



ICS090 Series Camclosure® Camera System

INDOOR, MINI DOME, SURFACE MOUNT/IN-CEILING

Product Features

- Fully-Integrated Indoor Enclosure with Camera and Lens
- Single Model for Surface Mount and Recessed Ceiling Applications
- Video Service Connector for On-Site Setup
- Shipped Completely Assembled, Easy to Install
- 12 VDC or 24 VAC Operation, Auto Sensing
- Manual, 3-Axis (Pan/Tilt/Rotation) Positioning Allows Adjustment for Optimum Camera Rotation and Placement
- Housing Available in White or Black
- Available with Smoked or Clear Dome
- Clear Dome Includes a Discreet Liner
- NTSC/PAL or EIA/CCIR Camera Formats
- All Color Cameras Feature Digital Signal Processing
- UTP Output (Twisted Pair) Models Available
- Includes 4S Adapter Plate
- 3-Year Warranty

The **ICS090 Series Camclosure® Integrated Camera System** integrates a camera and lens package into a small, versatile indoor enclosure that can be mounted directly to a ceiling/wall or recessed in a ceiling/wall.

The **ICS090 Series** is shipped completely assembled making installation fast and easy. To surface-mount the unit, remove it from the box, attach it to the mounting surface, and connect video and power. For recessed installations simply remove the surface mount ring (no tools required) and then install the unit inside a ceiling/wall. A 4S adapter plate is supplied with the unit for electrical box installations.

The **ICS090 Series** features a 3-axis camera and lens positioning system that is capable of 360 degrees of pan, 140 degrees of tilt and 360 degrees of rotation. The system also has an internal sensing system for input voltage (12 VDC or 24 VAC), easy access to V-phase adjustment (color only), and a built-in service connector for on-site camera setup.

An optional 4-foot service/monitor cable (**ICS090-SC**) is available for on-site setup and adjustments. To use the cable simply plug one



SHOWN IN BLACK



SHOWN IN WHITE

NOTE: THE SURFACE MOUNT RING IS REMOVED FOR RECESSED INSTALLATIONS.

end of the cable directly into the service connector of the **ICS090** and connect the other end to any standard BNC (VIDEO IN) connector on a monitor.

The **ICS090 Series** has a large selection of camera and lens options, including the following:

- High-resolution color camera with auto iris, varifocal lens (3-6 mm or 4-9 mm)
- High and standard resolution color cameras with fixed focal length lenses
- Standard resolution monochrome cameras with fixed focal length lenses

All cameras with fixed focal lenses are available in 2.9 mm, 3.6 mm, 6 mm, 8 mm, or 12 mm lengths.

The **ICS090 Series** is designed for continuous operation and is supported by a three-year warranty.



DataFAX
SPEC: 22462
MANUAL: 224628

C2462 / REVISED 10-03



TECHNICAL SPECIFICATIONS

ELECTRICAL

| | |
|-------------------|---|
| Input Voltage | 12 VDC or 24 VAC ($\pm 10\%$), auto-sensing |
| Power Consumption | 3 watts or less |
| Video Connector | BNC |

GENERAL

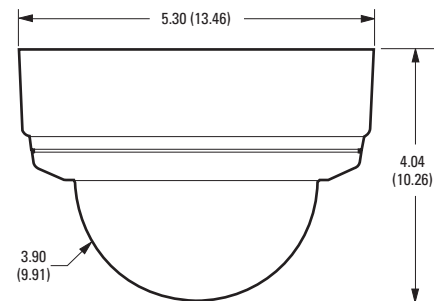
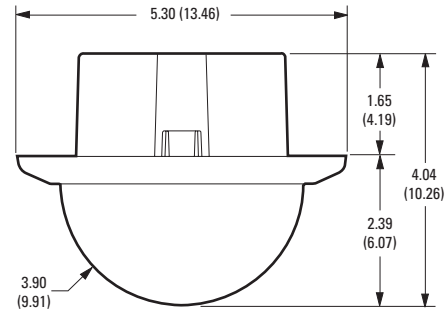
| | |
|-----------------------|-----------------------------|
| Pan/Tilt Adjustment | |
| Pan | 360° |
| Tilt | 140° (20° to 160° range) |
| Rotation | 360° |
| Construction | |
| Back Box and | |
| Surface Mount Ring | ABS plastic |
| Bubble | Polycarbonate |
| Finish | White or black |
| Dimensions | Refer to dimension drawings |
| Environment | Indoor |
| Operating Temperature | 32°F to 120°F (0° to 49°C) |
| Weight | |
| Unit | 0.52 lb (0.24 kg) |
| Shipping | 2 lb (0.91 kg) |

OPTIONAL ACCESSORIES

| | |
|-----------|---|
| ICS090-SC | 4-foot service/monitor cable. Compatible with any standard monitor BNC connector. |
|-----------|---|

CERTIFICATIONS

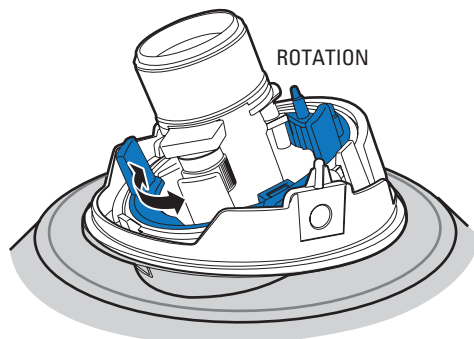
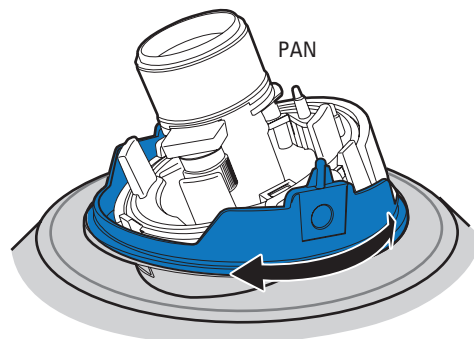
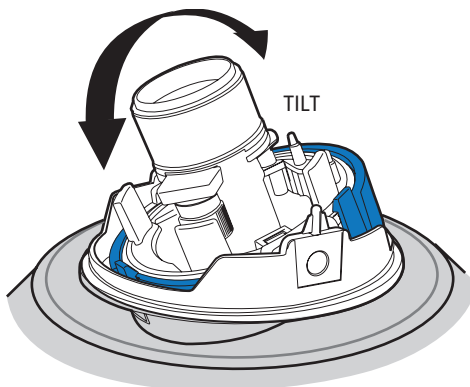
- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

3-AXIS POSITIONING SYSTEM

The ICS090 Series features a 3-axis camera and lens configuration for optimal camera rotation and placement. The camera and lens positioning system is capable of 360° of pan, 140° of tilt, and 360° of rotation.



TECHNICAL SPECIFICATIONS

CAMERA SPECIFICATIONS

| | Black-White Standard Resolution Fixed, Without Iris (Models ICS090- MA x/ ICS090- MC x) | Color Standard Resolution Fixed, Without Iris (Models ICS090- CA x/ ICS090- CC x) | Color High Resolution Fixed, Without Iris (Models ICS090- CR x/ ICS090- CS x) | Color High Resolution Varifocal, Auto Iris (Models ICS090- CRV x/ ICS090- CSV x) |
|------------------------|--|--|--|---|
| Signal System | EIA or CCIR | NTSC or PAL | NTSC or PAL | NTSC or PAL |
| Imaging Device | 1/3-inch CCD | 1/3-inch Interline Color CCD | 1/3-inch Interline Color CCD (Hyper HAD™) | 1/4-inch Interline Color CCD |
| Scanning System | 2:1 Interlace | 2:1 Interlace | 2:1 Interlace | 2:1 Interlace |
| Sync System | Internal | 12 VDC: Internal 24 VAC: External (VD Lock) | 12 VDC: Internal 24 VAC: External (VD Lock) | 12 VDC: Internal 24 VAC: External (VD Lock) |
| Horizontal Resolution | EIA: 420 TV lines CCIR: 420 TV lines | NTSC: 350 TV lines PAL: 350 TV lines | NTSC: 470 TV lines PAL: 460 TV lines | NTSC: 480 TV lines PAL: 480 TV lines |
| Signal-to-Noise Ratio | 50 dB | 48 dB | 48 dB | 48 dB (AGC Off) |
| Min. Illumination | 0.1 lux (f2.0) | 1 lux (f2.0) | 1 lux (f2.0) | Less than 1.2 lux (f1.2) |
| Video Out | 1 Vp-p Composite (75 ohms) | 1 Vp-p Composite (75 ohms) | 1 Vp-p Composite (75 ohms) | 1 Vp-p Composite (75 ohms) |
| Gain Control | Auto | Auto | NTSC: Auto PAL: Manual | On/Off by DIP switch (0-20 dB) |
| Exposure | Electronic Shutter (1/60 - 1/100,000) | Electronic Shutter (1/60 - 1/100,000) | Electronic Shutter (1/60 - 1/100,000) | Electronic Shutter (1/60 - 1/100,000) |
| White Balance | Not applicable | Auto | Auto | Auto or manual (switch selectable) |
| Backlight Compensation | Auto | Auto or manual (switch selectable) | Auto or manual (switch selectable) | Auto; adjusts AGC and AES |
| Power Source* | 12 VDC, 24 VAC | 12 VDC, 24 VAC | 12 VDC, 24 VAC | 12 VDC, 24 VAC |

*24 VAC power is recommended when installing any Camclosure® Integrated Camera System under fluorescent lighting conditions.

LENS SPECIFICATIONS

| Camera | Fixed Focal Length Without Iris | | | | | | | | | | Varifocal With Auto Iris | | | |
|-----------------------|---------------------------------|--------|----------|-----|----------|-----|----------|-----|----------|-----|-----------------------------|------------|----------------|----------------|
| | Color | B/W | Color | B/W | Color | B/W | Color | B/W | Color | B/W | Color, High Resolution only | | | |
| Focal Length | 2.9 mm | 3.0 mm | 3.6 mm | | 6.0 mm | | 8.0 mm | | 12.0 mm | | 3-6 mm | 4-9 mm | | |
| Format Size | 1/3-inch | | 1/3-inch | | 1/3-inch | | 1/3-inch | | 1/3-inch | | 1/4-inch | — | | |
| Relative Aperture (F) | 2.0 | | 2.0 | | 1.8 | 2.5 | 1.8 | 2.5 | 2.0 | | 1.2 to 1.5 | 1.6 to 2.4 | | |
| Operation | N/A | | N/A | | N/A | | N/A | | N/A | | Auto | Auto | | |
| Iris | N/A | | N/A | | N/A | | N/A | | N/A | | Auto | Auto | | |
| Focus | Manual | | Manual | | Manual | | Manual | | Manual | | Manual | Manual | | |
| Zoom | N/A | | N/A | | N/A | | N/A | | N/A | | Manual | Manual | | |
| Angle of View** | 90° | | 87° | | 74° | | 42° | 38° | 32° | 29° | 21° | | | |
| Horizontal | 90° | | 87° | | 74° | | 42° | 38° | 32° | 29° | 21° | 72° to 36° | 51.8° to 23.8° | |
| Diagonal | — | | — | | — | | — | | — | | — | | 96° to 46° | 66.1° to 29.7° |
| Vertical | 69° | | 67° | | 55° | | 33° | 30° | 25° | 23° | 17° | 52° to 26° | 38.3° to 17.8° | |

**Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.

SYSTEM MODELS

ICS090 SERIES HOUSING MODELS (No Camera/Lens)

The following models are not compatible with camera and lens packages and are not upgradable.

ICS-090NHU White housing with smoked dome

ICS-090BHNU Black housing with smoked dome

ICS090 SERIES SYSTEM MODELS (White Finish)

| Camera Type | Lower Dome | Lens/Iris | BNC Connector (NTSC) | UTP-Unshielded Twisted Pair* (NTSC) | BNC Connector (PAL) | UTP-Unshielded Twisted Pair* (PAL) | | |
|----------------------------|-------------|-------------------------|----------------------|-------------------------------------|---------------------|------------------------------------|--------------|---------------|
| Color, High Resolution | Smoked | 2.9 mm | ICS090-CR3 | ICS090-CR3T | ICS090-CS3 | ICS090-CS3T | | |
| | | 3.6 mm | ICS090-CR3.6 | ICS090-CR3.6T | ICS090-CS3.6 | ICS090-CS3.6T | | |
| | | 6 mm | ICS090-CR6 | ICS090-CR6T | ICS090-CS6 | ICS090-CS6T | | |
| | | 8 mm | ICS090-CR8 | ICS090-CR8T | ICS090-CS8 | ICS090-CS8T | | |
| | | 12 mm | ICS090-CR12 | ICS090-CR12T | ICS090-CS12 | ICS090-CS12T | | |
| | | 3-6 mm with Auto Iris | ICS090-CRV3A | ICS090-CRV3AT | ICS090-CSV3A | ICS090-CSV3AT | | |
| | | 4-9 mm with Auto Iris | ICS090-CRV4A | ICS090-CRV4AT | ICS090-CSV4A | ICS090-CSV4AT | | |
| | Clear | 2.9 mm | ICS091-CR3 | ICS091-CR3T | ICS091-CS3 | ICS091-CS3T | | |
| | | 3.6 mm | ICS091-CR3.6 | ICS091-CR3.6T | ICS091-CS3.6 | ICS091-CS3.6T | | |
| | | 6 mm | ICS091-CR6 | ICS091-CR6T | ICS091-CS6 | ICS091-CS6T | | |
| | | 8 mm | ICS091-CR8 | ICS091-CR8T | ICS091-CS8 | ICS091-CS8T | | |
| | | 12 mm | ICS091-CR12 | ICS091-CR12T | ICS091-CS12 | ICS091-CS12T | | |
| | | 3-6 mm with Auto Iris | ICS091-CRV3A | ICS091-CRV3AT | ICS091-CSV3A | ICS091-CSV3AT | | |
| | | 4-9 mm with Auto Iris | ICS091-CRV4A | ICS091-CRV4AT | ICS091-CSV4A | ICS091-CSV4AT | | |
| Color, Standard Resolution | Smoked | 2.9 mm | ICS090-CA3 | ICS090-CA3T | ICS090-CC3 | ICS090-CC3T | | |
| | | 3.6 mm | ICS090-CA3.6 | ICS090-CA3.6T | ICS090-CC3.6 | ICS090-CC3.6T | | |
| | | 6 mm | ICS090-CA6 | ICS090-CA6T | ICS090-CC6 | ICS090-CC6T | | |
| | | 8 mm | ICS090-CA8 | ICS090-CA8T | ICS090-CC8 | ICS090-CC8T | | |
| | | 12 mm | ICS090-CA12 | ICS090-CA12T | ICS090-CC12 | ICS090-CC12T | | |
| | Clear | 2.9 mm | ICS091-CA3 | ICS091-CA3T | ICS091-CC3 | ICS091-CC3T | | |
| | | 3.6 mm | ICS091-CA3.6 | ICS091-CA3.6T | ICS091-CC3.6 | ICS091-CC3.6T | | |
| | | 6 mm | ICS091-CA6 | ICS091-CA6T | ICS091-CC6 | ICS091-CC6T | | |
| | | 8 mm | ICS091-CA8 | ICS091-CA8T | ICS091-CC8 | ICS091-CC8T | | |
| | | 12 mm | ICS091-CA12 | ICS091-CA12T | ICS091-CC12 | ICS091-CC12T | | |
| | | B-W Standard Resolution | Smoked | 2.9 mm | ICS090-MA3 | ICS090-MA3T | ICS090-MC3 | ICS090-MC3T |
| | | | | 3.6 mm | ICS090-MA3.6 | ICS090-MA3.6T | ICS090-MC3.6 | ICS090-MC3.6T |
| | | | | 6 mm | ICS090-MA6 | ICS090-MA6T | ICS090-MC6 | ICS090-MC6T |
| | | | | 8 mm | ICS090-MA8 | ICS090-MA8T | ICS090-MC8 | ICS090-MC8T |
| 12 mm | ICS090-MA12 | | | ICS090-MA12T | ICS090-MC12 | ICS090-MC12T | | |
| Clear | 2.9 mm | | ICS091-MA3 | ICS091-MA3T | ICS091-MC3 | ICS091-MC3T | | |
| | 3.6 mm | | ICS091-MA3.6 | ICS091-MA3.6T | ICS091-MC3.6 | ICS091-MC3.6T | | |
| | 6 mm | | ICS091-MA6 | ICS091-MA6T | ICS091-MC6 | ICS091-MC6T | | |
| | 8 mm | | ICS091-MA8 | ICS091-MA8T | ICS091-MC8 | ICS091-MC8T | | |
| | | 12 mm | ICS091-MA12 | ICS091-MA12T | ICS091-MC12 | ICS091-MC12T | | |

*Compatible with NVT and NITEK. Call your customer service representative for part numbers. A separate receiver is needed.

SYSTEM MODELS

ICS090 SERIES SYSTEM MODELS (Black Finish)

| Camera Type | Lower Dome | Lens/Iris | BNC Connector (NTSC) | UTP-Unshielded Twisted Pair* (NTSC) | BNC Connector (PAL) | UTP-Unshielded Twisted Pair* (PAL) |
|----------------------------|------------|-----------------------|----------------------|-------------------------------------|---------------------|------------------------------------|
| Color, High Resolution | Smoked | 2.9 mm | ICS090B-CR3 | ICS090B-CR3T | ICS090B-CS3 | ICS090B-CS3T |
| | | 3.6 mm | ICS090B-CR3.6 | ICS090B-CR3.6T | ICS090B-CS3.6 | ICS090B-CS3.6T |
| | | 6 mm | ICS090B-CR6 | ICS090B-CR6T | ICS090B-CS6 | ICS090B-CS6T |
| | | 8 mm | ICS090B-CR8 | ICS090B-CR8T | ICS090B-CS8 | ICS090B-CS8T |
| | | 12 mm | ICS090B-CR12 | ICS090B-CR12T | ICS090B-CS12 | ICS090B-CS12T |
| | | 3-6 mm with Auto Iris | ICS090B-CRV3A | ICS090B-CRV3AT | ICS090B-CSV3A | ICS090B-CSV3AT |
| | | 4-9 mm with Auto Iris | ICS090B-CRV4A | ICS090B-CRV4AT | ICS090B-CSV4A | ICS090B-CSV4AT |
| | Clear | 2.9 mm | ICS091B-CR3 | ICS091B-CR3T | ICS091B-CS3 | ICS091B-CS3T |
| | | 3.6 mm | ICS091B-CR3.6 | ICS091B-CR3.6T | ICS091B-CS3.6 | ICS091B-CS3.6T |
| | | 6 mm | ICS091B-CR6 | ICS091B-CR6T | ICS091B-CS6 | ICS091B-CS6T |
| | | 8 mm | ICS091B-CR8 | ICS091B-CR8T | ICS091B-CS8 | ICS091B-CS8T |
| | | 12 mm | ICS091B-CR12 | ICS091B-CR12T | ICS091B-CS12 | ICS091B-CS12T |
| | | 3-6 mm with Auto Iris | ICS091B-CRV3A | ICS091B-CRV3AT | ICS091B-CSV3A | ICS091B-CSV3AT |
| | | 4-9 mm with Auto Iris | ICS091B-CRV4A | ICS091B-CRV4AT | ICS091B-CSV4A | ICS091B-CSV4AT |
| Color, Standard Resolution | Smoked | 2.9 mm | ICS090B-CA3 | ICS090B-CA3T | ICS090B-CC3 | ICS090B-CC3T |
| | | 3.6 mm | ICS090B-CA3.6 | ICS090B-CA3.6T | ICS090B-CC3.6 | ICS090B-CC3.6T |
| | | 6 mm | ICS090B-CA6 | ICS090B-CA6T | ICS090B-CC6 | ICS090B-CC6T |
| | | 8 mm | ICS090B-CA8 | ICS090B-CA8T | ICS090B-CC8 | ICS090B-CC8T |
| | | 12 mm | ICS090B-CA12 | ICS090B-CA12T | ICS090B-CC12 | ICS090B-CC12T |
| | Clear | 2.9 mm | ICS091B-CA3 | ICS091B-CA3T | ICS091B-CC3 | ICS091B-CC3T |
| | | 3.6 mm | ICS091B-CA3.6 | ICS091B-CA3.6T | ICS091B-CC3.6 | ICS091B-CC3.6T |
| | | 6 mm | ICS091B-CA6 | ICS091B-CA6T | ICS091B-CC6 | ICS091B-CC6T |
| | | 8 mm | ICS091B-CA8 | ICS091B-CA8T | ICS091B-CC8 | ICS091B-CC8T |
| | | 12 mm | ICS091B-CA12 | ICS091B-CA12T | ICS091B-CC12 | ICS091B-CC12T |
| B-W Standard Resolution | Smoked | 2.9 mm | ICS090B-MA3 | ICS090B-MA3T | ICS090B-MC3 | ICS090B-MC3T |
| | | 3.6 mm | ICS090B-MA3.6 | ICS090B-MA3.6T | ICS090B-MC3.6 | ICS090B-MC3.6T |
| | | 6 mm | ICS090B-MA6 | ICS090B-MA6T | ICS090B-MC6 | ICS090B-MC6T |
| | | 8 mm | ICS090B-MA8 | ICS090B-MA8T | ICS090B-MC8 | ICS090B-MC8T |
| | | 12 mm | ICS090B-MA12 | ICS090B-MA12T | ICS090B-MC12 | ICS090B-MC12T |
| | Clear | 2.9 mm | ICS091B-MA3 | ICS091B-MA3T | ICS091B-MC3 | ICS091B-MC3T |
| | | 3.6 mm | ICS091B-MA3.6 | ICS091B-MA3.6T | ICS091B-MC3.6 | ICS091B-MC3.6T |
| | | 6 mm | ICS091B-MA6 | ICS091B-MA6T | ICS091B-MC6 | ICS091B-MC6T |
| | | 8 mm | ICS091B-MA8 | ICS091B-MA8T | ICS091B-MC8 | ICS091B-MC8T |
| | | 12 mm | ICS091B-MA12 | ICS091B-MA12T | ICS091B-MC12 | ICS091B-MC12T |

*Compatible with NVT and NITEK. Call your customer service representative for part numbers. A separate receiver is needed.

OPTIONAL ACCESSORIES

RECOMMENDED POWER SUPPLIES

TF2000 Power supply for one 24 VAC camera, 20 VA
MCS Series Multiple 24 VAC camera power supply, indoor
MCS*E Series Multiple 24 VAC camera power supply, indoor

OPTIONAL ACCESSORIES

ICS090-SC 4-foot service/monitor cable; compatible with any standard monitor BNC connector

LENS PACK OPTIONS

Lens packs offer the added convenience of easily changing a camera's field of view by simply changing the lens.

The following lens packs are available for all Camclosures. All fixed focal length lenses ranging from 2.9 mm to 12 mm are interchangeable with any camera module. Varifocal lenses are not interchangeable.

Variety Pack

13FFD-V5PAK Variety package of five lenses, one each 2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm

Single Lens Pack

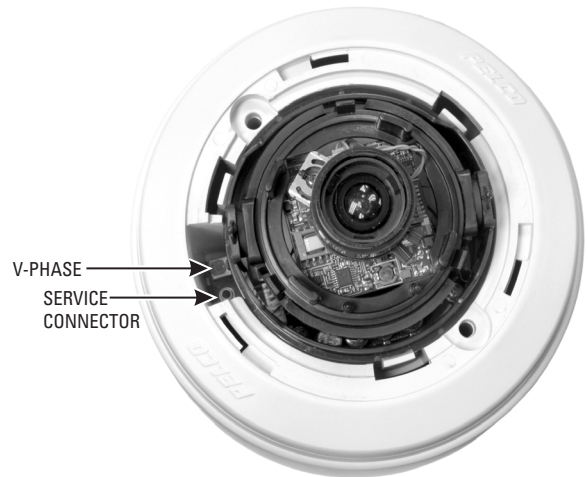
13FF3D 2.9 mm lens and mount
13FF3.6D 3.6 mm lens and mount
13FF6D 6 mm lens and mount
13FF8D 8 mm lens and mount
13FF12D 12 mm lens and mount

Four Lens Pack

13FF3D-4PAK Package of four 2.9 mm lenses and mounts
13FF3.6D-4PAK Package of four 3.6 mm lenses and mounts
13FF6D-4PAK Package of four 6 mm lenses and mounts



ICS090-SC 4-FOOT SERVICE/MONITOR CABLE



ICS090 SERIES CAMCLOSURE FEATURES EASY ACCESS TO V-PHASE ADJUSTMENT (COLOR ONLY) AND BUILT-IN SERVICE CONNECTOR FOR ON-SITE CAMERA SET-UP



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