



# **UP Series**

# Installation manual



UP33, UP36 and UP36D camera stations



Note: To ensure proper operation, please read this manual thoroughly before using the product and retain the information for future reference.

**UPxx Series** 

Installation Manual v3.0. (Added UP36D)

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#### How to contact us

If you have any comments or queries concerning any aspect related to the product, do not hesitate to contact:

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## **Important Safety Instructions**

Prior to installation and operation, carefully read all instructions the in this manual and heed all warnings.

Unpack this equipment and handle it carefully. If the package appears to be damaged, notify the shipper immediately.

Use the original packaging to transport the unit. Disconnect power supply before moving it. In case of returning the equipment, the original packaging must be used.

Make sure that the installation surface can support at least four times the weight of the unit in normal operating conditions. In case of excessive external stress (e.g. vibration, strong winds or impact), the equipment may need additional means of protection.

Proper hardware should be carefully chosen to fasten the unit to the surfaces.

Use caution when lifting and assembling the unit. It is recommended that non-slip protective gloves be worn during installation. The unit could bear sharp edges.



Trying to manually force the wiper will result in damaging the device and will void the warranty.

To maintain the IP rating of the unit, adequate cable glands must be used. The unit must be tightly closed when operating.

For security reasons, do not install the unit in the proximity of water containers and never push objects or pour liquids into the unit. The unit can be safely used in damp environments or outdoors, as long as the connectors and lids are properly sealed.

Video and data cables should not share the same conduit with supply voltage cables. Whenever EMC is an issue, adequately shielded cables must be used.

Open only the covers pointed out in this installation manual. Other covers should be open only by the manufacturer.

This equipment has been designed to operate in harsh environments requiring little or no maintenance. Suggested inspection interval is 6 months, but extremely harsh environments may require more frequent inspection and maintenance checks. On each inspection check the O-ring seals and the eventual window wiper blade integrity. Replace them if necessary.

Check cables, electrical connections and mounting hardware for integrity and tightness. Replace or tighten any damaged/loose part.



Before performing any operation, turn off the power. The installation of the unit can be performed only by qualified personnel in accordance with the regulations in force. Do not connect the unit to a supply circuit unless the installation is completed.

Power the unit with 24 Vac / 3 A (75 W) power supply. Incorrect Power Supply Voltage may damage the unit. Do not overload the terminal connection, as it may cause a fire or electrical shock hazard.

An all-pole mains switch with an opening distance between the contacts at least 3 mm in each pole must be incorporated in the electrical installation. The switch must be equipped with protection against the fault current towards the ground (differential) and the overcurrent (magnetothermal, maximum 15A). It must be very quickly recognizable and readily accessible. A suitable blow fuse must also be installed for protection.

Fasten all the cables with cables ties or similar to avoid the electrical contact with surrounding parts in case that terminal blocks screw off.

Electrical connections (such as plugs and cords) must be protected from potential hazardous environmental factors (e.g. foot traffic, hitting objects).

Ensure that the unit case is properly earthed, connecting all the earth ground studs. Earth cable should be about 10mm longer than the other cables on the connector, in such way that it won't be accidentally disconnected if the cable is stretched or pulled.

When leaving the unit unused for long periods, disconnect supply cables.

## **Description & Models**



The Upright PTZ (UP33, UP36 or UP36D) is a high-precision, full-featured network PTZ camera that delivers high quality, high-definition images. The rugged construction of cast aluminum and durable plastic ensures accurate positioning and stable video, both close up and long distance. The UP is designed to operate in extreme temperatures for mission-critical applications. It is tested and approved to the to the environmental requirements of NEMA TS-2. And its powder-coated aluminum construction complies Corrosion Class C5.

#### **Models**

UP33 - Upright PTZ, 33x zoom, 24 Vac

UP36 - Upright PTZ, 36x zoom, 24 Vac

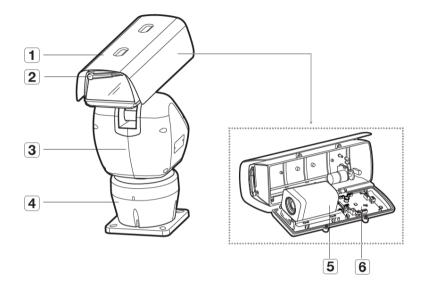
UP36D - Upright PTZ, Dual sensor 36x zoom, 24 Vac

UP...-PoE - Upright PTZ suitable for PoE++ only

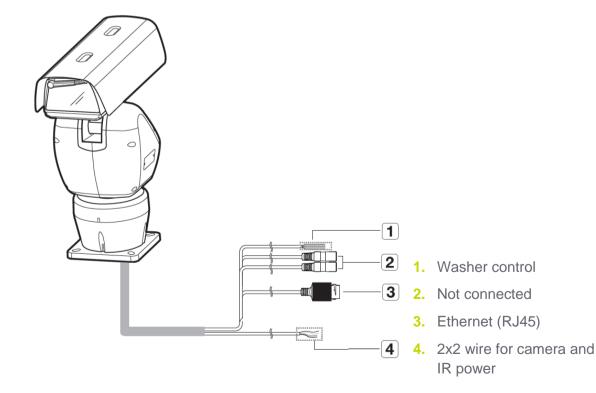
UP-IR200 - IR illumination kit for Upxx, 200m, 25°, 850 nm

## **Installation & Connections**

### **Overview**



- 1. Sunshield
- 2. Wiper
- 3. Main body
- 4. Base housing
- 5. Zoombox camera
- 6. Telemetry card

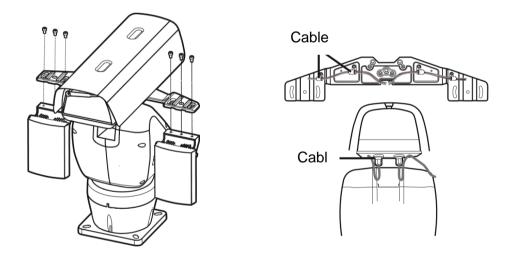


### Installing the optional IR Illuminator (UP-IR200)

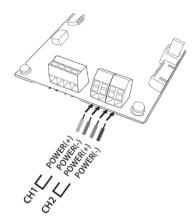
1. Secure the bracket to the camera with the 3 supplied bolts.



Connect the IR illuminators to the brackets. Lead the IR illuminator cable into the housing through the cable-clamps in the bracket and insert it in the housing through the cable-gland at the back of the housing.



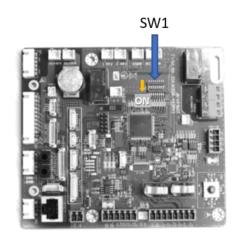
3. Connect the IR-illuminator power cables to the telemetry board.



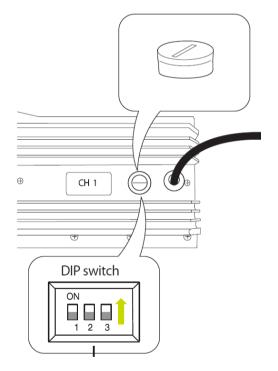
**4.** Set SW1-8 to the OFF position. Both UP33 and UP36 controls the illuminators by Aux2.

SW1 should be in the following position:

1.	ON	Reserved
2.	ON	Reserved
3.	OFF	Reserved
4.	OFF	Reserved
<b>5</b> .	OFF	Reserved
6.	OFF	Reserved
7.	OFF	Reserved
8.	OFF	Camera (Aux2) control

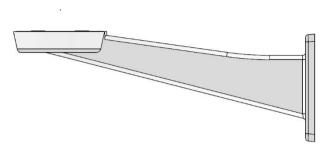


 Remove the blind plug on the backside of the IRilluminator to access the control DIP switch. Slide the 3rd switch to ON. (In case there is no DIP switch, no special action is required)



### Mounting with the optional wall bracket (UP-WM)

1. Fix the wallmount bracket (UP-WM) using sturdy anchor bolts. Each bolt should be able to hold at least 60 kg. (M10x30 is recommended)



2. Remove the rectangle shaped base-plate from the base housing and replace it with the wallmount adapter plate (part of the UP-WM delivery).



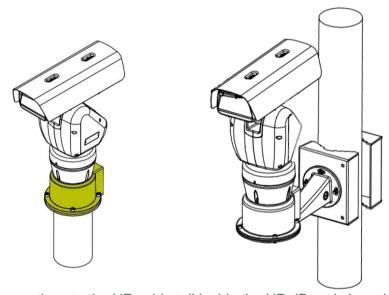
- 3. Mount the UP33 or UP36 on the wallmount bracket. Lead the multicable tail through the cable tray of the bracket.
- 4. Reassemble the cover of the wallmount bracket.

### Mounting with the optional junction box (UP-JB)

1. Remove the rectangle shaped base-plate from the base housing and replace it with the top part of the junction box.

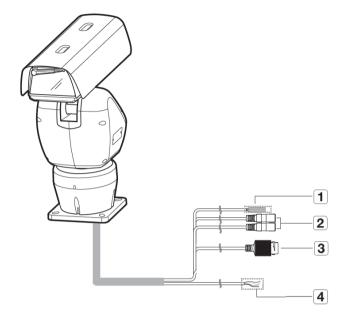


- 2. Mount the base plate of the UP-JB to the pole top or the UP-WM.
- 3. Mount the camera carefully on the UP-JB base plate



4. Make the connections to the UP cable tail inside the UP-JB and close the UP-JB lid..

#### **Connections**

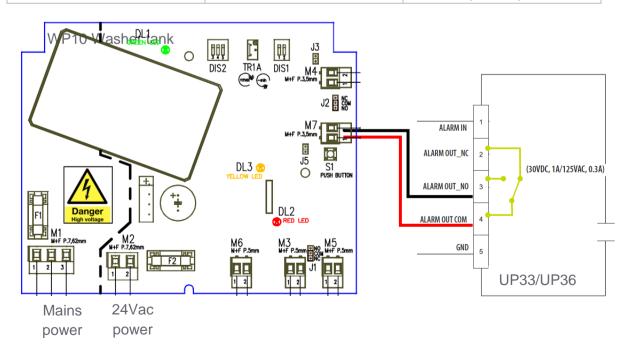


- 1. Washer control
- 2. Not connected
- 3. Ethernet (RJ45)
- 2x2 wire for camera and IR power

### (1) Washer control

The washer control is connected by the ALARM-out wires.

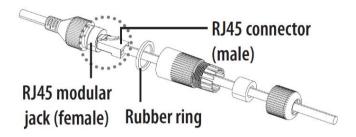
Cable Label	Cable color	Remarks
ALARM IN	Black	
GND	Brown	
ALARM OUT NO	Red	Normally open (Washer)
ALARM OUT NC	Orange	Normally closed
ALARM OUT COM	Yellow	Common (Washer)



#### (3) Ethernet

Ethernet cable should be CAT5e terminated with a RJ45. The max distance is 100m.

The RJ45 connection can be made waterproof (IP66) by using the "RJ45 water proof accessory", which is standard included.



Assemble the water proof RJ45 as shown in the drawing below..

#### (4) Power supply

Cable Label	Cable Colour	Input
Main power	Brown	24 Vac, 4 A, 50/60 Hz
	Blue	
IR Illuminator power	Black	24 Vac, 6A, 50/60 Hz
	Green	

Recommend power supply wire specification:

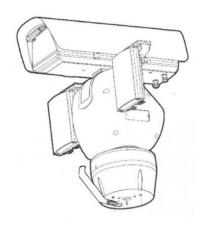
Wire type	AWG16	AWG14
Max cable length	15m	24m

# Installing the washer nozzle

The bracket for the nozzle has to be installed separately. Please, follow the instructions below:

1. Remove the rectangle shaped base-plate from the base housing.





- 2. Place the nozzle bracket between the base plate and the base housing at the position of the small notch indicating the 0° position. The nozzle bracket is of the delivery of the WP10 washer tank.
- 3. Replace the rectangle base plate or proceed with fixing the UP-WM wall mount bracket.
- 4. For the UP33 only:

Define a washer position by setting one of the presets to  $P=0^{\circ}$ ,  $T=90^{\circ}$ . The camera has to move to this preset before the washer is activated. (The wipe/washer are supported by VDG Sense using the "onvif" driver)

5. The UP36D only

To protect the Germanium window, the UP36D is not equipped with a wiper.

### **Maintenance**

To keep the UP PTZ camera in perfect condition over its life time, regular inspection and cleaning of the camera is recommended. Depending on the severity of contamination of the environment, the camera should be inspected and cleaned every 3 to 12 months.

Please follow the maintenance instructions below:

- 1. The camera can be cleaned using water jets with clean water (max. 1 Bar / 15 PSI @ 3m) or by wiping the camera housing with a damp cotton cloth.
- 2. Remove nests of insects with an suitable brush. (Do not use chemicals)
- 3. Clean the optical glass window and the germanium window with lukewarm soapy water. Use a soft cotton cloth to avoid scratching the windows or damaging its coating.
- 4. Check the condition of the wiper and replace if necessary. If the camera is in direct sunlight it is recommended to replace the wiper with the original UP wiper at least once a year.
- Check the integrity of all the O-rings and rubber sealings. Lubricate them with silicone grease (O-ring grease) to prevent them from getting drying out and to ensure their watertightness. Replace the sealings if necessary.
- 6. It is recommended that the fan in the top housing is replaced every two years.

For replacement parts, please, contact TKH Security.



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