

I. IMPORTANT SAFEGUARDS

- a) This apparatus must be connected to Earth. This installation should be made by made by a qualified installer.
- b) Do not carry out electrical installations in wet weather conditions.
- c) Voltage must to be matched with P/T.
- d) Examining connection , to sure that is correct.
- e) Please not to put the P/T with auto scanning continuouly for long time.

II. Summarize

This unit is a hi-tech CCTV product which incorporates panoramic speed-variable PAN/TILT, multifunctional decoder, CPU processor, memory chip into a whole. It can largely reduce connection and installation processes of components in the system, rise up reliability of the system and facilitate installation and maintenance. Therefore it has advantages of beautiful appearance, compact structure and easy operation.

1、 Integrated Multi-Protocol Decoder

- a. With integrated decoder and multi-protocol, it can integrate 16 kinds of communication protocols in maximum. As its baud rate of communication can be adjusted, it is compatible with many normal systems by easy setup inside the dome camera, so it has stronger versatility.
- b. RS485 serial control: addresses of unit 1-511.

2、 Integrated Speed-Variable PAN/TILT

- a. Turning 0--355° horizontally and an adjustable speed from 0.25 - 10 rad/s; turning -90 -- +20° vertically with a speed up to 10 rad/s.
- b. Running stably at low speed with super lower noise. Pictures have no shaking.

3、 High Intelligent Degree

- a. As much as 64 preset positions can be preset with powerless memory
- b. The P/T can scan horizontally between two points and scan speed can modified.
- c. Six sets of programmable tour locus with 16 position each set. The running speed and the detention time are adjustable respectively;

4、 Could to be cooperated with outdoor housing ,also could control camera that in housing

- a. Camera's iris、 focus、 zoon could to be manual controlled.
- b. Control auto iris shutter speed.
- c. Auto white balance tracking.

III. P/T SETUP

1、 ADDRESS SET

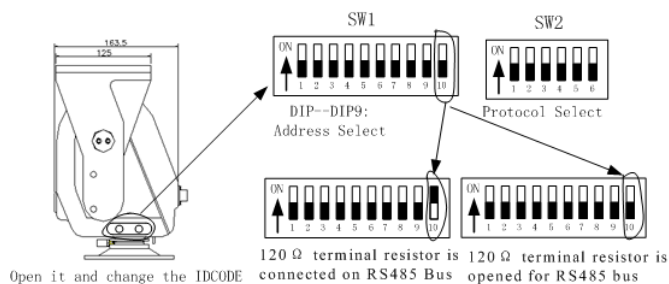


Figure 1

As shown in Figure 1, SW1 is used to set address of the P/T from 1 – 511. The ID-CODE from DIP-9 to DIP-1 are equivalent to a 9-bit binary digit. DIP-9 is MSB while DIP-1 is LSB. The state “ON” of each bit means 1 while “OFF” means 0. Following table shows states of coding switches of some addresses.

P/T Address	Status of ID-CODE								
	DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7	DIP8	DIP9
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
...
511	ON	ON	ON	ON	ON	ON	ON	ON	ON

Table 1

For Example:



2、 Selection of the Terminal Resistor

As shown in Figure 1, DIP10 of the ID-CODE is the select switch of the 120 Ω terminal resistor on the bus RS485, on which only one terminal resistor of the dome camera at the farthest end can be connected, while the terminal resistors of other devices should be opened.

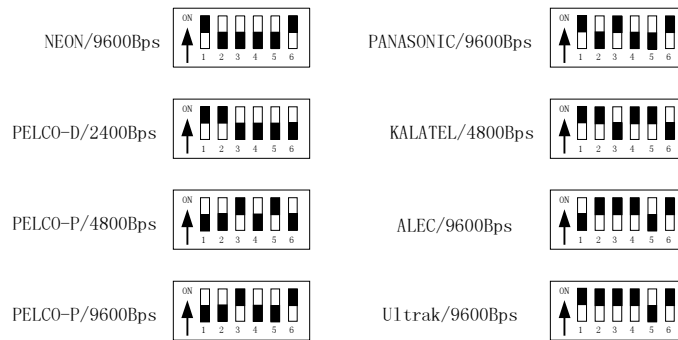
3、 Setup of the Protocol and the Default Baud Rate

As shown in Figure 1, SW2 is used to set the protocol of communication and the baud rate used by the dome camera. DIP-4 to DIP-1 of SW2 is used to select protocols and 16 different protocols can be selected in maximum. Following table shows states of coding switches of protocols selected by the dome camera in which ● means the protocol has been integrated while ○ means the protocol is temporarily vacant.

Type of Protocols	Selection of Protocols				Normal Baud Rate		Integrated Protocol
	DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	
SAMSUNG	ON	OFF	OFF	OFF	OFF	ON	●
NEON	ON	OFF	OFF	OFF	OFF	ON	●
Reserved	OFF	ON	OFF	OFF	OFF	ON	○
PELCO-D	ON	ON	OFF	OFF	OFF	OFF	●
PELCO-P/4800	OFF	OFF	ON	OFF	ON	OFF	●
PELCO-P/9600					OFF	ON	
PANASONIC	ON	OFF	ON	OFF	OFF	ON	○
Longcomity	OFF	ON	ON	OFF	OFF	ON	●
HUNDA600	ON	ON	ON	OFF	OFF	ON	●
LILIN	OFF	OFF	OFF	ON	ON	OFF	○
VICON	ON	OFF	OFF	ON	ON	OFF	○
MOLYNX	OFF	ON	OFF	ON	OFF	ON	○
KALATEL	ON	ON	OFF	ON	ON	OFF	○
VCL	OFF	OFF	ON	ON	OFF	ON	○
DAIWA	ON	OFF	ON	ON	OFF	ON	●
ALEC	OFF	ON	ON	ON	OFF	ON	●
Ultrak	ON	ON	ON	ON	OFF	ON	●

Table 2

Some protocols and the states of the coding switches of normal baud rate of these protocols are shown as follows:



4. **Setup of the Baud Rate of Communication.** As shown in Figure 1, SW2 is used to set the protocol of communication and the baud rate used by the dome camera. DIP-6 and DIP-5 of SW2 are used to select the baud rate of communication and 4 different baud rates can be selected in maximum. If the controller adopts non-standard baud rate, you can adjust it to be identical with that of the controller as per the following table.

Baud Rate of Communication	Setup of Baud Rate					
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
2400bps					OFF	OFF
4800bps					ON	OFF
9600bps					OFF	ON
19200bps					ON	ON

Table 3

IV. CONNECTION DETAILS

Notice: Before carrying out any electrical installation ensure that the cable being used in at the correct voltage and current rating for the application.

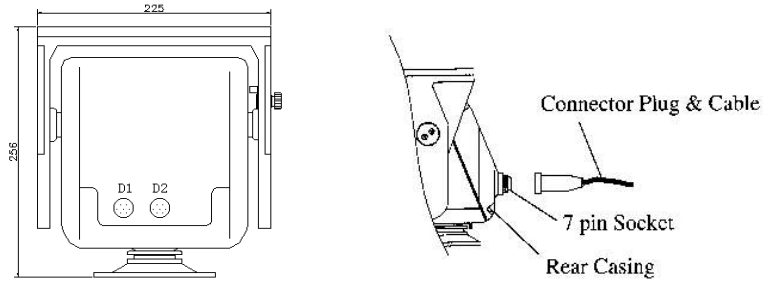


Figure 2

1. **Connection P/T with controller :** RS485 control signal 、 power supply(AC24V)、 video signal could connect with controller by air waterproof connector plug (D1). Figure 4 is Connect way of D1. Figure 3 is come out line of air connector plug.

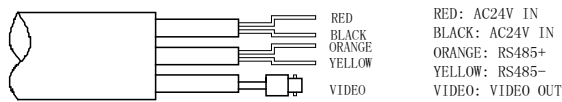


Figure 3

2. **Connection of P/T and outdoor housing: when collocate the special decoder for housing, decoder's control signal input、 Power supply(AC24V) and video signal output by air waterproof connector plug (D2) to connctet .** Figure 5 is connect way of D2. Note: Connect P/T's GND with lens decoder's GND. Furthermore P/T's **TXD、 RXD must cross connect with lens decoder's TXD、 RXD**, Otherwise, lens will not to be controlled. Otherwise, Could not to preset lens's position,only just could preset P/T's postision.

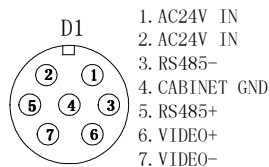


Figure 4

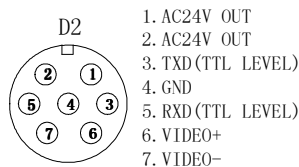


Figure 5

3. **Control wiper: Use command (D-ZOOM ON) to startup wiper; Use command (D-ZOOM OFF) to stop wiper. Also could use call NO.64 preset position to startup or stop(switch controll) wiper.**

V. SETTING PAN/TILT END

- a、 Setting the Pan limits (see figure 6): Loosen the M4 screws and loosen the pan strikers. Adjust the strikers until they are at the position to strike the relevant actuator, thus activating the limit switches. Tighten the M4 screws to secure the pan strikers.
- b、 Setting the Tilt limits (see figure 7): Release the screw locks and adjust the strikers until they are at the position to strike the actuator, thus activating the limit switches.

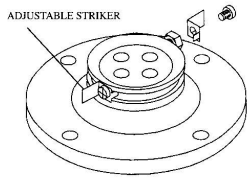


Figure 6

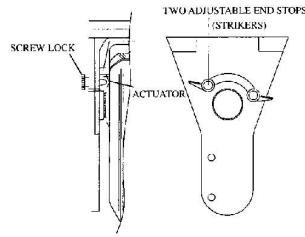


Figure 7

VI. INSTALLATION

- a、 This outdoor Pan/Tilt unit is intended to be mounted on a wall mount. The unit base has 4 holes equi-spaced on 4" (101.6mm) P.C.D[see figure 8], which line up with the bracket mounting holes. Mount the unit base onto the bracket using the four M6×25 Hex head screws, 6mm washers and the M6 nuts provided in the packing kit.
- b、 Remove the six M4mm fixing screws from the top platform using the three M1/4" -20screws (supplied). Secure the Sub-plate to the base of the Camera Housing [see figure 1]. Secure the sub-plate (with camera housing attached) with the six 6mm fixing screws removed earlier.

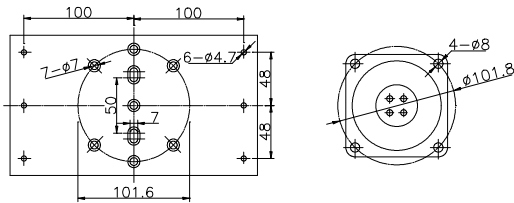


Figure 8

VII. SPECIFICATIONS

Input Voltage:	AC 24V
Angular Travel:	Pan 350° Tilt +20° ~ -90° (OTT MOUNT)
Speed:	Pan 0.25° ~ 10° /second Tilt 0.25° ~ 10° /second
Limit Stop:	Externally adjustable
Load Rating:	15Kgs (OTT MOUNT)
Operating Temperature:	-35°C~+60°C
Construction:	Aluminum alloy casting
Measurement:	225(L)×180(W)×260(H)(OTT MOUNT)
Unit Weight:	10 Kg