

# SURVEYOR4



## In-Ceiling Fixed-Position Camera Dome

- **Color and monochrome cameras**
- **High resolution models available**
- **Manual or autoiris varifocal lenses**
- **Adjustable camera position in 4 directions**
- **Fast installation with supplied electrical box**
- **24 VAC operation**
- **Accessible BNC connector for local video testing**
- **Cost-effective design**

The Surveyor4 Miniature Fixed-Position Camera Dome series offers a compact indoor domed housing incorporating a fixed camera and lens combination. They are configured for in-ceiling installation. The domes include a standard or high-resolution monochrome or color camera with a choice of manual varifocal or varifocal autoiris lenses. A smoked lower dome is included. A model is available that offers twisted pair video connection. A UTP receiver is required for twisted pair configuration. Refer to Table 1 and Selection Chart for complete model descriptions.

The camera position is adjustable in four directions, allowing for adjustment of pan, tilt, vertical height in the dome and rotation about the lens axis (roll), for any angle of view required. The lens iris and focus can be adjusted, as well as selecting a wide or telephoto angle of view. The unit accepts 24 VAC input; the color cameras offer line lock capability.

The Surveyor Camera Dome meets FCC requirements for a Class A device.

### ASSOCIATED EQUIPMENT AND ACCESSORIES

**Model SUR4-PH, Product Code 7803:** Pendant housing that allows the Surveyor4 camera dome to be installed in an outdoor pendant configuration.

**Model V4-H-P Pendant Housing, Product Code 7898:** Pendant housing that allows the Surveyor4 to be installed in an indoor pendant configuration.

**Notes:** SUPERSEDES PRODUCT SPECIFICATION V028-102

## Contractors' Specification

### Miniature Fixed-Position Camera Domes

The fixed camera dome shall incorporate a fixed camera and varifocal lens combination. The camera domes shall be available for indoor in-ceiling mounting configurations. Standard or high-resolution color or monochrome cameras shall be available with a choice of manual varifocal or autoiris varifocal lenses. A smoked lower dome shall be included.

The camera position shall have a four direction adjustment, allowing for adjustment of pan, tilt, vertical height in the dome and lens rotation (roll), for any angle of view required. Both monochrome and color camera versions shall accept 24 VAC; color cameras shall offer line lock capability. The cameras shall be a 1/3-inch format camera. The monochrome cameras shall have 380 (standard) or 580 (high resolution) TV lines resolution and 0.028 fc (0.3 lux) sensitivity; the color cameras shall have 330 TV lines resolution and 0.056 fc (0.6 lux) sensitivity (standard) or 460 TV lines resolution and 0.019 fc (0.2 lux) sensitivity (high resolution). All cameras shall have electronic shutter and shall be available with a 2.6-6 mm manual or autoiris varifocal lens.

The in-ceiling camera dome's dimensions shall not exceed: height, 3.0 in. (76 mm) below the ceiling and 4.1 in. (104 mm) above the ceiling; total diameter, 6.2 in. (157 mm); dome diameter, 5.25 in. (133 mm). The weight shall be approximately 2.25 lb (1.02 kg).

The in-ceiling fixed camera dome system shall be Vicon Surveyor4 In-Ceiling Fixed-Position Camera Dome series. Refer to Table 1 for specific model numbers.

| Model                | Product Code | Description  |
|----------------------|--------------|--|
| S4-M36               | 7816         | 1/3-in. monochrome camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; EIA; coaxial cable video                          |
| S4-M36C              | 7816-01      | 1/3-in. monochrome camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; CCIR; coaxial cable video                         |
| S4-MH36              | 7817         | 1/3-in. high-resolution monochrome camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome, EIA; coaxial cable video          |
| S4-MH36C             | 7817-01      | 1/3-in. high-resolution monochrome camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; CCIR; coaxial cable video         |
| S4-MHA36             | 7818         | 1/3-in. high-resolution monochrome camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; EIA; coaxial cable video |
| S4-MHA36C            | 7818-01      | 1/3-in. high-resolution monochrome camera and 2.6-6 mm varifocal autoiris lens; 24 VAC 4-inch smoked lower dome; CCIR; coaxial cable video |
| S4-C36               | 7819         | 1/3-in. color camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; NTSC; coaxial cable video                              |
| S4-C36C              | 7819-01      | 1/3-in. color camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; PAL; coaxial cable video                               |
| S4-CA36              | 7820         | 1/3-in. color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; NTSC; coaxial cable video                     |
| S4-CA36C             | 7820-01      | 1/3-in. color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; PAL; coaxial cable video                      |
| S4-CH36              | 7821         | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; NTSC; coaxial cable video              |
| S4-CH36C             | 7821-01      | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal lens; 24 VAC; 4-inch smoked lower dome; PAL; coaxial cable video               |
| S4-CHA36             | 7822         | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; NTSC; coaxial cable video     |
| S4-CHA36C            | 7822-01      | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; PAL; coaxial cable video      |
| S4T-CHA36            | 7857         | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; NTSC; twisted pair video      |
| S4T-CHA36C           | 7857-01      | 1/3-in. high-resolution color camera and 2.6-6 mm varifocal autoiris lens; 24 VAC; 4-inch smoked lower dome; PAL; twisted pair video       |
| <b>UTP Receivers</b> |              |  |
| V212-NVT             | 7631         | Receiver, converts UTP video to composite up to 500 ft from transmitter  |
| V213-NVT             | 6518         | Receiver, converts UTP video to composite up to 1000 ft from transmitter   |
| V652-NVT             | 7453         | Receiver; converts UTP video to composite up to 3000 ft from transmitter   |
| V1613-NVT            | 7648         | 16-channel Hub receiver, converts UTP video to composite up to 1000 ft from each transmitter   |
| V1622-NVT            | 6519         | 16-channel Hub receiver, converts UTP video to composite up to 3000 ft from each transmitter   |

**Table 1: Models, Product Codes and Descriptions**

# Technical Information

## ELECTRICAL

**Input Voltage:** 13-28 VAC (24 VAC nominal), nonisolated.

**Current Rating:** 300 mA at 24 VAC.

**Power Consumption:** 7.2 W.

**Heat Equivalent:** 0.4 btu/min (0.1 kg-cal/min).  
 Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

**Maximum Operating Distance:**

| Volt-<br>age | Wire Gauge ft (m) |               |                |                |                  |
|--------------|-------------------|---------------|----------------|----------------|------------------|
|              | 20                | 18            | 16             | 14             | 12               |
| 24<br>VAC    | 1830<br>(550)     | 2860<br>(870) | 4580<br>(1400) | 7300<br>(2225) | 11,450<br>(3490) |

**Connectors:** Power: 3-pin terminal block.  
 Video: BNC, or optional UTP terminal block.

**Video Output Impedance:** 75 ohms.

**Scanning System:** EIA/NTSC: 525 lines, 60 fields/sec.  
 CCIR/PAL: 625 lines, 50 fields/sec.

**Radio Frequency Emission Rating:** FCC Class A.

## CAMERA/LENS

**Specifications:** Refer to Table 2.

## OPERATIONAL

**Tilt and Horizontal Adjustment:** 4 axis adjustment, pan, tilt, vertical height of camera/lens and roll (lens may be rotated on its axis 360°).

## MECHANICAL

**Application:** Indoor.

**Mounting:** In-ceiling with 4 x 4 electrical box and bracket.

**Dimensions:** Height (H1): 4.1 in. (104 mm), above ceiling; (H2): 3.0 in. (76 mm), below ceiling.  
 Total Diameter (D1): 6.2 in. (157 mm).  
 Dome Diameter (D2): 5.25 in. (133 mm).  
 Total width of electrical box (W): 4.75 in. (121 mm)

**Weight:** Approximately 2.25 lb (1.02 kg).

**Construction:** Plastic and steel.

**Finish:** Black enclosure, smoked (gray tint) lower dome.

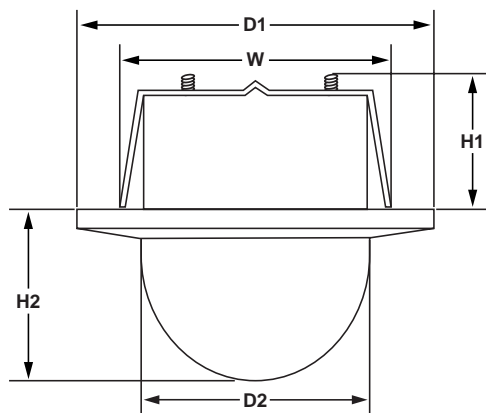
## ENVIRONMENTAL

**Operating Temperature Range:** 35 to 104° F (2 to 40° C).

**Operating Humidity:** Up to 90% relative, noncondensing.

**Storage Temperature Range:** -40 to 150° F (-40 to 65° C).

**Storage Humidity:** Up to 90% relative, noncondensing.



## Technical Information (cont'd)

| Model  | Image Device                                    | Color/Mono | Resolution (TV lines) | Sensitivity fc (lux)            | Electronic Iris (sec) | Signal-to-Noise Ratio |
|--|---|------------|-----------------------|---------------------------------|-----------------------|-----------------------|
| S4-M36/<br>S4-M36C                                 | 1/3" CCD,<br>2:1 interlace,<br>EIA/CCIR         | Mono       | 380                   | 0.028 (0.3)<br>at 20 IRE, f/2   | 1/60 (1/50)-1/100,000 | >50 dB (AGC off)      |
| S4-MH36/<br>S4-MH36C                               | 1/3" CCD,<br>2:1 interlace,<br>EIA/CCIR         | Mono       | 580                   | 0.0028 (0.03)<br>at 20 IRE, f/2 | 1/60 (1/50)-1/100,000 | >50 dB (AGC off)      |
| S4-MHA36/<br>S4-MHA36C                             | 1/3" CCD,<br>2:1 interlace,<br>EIA/CCIR         | Mono       | 580                   | 0.0028<br>(0.03)                | 1/60 (1/50)-1/100,000 | >50 dB (AGC off)      |
| S4-C36/<br>S4-C36C                                 | 1/3" CCD,<br>2:1 interlace,<br>NTSC/PAL         | Color      | 330                   | 0.056 (0.6)<br>at 40 IRE, f/2   | 1/60 (1/50)-1/100,000 | >48 dB (AGC off)      |
| S4-CA36/<br>S4-CA36C                               | 1/3" CCD,<br>2:1 interlace,<br>NTSC/PAL         | Color      | 330                   | 0.056 (0.6)<br>at 20 IRE, f/2   | 1/60 (1/50)-1/100,000 | >48 dB (AGC off)      |
| S4-CH36/<br>S4-CH36C                               | 1/3" ExView™<br>CCD, 2:1 interlace,<br>NTSC/PAL | Color      | 460                   | 0.019 (0.2)<br>at 25 IRE, f/1.2 | 1/60 (1/50)-1/100,000 | >48 dB (AGC off)      |
| S4-CHA36/<br>S4-CHA36C<br>S4T-CHA36/<br>S4T-CHA36C | 1/3" ExView™<br>CCD, 2:1 interlace,<br>NTSC/PAL | Color      | 460                   | 0.019 (0.2)<br>at 25 IRE, f/1.2 | 1/60 (1/50)-1/100,000 | >48 dB (AGC off)      |

**Table 2: Camera Specifications**

| Model                                      | Focal Length (mm)                   | Field-of-View |               |
|--|-------------------------------------|---------------|---------------|
|  |                                     | Horizontal    | Vertical      |
| S4-M36/S4-M36C                             | 2.6-6 varifocal<br>with manual iris | 106° - 47.6°  | 78.2° - 35.8° |
| S4-MH36/S4-MH36C                           | 2.6-6 varifocal<br>with manual iris | 106° - 47.6°  | 78.2° - 35.8° |
| S4-MHA36/S4-MHA36C                         | 2.6-6 varifocal<br>with autoiris    | 106° - 47.6°  | 78.2° - 35.8° |
| S4-C36/S4-C36C                             | 2.6-6 varifocal<br>with manual iris | 106° - 47.6°  | 78.2° - 35.8° |
| S4-CA36/S4-CA36C                           | 2.6-6 varifocal<br>with autoiris    | 106° - 47.6°  | 78.2° - 35.8° |
| S4-CH36/S4-CH36C                           | 2.6-6 varifocal<br>with manual iris | 106° - 47.6°  | 78.2° - 35.8° |
| S4-CHA36/S4-CHA36C<br>S4T-CHA36/S4T-CHA36C | 2.6-6 varifocal<br>with autoiris    | 106° - 47.6°  | 78.2° - 35.8° |

**Table 2 cont'd: Lens Specifications**

# Surveyor4 Selection Chart

