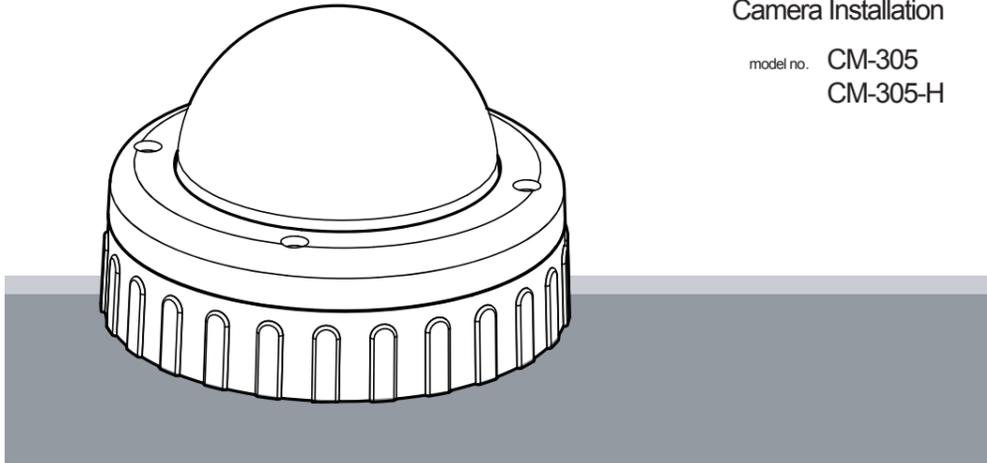


Tamper Resistant Outdoor Dome Camera

Camera Installation

model no. CM-305
CM-305-H



OPTIX

Please carefully read these instructions before using this product.
Save this manual for future use.
29713AB

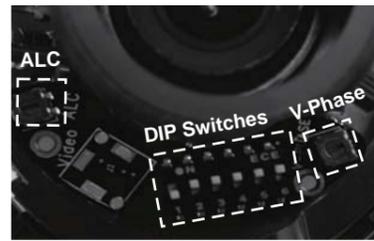
General Specifications

Model No.	CM-305	CM-305-H
Image Sensor	1/3" Sony SuperHAD	
Imaging DSP	Sony HQ-1	
IP Rating	IP66	
Type / Format	NTSC	
Wide Dynamic Range	No	
Minimum Illumination	0.6 lux @ F1.2 (50 IRE)	
Day / Night	Yes	
Horizontal TVL	Day: 540 TVL / Night: 570 TVL	
Service Monitor Jack	Yes, 2.5 mm (3/32) T/S Jack	
S/N Ratio	>50dB	
Focal Length	3.3 ~ 12 mm	
Iris Control	DC Drive	
Synchronization	INT / LL	
Video Output	1.0Vpp, 75Ω BNC Unbalanced	
White Balance	AWB, AWB-EX	
Auto White Balance Range	2500 K ~ 11000 K (AWB-EX 2000 K ~ 18000 K)	
Backlight Compensation	Central Area	
Auto Gain Control	AGC-EX, AGC Normal	
Operating Temperature	14°F ~ 122°F (-10°C ~ 50°C)	-58°F ~ 122°F (-50°C ~ 50°C)
Heater	Optional	Yes
Power Consumption	4.2W	13W
Rated Amperature	0.35A (12vDC) / 0.18A (24vAC)	0.54A (24vAC)
Input Voltage	12vDC / 24vAC (±10%)	24vAC (±10%)
Weight	1.98 lbs (0.9 kg)	
Dimensions	Dome : ø3.9" (100 mm) x H: 1.7" (45 mm) Housing: ø5.3" (135 mm) x H: 1.9" (50 mm)	
Housing / Dome Cover	Gray / Clear	

Hardware Kit Contents

- 1/2" Rubber Grommet
- 3/4" Rubber Grommet
- Screw Pack
- Torx Driver
- Wire-ended Power Adaptor lead
- Quick Install Adaptor (Optional)

Camera Adjustments



	FUNCTION	OFF <input type="checkbox"/>	ON <input type="checkbox"/>
①	L.L.	INT	LL
②	D/N	OFF	ON
③	AWB	NORMAL	EX
④	FL	OFF	ON
⑤	BLC	OFF	ON
⑥	AGC	EX	NORMAL

The bank of DIP switches allows the following settings to be made:

Line Lock (INT/LL)

In LL Mode, the V-Phase may be adjusted to compensate for connected supply phase differences. Only applicable for 24vAC supply. When using a 12vDC power supply, the camera should be operated with INT (internal) sync.

DAY/NIGHT Mode (D/N)

When this switch is set to ON the camera will produce color images under normal lighting conditions. In reduced light the camera will switch to Monochrome mode.

Auto White Balance (AWB Normal/AWB-EX)

AWB: The camera operates in the normal AWB range (2700 K ~ 11000 K).

AWB-EX: The camera operates in the extended AWB range (2000 K ~ 18000 K).

Flickerless Mode (FL/ON)

The camera reduces flicker in the image under fluorescent lighting.

Back Light Compensation (BLC)

When set to ON, this option improves the camera's response to strong, unwanted lighting effects behind the desired subject.

Low Light Sensitivity (AGC-EX/AGC Norm)

When set to EX, sensitivity in low light will automatically increase.

Selecting NORMAL will remove noise from the image, but will also limit the camera's sensitivity.

Vertical Phase Adjustment (V-Phase)

Use this adjustment when using a 24vAC supply to align the camera phase with that of the power supply.

DC-IRIS Adjustment (ALC)

This is factory preset. It should not normally require adjustment.

Template

Surface Mount (on a wall or ceiling)

Using Quick Install Adaptor:

Create an aperture in the mounting surface to a diameter of 1.5" (38 mm) as indicated by "T2".

Using Locking Arms:

Create an aperture in the mounting surface to a diameter of 4.3" (110 mm) as indicated by "T3".

Using Screws:

Create four holes at template positions 'T1', use the screws and plugs provided in the screw kit where the mounting surface is appropriate.

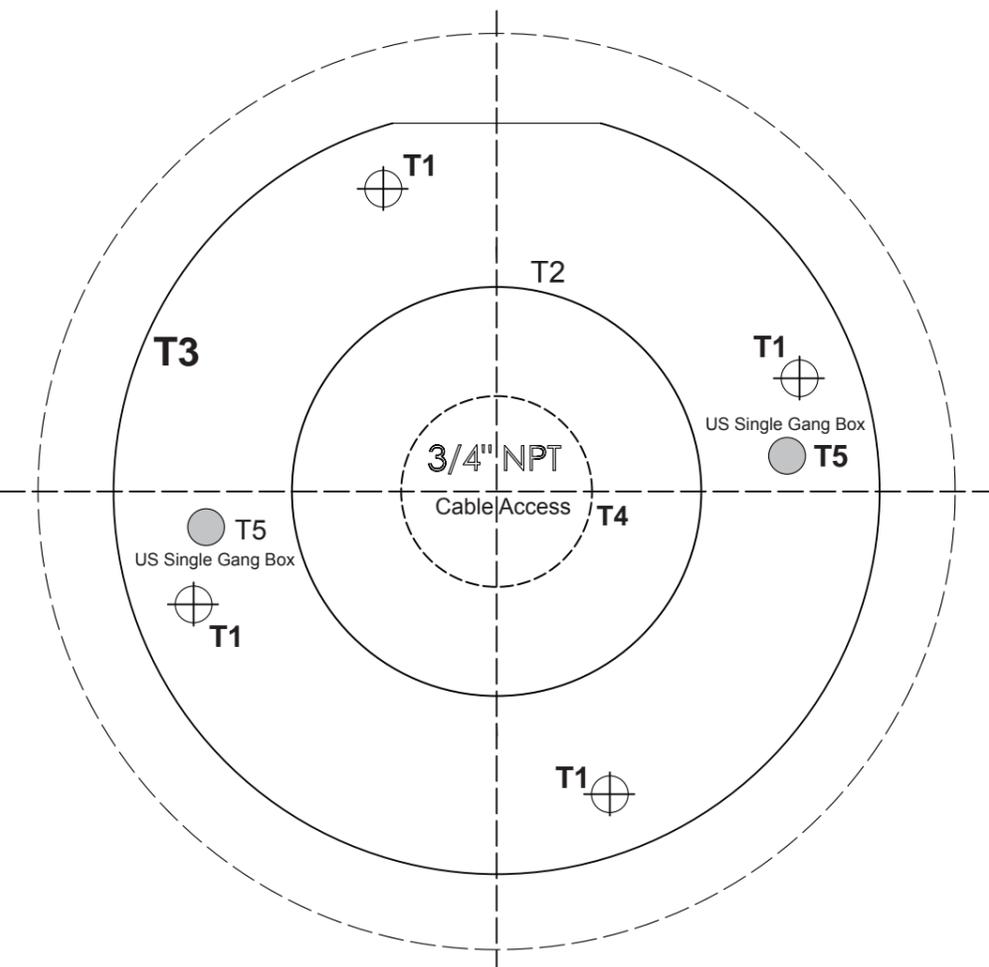
Cable Access Using Base Cable Entry

When the cables are threaded through the mounting surface, create a 3/4" (19 mm) hole as indicated "T4".

Note: When mounting the dome on a surface with the four T1 screws, use one of the side knock-outs as indicated for cable entry (see installation guide overleaf).

Note: When mounting on a US Single Gang Box, use the pre-drilled securing holes in the dome base as indicated "T5".

Do Not Open the holes at position "T5".



Regulatory Compliance

Emissions	FCC part 15 Class B CE: EN55011 ICES-003 EN55022 CISPR 11 CISPR 22 ANSI C63.4
Immunity	CE: EN50130-4



FCC COMPLIANCE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocated the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

CISPR 22 WARNING:

This is a Class B product. In a domestic environment this product may cause radio interference which case the user may be required to take adequate measures.

POWER SUPPLY REQUIREMENTS:

For use with listed Audio/Video product and only connected to 15W or less power supply.

*Power supply should be a NEC Class 2 / LPS Supply.

EQUIPMENT MODIFICATION CAUTION:

Equipment changes or modifications not expressly approved by the manufacturer, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

This class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Installation

1. Remove the dome cover and the camera module

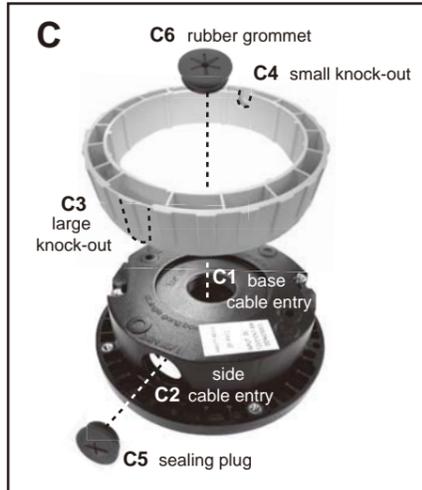
Use the supplied large torx driver to loosen the four cover screws. The screws are captive and will remain in the cover (image A).

Loosen the gimbal securing screws to remove the camera module (image B).



2. Open the required cable entry

Use either the base cable entry (C1) for the side cable entry (C2) as required. When surface mounting and using the side cable entry (C2), open the large (C3) or small (C4) knock-out on the outer ring to required size by cutting away excess material. Rotate the outer ring so that the knock-out aligns with the side cable entry. Seal an unused side cable entry with a sealing plug (C5). Use the supplied rubber grommet (C6) to prevent dust penetration when using the base cable entry. For external applications, conduit should be used to carry cables into the housing.



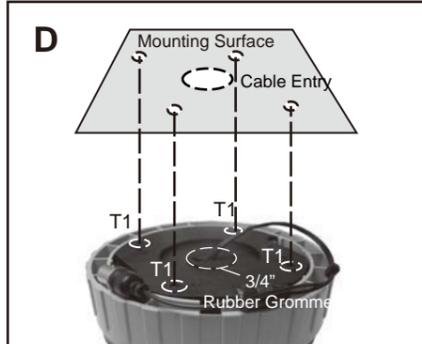
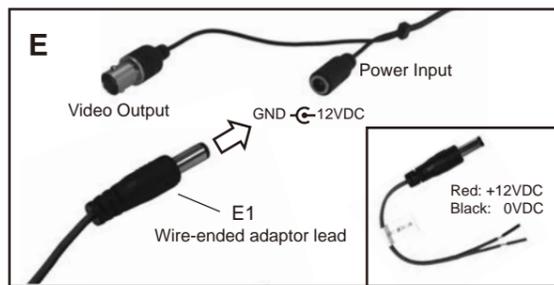
3. Mount the camera base

Mount the camera base, using screws, on a US single gang box, using the flush mount locking arms, or using the quick install adaptor. See the individual instructions below and at right.

4. Connect the wiring

Feed the pre-connected main lead through one of the cable access points and connect it to your video output and power input cables. A wire-ended adaptor lead (E1) is supplied for use with power supply cables that are not terminated with the appropriate power connector.

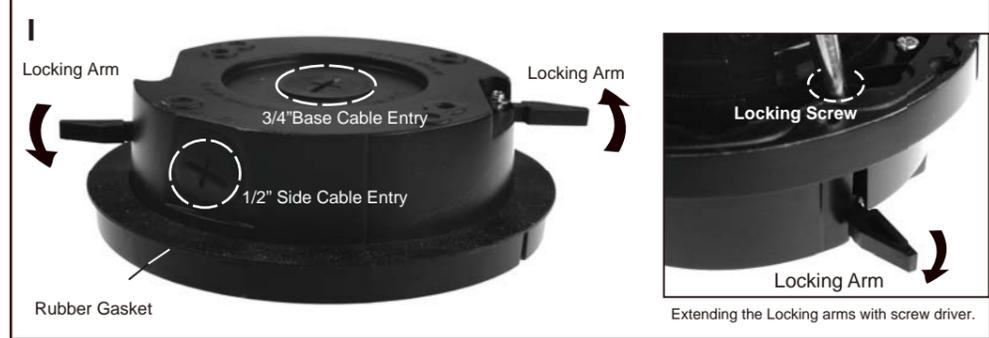
For 12VDC operation: Connect the red lead to positive and the black lead to negative.



Flush Mount Using Locking Arms

Cut a 4.3" (110mm) hole in the mounting surface as indicated by the template marking T3. Insert the dome base and turn the silver-colored screws counter-clockwise by 180° to extend the locking arms and tighten them against the mounting surface (image I).

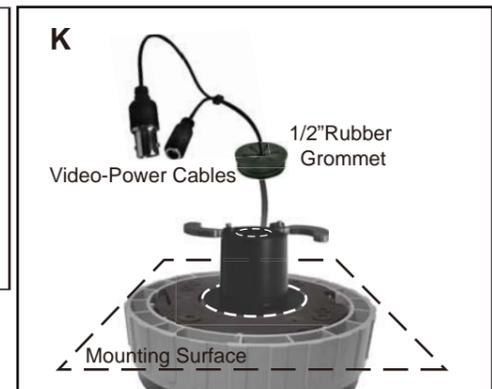
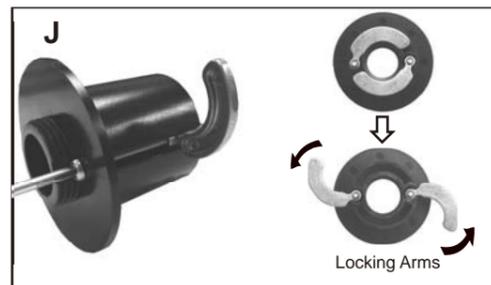
Note: To protect against dust and moisture penetration, always use the large rubber gasket on the dome base when installing.



Using the Quick Install Adaptor

Cut a 1.5" (38mm) hole in the mounting surface using the T2 marking on the template. Insert the adaptor and turn the screws counter-clockwise one turn to extend the arms, then turn the screws clockwise to pull the arms toward the flange and secure the adaptor to the mounting surface (image J).

Push the cables through the opening and the 1/2" rubber grommet. Make sure the grommet is properly installed on the adaptor to prevent dust penetration (image K).



IMPORTANT: If the dome is mounted externally, use a suitable sealant around the cable entry hole to ensure a moisture resistant seal. This prevents water vapour, from the connected conduit, from condensing inside the housing.

5. Replace the Camera Module

Tighten the gimbal screws with a screw driver to re-install the camera module.

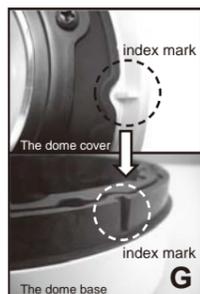
6. Adjust the camera position

Adjust the camera position by rotating and panning the camera base. The focus and range of the lens can also be adjusted.



7. Install the camera liner

Carefully fit the camera liner over the camera base so that it snaps into place (image F). Do not obstruct the camera lens.



8. Replace the Dome Cover

Replace the dome cover using the index marks (image G) to align it. Tighten the torx screws to secure the cover. Do not overtighten.

Mount Using Screws

When mounting the dome to a ceiling or wall using screws, knock out the four screw access holes on the base that correspond to the template marks T1 using a phillips head screw driver (image D). Drill four holes in the mounting surface using template marks T1 and cut a hole using template marking T4 for the 3/4" base cable entry.

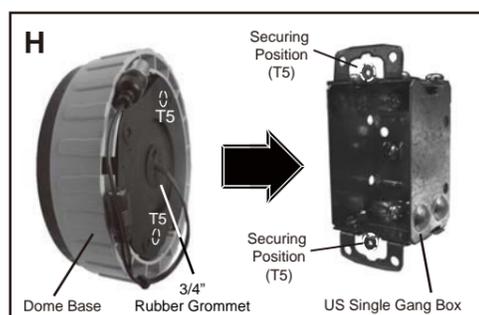
When flush mounting or surface mounting using the outer ring, ensure that the large rubber gasket (image I) is in place under the lip of the dome enclosure.

IMPORTANT: If the dome is mounted externally using screws, use the supplied rubber o-rings over each of the four mounting holes of the dome base to ensure a moisture resistant seal. Tighten the screws sufficiently to compress the o-ring moisture seals located underneath the screwheads. **Do not overtighten.**

Mount on a US Single Gang Box:

When mounting the dome to a single gang box, carefully remove the screws from the securing position on the box. Insert the 3/4" rubber grommet in the base cable entry to prevent dust penetration and push the cables through the dome base and grommet.

Mount the dome base using the two screws removed earlier. Tighten the screws sufficiently to secure the base to the box (position T5, image H).



Template