	118	00110101	172	10000111	225
11101110	119	10110101	173	01000111	226
00011110	120	01110101	174	11000111	227
10011110	121	11110101	175	00100111	228
01011110	122	00001101	176	10100111	229
11011110	123	10001101	177	01100111	230
00111110	124	01001101	178	11100111	231
10111110	125	11001101	179	00010111	232
01111110	126	00101101	180	10010111	233
11111110	127	10101101	181	01010111	234
00000001	128	01101101	182	11010111	235
10000001	129	11101101	183	00110111	236
01000001	130	00011101	184	10110111	237
11000001	131	10011101	185	01110111	238
00100001	132	01011101	186	11110111	239
10100001	133	11011101	187	00001111	240
01100001	134	00111101	188	10001111	241
11100001	135	10111101	189	01001111	242
00010001	136	01111101	190	11001111	243
10010001	137	11111101	191	00101111	244
01010001	138	00000011	192	10101111	245
11010001	139	10000011	193	01101111	246
00110001	140	01000011	194	11101111	247
10110001	141	11000011	195	00011111	248
01110001	142	00100011	196	10011111	249
11110001	143	10100011	197	01011111	250
00001001	144	01100011	198	11011111	251
10001001	145	11100011	199	00111111	252
01001001	146	00010011	200	10111111	253
11001001	147	10010011	201	01111111	254
				11111111	255

9.2 RS-485 Termination

The 1st DIP of SW2 is used for 100Ω termination.
Set on 1st DIP of SW2 only by the last connected camera from the loop (CAM n).
Even in case of only one camera, set ON 1st-DIP of SW2.



9.3 Protocol

The 3rd, 4TH of DIP SW2 above are used for Protocol Setting.
Factory Default: Pelco-D or Pelco-P (Auto detection)

DIP SW2 - 3rd 4th	
OFF / OFF	Pelco-D or Pelco-P
ON / ON	Maxpro protocol

9.4 Baud Rate Setting

The 7th, 8th SW of DIP SW2 is used for baud rate setting.
With DIP SW2 baud rate can be changed to 4800bps, 9600bps.
Factory Default: 2400bps.

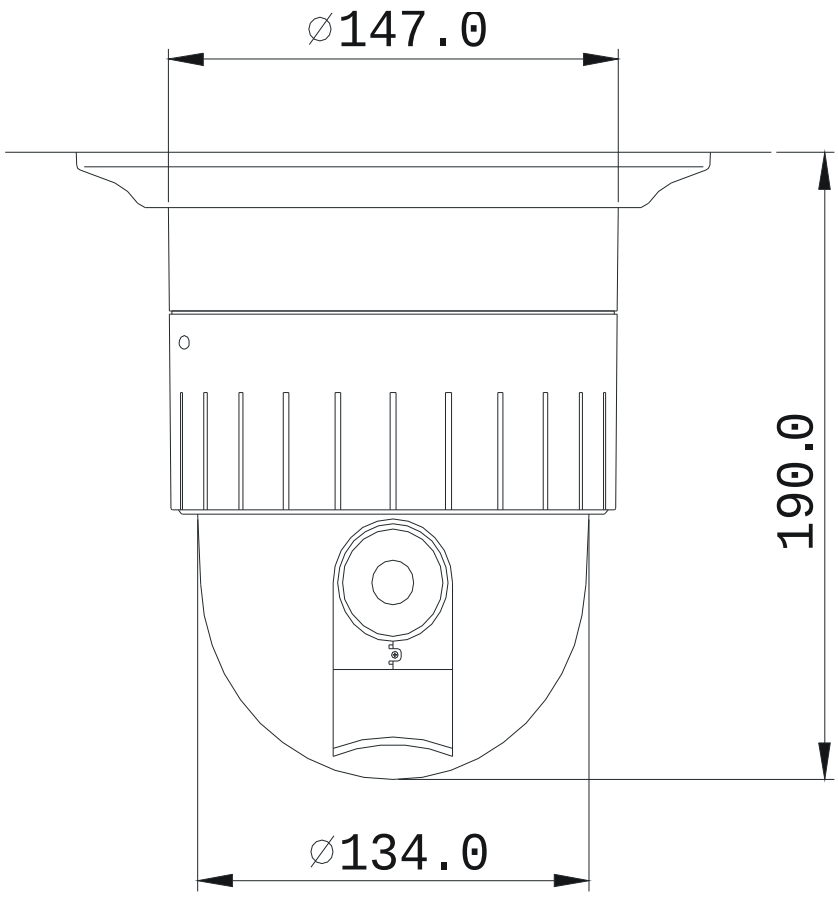
DIP SW2-7th	DIP SW2-8th	BAUD RATE
OFF	OFF	Not Used
OFF	ON	2400bps
ON	OFF	4800bps
ON	ON	9600bps

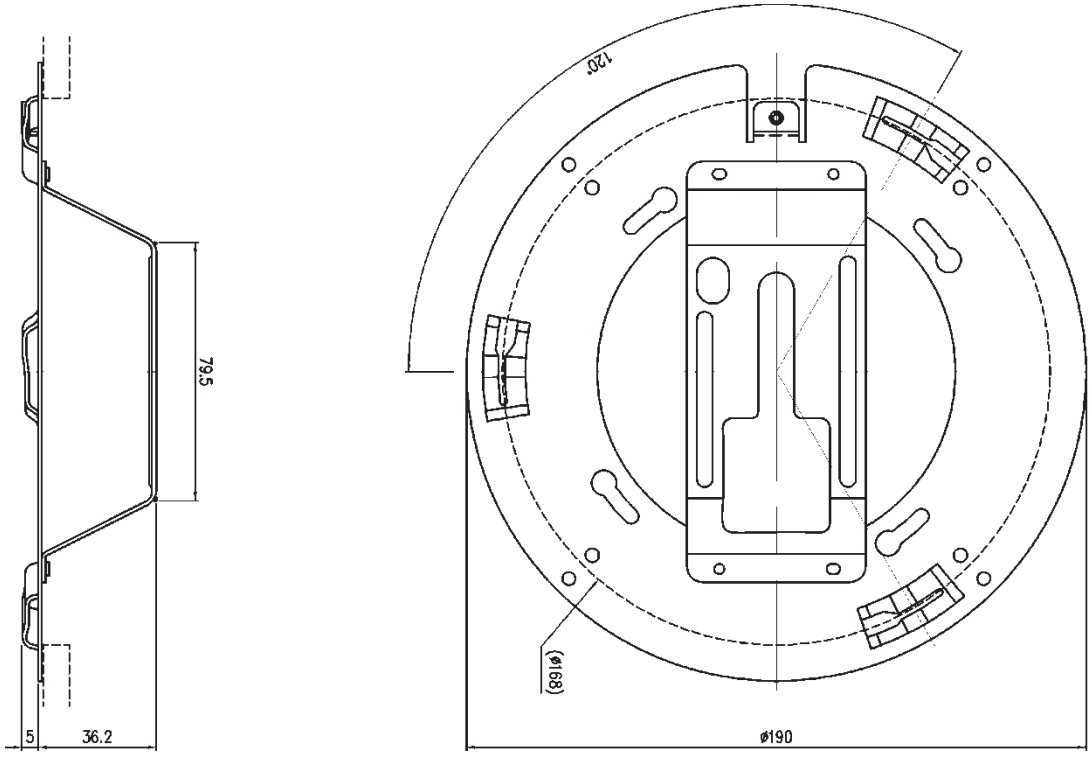
* The 2nd, 5th, 6th of DIP SW2 are not used.

10. Specifications

MODEL			TVCC75100	TVCC75200
PAN /TILT	Pan Rotation Angle		360° Endless	
	Pan Speed	Manual	0.5°/sec ~ 200°/sec (64step)	
		Preset	Max 300°/sec	
	Tilt Rotation Angle		-2° ~ 90°	
	Tilt Speed	Manual	0.5° ~ 45°/sec (64step)	
		Preset	Max 250° /sec	
	System Accuracy		0.024°	
FUNCTIONS	Presets		165 positions with 16 character labels available for each position with different speed steps	
	Group Tour		Max. 8 Programmable group tours (each one consisting of up to 60 preset steps with different steps)	
	Auto pan		Programmable Auto Scan	
	Pattern		8 Programmable Patterns (total 480 seconds)	
	Sector		8 Selectable Sectors with 16 charactors	
	Password Protection		Yes	
	Privacy Zone		8	24
	Alarm Input		4 alarms (with various programmable states)	
	Alarm Actions		Activate preset, Group scanning or output per alarm input	
	Aux Output		2 Replay Output	
	Auto Flip		ON / OFF	
	OSD Menu		German, English, French, Dutch, Danish	
	Communication		RS-485	
	Protocol		Built in Pelco-D, Pelco-P	
POWER	Power Consumption		18W Max	
	Power Supply		18~32VAC 60/50Hz 850mA	
OTHERS	Construction		Cool Gray Body(ABS) , Anti-vandal bubble (Poly Carbonate)	
	Dimensions		147φ (D) * 190mm (H); 5.8" (D) * 7.5"(H)	
	Weight		1.9 kg (5 lbs)	
	Motor Type		Stepper	
	Micro Steps		1/8 Micro Step	
	Storage Temperature		-20°C ~ 60°C (-4°F ~140°F)	
	Operating Temperature		-10°C ~ 50°C (14°F ~122°F)	
	Certifications		CE, FCC	
CAMERA MODULE	Image Sensor		1/4" Interline Transfer CCD	1/4" Sony Exview HAD CCD
	Total Image Pixels	NTSC	811(H) * 508(V) 410K	811(H) * 508(V) 410K
		PAL	795(H) * 596(V) 470K	795(H) * 596(V) 470K
	Number Of Effective Pixels	NTSC	768(H) * 494(V) 380K	768(H) * 494(V) 380K
		PAL	752(H) * 582(V) 440K	752(H) * 582(V) 440K
	Horizontal resolution		560 TVL	550 TVL
	Lens	Optical	27x Optical Zoom (F1.6~F2.8; f=3.5~95.0mm)	36x Optical Zoom (F 1.6~4.5; f=3.4~122.4mm)
		Digital	16x (432x with optical)	12x (432x with optical)
	Day & Night (ICR)		Auto/ Day/ Night	
	Min.Shooting Distance		1,5m(Tele)	0.32m(Wide)/1.5m(Tele)
	Min. illumination	Normal mode	0.2Lux (50IRE)	0.1Lux (50IRE)
		Night mode	0.02Lux (ICR On)	0.01Lux (ICR On)
	Luminance S/N Ratio		More than 50dB	
	Video Output		VBS:1.0Vp-p (sync negative), Y/C Output	
	BLC		ON / OFF	
	Flickerless	NTSC	ON / OFF	

11. Dimensions


∅147.0
190.0
∅134.0


120°
79.5
5
36.2
(ø168)
ø190