

NOTES SUPERSEDES PRODUCT SPECIFICATION 413-292	SPEC NO. 413	REV. 194	SEC. 6
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Model Number	V4.5H-12-1	V4.5H-15-1
Product Codes	4295	4296
Description	ENVIRONMENTAL MICROHOUSINGS	ENVIRONMENTAL MICROHOUSINGS



- **Weatherproof**
- **Easy installation and serviceability**
- **Accommodates a variety of camera sizes**
- **UL listed**

The V4.5H Series of Environmental Micro housings combines durability with attractive styling to provide protection from weather conditions for miniature charge-coupled device (CCD) cameras. Constructed of ribbed extruded aluminum with a light gray powder-coated finish, the V4.5H is both functional and aesthetic. It is designed for indoor or outdoor use.

Available in 12-inch (30 cm) and 15-inch (38 cm) lengths, the V4.5H features flexibility and easy installation. The bolt-hole pattern on the unit's base allows attachment to a variety of remote positioning devices and wall mounts. The V1600WM Wall Mount with V1600AH Adjustable Head is recommended for fixed mounting.) End caps are simply detached by removing two screws. Because the camera mounting plate is secured to the rear end cap, access to the camera and lens is instant and unhampered. A slot in the mounting plate enables adjustable front-to-back camera positioning. A vent is located on the base of the front end cap, thereby allowing for circulation while keeping out the elements. See Figure 1 for dimensions.

V4.5H ENVIRONMENTAL HOUSING

The V4.5H accommodates camera and lens combinations up to 8.75-inches (22.2 cm) long for Model V4.5H-12-1, and up to 11.75-inches (29.8 cm) long for Model V4.5H-15-1. Compact zoom lenses compatible with the V4.5H are listed in Table 1. The housings comply with UL standard 1409.

TABLE 1
MOTORIZED ZOOM LENSES FOR THE V4.5H

Model Number	Focal Length (mm)	Zoom Range	Lens Speed (f/)
2/3-Inch Format V12.5-75-4 (M, MS, AC)	12.5-75	6X	1.2
1/2-Inch Format V8.5-51 (M, MS, AC)	8.5-51	6X	1.2
1/3-Inch Format V6-36 (AC) V6-60 (AC)	6-36 6-60	6X 10X	1.2 1.2

†M-Motorized zoom, focus, and iris. MS-Motorized zoom, focus, and iris, with a neutral density spot filter. AC-Motorized zoom and focus with auto iris and a neutral density spot filter

8.75-INCH* INDOOR/OUTDOOR HOUSING

The housing shall be a weatherproof enclosure for small cameras. Construction shall be of aluminum for protection from radio frequency (RF) interference. Maximum camera/lens dimensions shall be: length, 8.75 in. (22.2 cm); width, 4.25 in. (10.8 cm); height, 3.0 in. (7.6 cm). All wiring shall be routed into the rear of the housing through compression fittings. The following options shall be available: thermostatically-controlled heater; sunshield; rainshield. The housing shall be Vicon's model V4.5H-12-1 or equivalent.

11.75-INCH* INDOOR/OUTDOOR HOUSING

The housing shall be a weatherproof enclosure for small cameras with zoom lenses. Construction shall be of aluminum for protection from radio frequency (RF) interference. Maximum camera/lens dimensions shall be: length, 11.75 in. (29.8 cm); width, 4.25 in. (10.8 cm); height, 3.0 in. (7.6 cm). All wiring shall be routed into the rear of the housing through compression fittings. The following options shall be available: thermostatically-controlled heater; sunshield; rainshield. The housing shall be Vicon's model V4.5H-15-1 or equivalent.

*Maximum length of camera/lens combination.



TECHNICAL INFORMATION

ELECTRICAL

Accessory Power: See Table 2.

OPERATIONAL

Horizontal Adjustment: Slot in mounting plate allows front-to-back camera positioning.

OPTICAL

Light Loss through Window: 0.4 f-stop.

MECHANICAL

External Dimensions: See Figure 1.
 Height: 4.5 in. (11 cm).
 Width: 5.5 in. (14 cm).
 Length-V4.5H-12-1: 13.0 in. (33.0 cm)*.
 Length-V4.5H-15-1: 16.0 in. (40.6 cm)*.
 *Includes connectors.

Maximum Camera/Lens Dimensions:
 V4.5H-12-1
 Length: 8.75 in. (22.2 cm).
 Width: 4.25 in. (10.8 cm).
 Height: 3.0 (7.6 cm).
 V4.5H-15-1
 Length: 11.75 in. (29.8 cm).
 Width: 4.25 in. (10.8 cm).
 Height: 3.0 (7.6 cm).

Weight: V4.5H-12-1: 2.9 lb (1.3 kg).
 V4.5H-15-1: 3.5 lb (1.6 kg).

Construction: Body: ribbed extruded

aluminum.
 Base: ribbed extruded aluminum.
 End caps: molded Noryl**.
 Camera platform: 0.06-in. thick (0.15 cm) aluminum.
 Window: 0.19-in. (0.48 cm) plate glass.

Clear Window Area: 2.6 in. (6.6 cm) x 3.9 in. (9.9 cm).

Finish: Clear anodized aluminum body, black end caps.

Cable Access: Three compression fitting nuts on rear end cap.

Housing Mounting: See Figure 1.
 Bolt hole pattern on housing base allows a variety of mounting possibilities using 1/4-20 mounting screws and lockwashers.

Camera Mounting: Slot allows adjustable camera positioning with 1/4-20 screw.

Shipping Data: See Table 3.

Safety Rating: UL Standard 1409.

ENVIRONMENTAL

Ambient Temperature Range: Maintains motorized zoom lens operation at temperatures down to -40° F (-40°C) with heater accessory.

**TABLE 2
 HOUSING ACCESSORIES SPECIFICATIONS**

Model Number	Input Voltage (V)	Current (A)	Power Consumption (Max) (W)	Heat Equivalent† btu/min (cal/min)	Weight lb (kg)
V4.5H-HR	120	0.42	50	2.8 (0.72)	0.3 (0.14)
	230	0.22			
V4.5H-HR-24	24	2.1	50	2.8 (0.72)	0.3 (0.14)

†Note: The heat equivalent represents the conversion of 100% of the electrical energy to heat. The 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.

**TABLE 3
SHIPPING DATA**

Model Number	Shipping Weight lb	Shipping Weight kg	Shipping Dimensions Height in.	Shipping Dimensions Height cm	Shipping Dimensions Width in.	Shipping Dimensions Width cm	Shipping Dimensions Length in.	Shipping Dimensions Length cm	Shipping Volume cu ft	Shipping Volume cu m
V4.5H-12-1	3.8	1.7	5.0	12.7	7.25	18.4	18.5	47.0	0.4	0.01
V4.5H-15-1	4.2	1.9	5.0	12.7	7.25	18.4	18.5	47.0	0.4	0.01
V4.5H-HR	0.4	0.2	1.25	3.2	6.6	16.8	4.05	10.2	0.02	0.0006
V4.5H-12-S	1.6	0.7	3.6	9.1	6.6	17	18.0	45.7	0.3	0.008
V4.5H-15-S	1.9	0.9	3.6	9.1	6.6	17	18.0	45.7	0.3	0.008
V4.5H-R	0.3	0.1	3.9	9.9	5.1	13	4.75	12.1	0.06	0.002

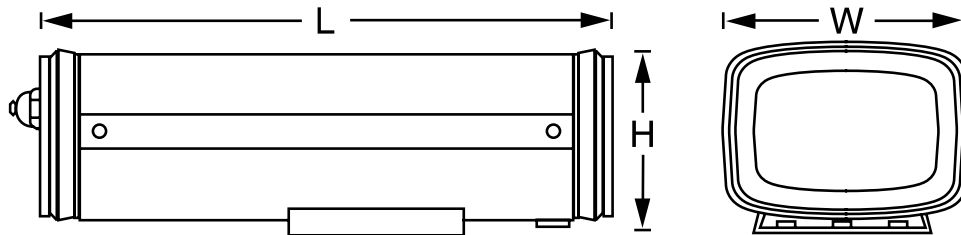
****Trademark of General ElectricCo.**

ASSOCIATED EQUIPMENT AND ACCESSORIES

Model V4.5H-HR Heater Assembly: Resistor-type heater and a window heater provided with thermostat. Operates at 24 VAC, 120 VAC or 230 VAC. Provides 50 watts of heating power with preset thermostat that goes on when the temperature drops to 68° F (20° C) and goes off when it reaches 80° F (26.7° C). V4.5H-HR product code 4294. V4.5H-HR-24 product code 4294-02. V4.5H-HR-230 product code 4294-01.

Model V4.5H-12-S and V4.5H-15-S Sunshields: Protects against direct solar radiation. For use with V4.5H-12-1 and V4.5H-15-1 Environmental Micro housings, respectively. Weigh 1.1 lb (0.5 kg) and 1.4 lb (0.6 kg). Product codes 1740 and 1741.

Model V4.5H-R Rainshield: Shields the viewing area from rain. For use with both the models. Weighs 0.09 lb (0.04 kg). Product code 1742.



**Figure 1
V4.5H Dimensions**



V8540H-SP

- Complies with UL and IEC standards
- Heater and blower accessories available
- Outdoor, explosionproof
- Easy installation and serviceability

The V8540H-SP Explosionproof Housing is suitable for both indoor and outdoor installations. It is constructed of seamless aluminum tubing, and the front window is made of tempered glass for distortion-free viewing.

The housing is equipped with an adjustable mounting bracket, a slide-out camera platform, and removable end caps. Conduit fittings are supplied on the rear end caps for ease of installation and service. See Figure 1 for outline drawing and Figure 2 for mounting plate hole pattern.

Explosionproof Housing

The housing shall be an explosionproof enclosure for small CCTV camera/lens combinations. Construction shall be of aluminum for protection from radio frequency (RF) interference. The housing shall be a seamless cylinder. Exterior dimensions shall not exceed: height, 6.0 in. (152 mm); width, 5.25 in. (133mm); length, 26.7 in. (678 mm) A tempered glass viewing window, 3.1 in. (79 mm) diameter, shall be installed in the front end cap. The unloaded unit weight shall not be greater than 16 lb (7.3 kg). Withdrawal of the rear end cap shall provide full access to the camera/lens assembly and any housing accessories. All electrical connections to the unit shall be made through presealed conduit fittings in the rear end cap.

Accessory kits are available to provide a heater and blower with a thermostat control to maintain constant temperature within the housing. The heater provides 50 watts of heating power and may be used with 120 VAC and 230 VAC power. A preset thermostat turns on the heater when the temperature falls below 40° F (4.4° C) and turns on the blower when the internal temperature rises above 90° F (32.2 C).

The V8540H-SP Explosionproof Housing complies with UL 1203-1995 Class I, Division 1, Groups C and D, Class II, Division 1, Groups E, F, and G, and flameproof enclosure ExdIIIC per IEC Standards IEC79-0-1998 and IEC79-1-1990, electrical apparatus for explosive gas atmospheres.

NOTE: The internal diameter of the housing is 4.8 in. (119 mm), and the free space above the camera mounting rail is 3.8 in. (96 mm). Refer to Figure 3. The dimensions given for maximum camera/lens height and width are based on a rectangular solid. Other sizes and shapes of camera/lens combinations may fit, but they must be physically tested for fit.

ASSOCIATED EQUIPMENT AND ACCESSORIES

Model V8540H-H Heater and Thermostat Assembly, Product Code 1644: Provides 50 watts of heating power. Thermostat preset for closure at temperatures below 40° F (4.4° C). Weights 0.25 lb (0.1 kg). One model may be used with either 120 VAC or 230 VAC input power. Product Specification 760.

Model V8540H-B Blower and Thermostat Assembly, Product Code 1645 (120 VAC) or 1645-01 (230 VAC): Turns on when temperature rises above 90° F (32.2° C). Requires 8.5 W power. Weighs 0.09 lb (0.04 kg). Product Specification 760.

The housing shall comply with the UL standard 1203-1995 Class I, Division I, Groups C and D, Class II, Division I, Groups E, F, and G and flameproof enclosure ExdIIIC per IEC standards IEC 79-0-1998 and IEC 79-1-1990, electrical apparatus for explosive gas atmospheres. The following options shall be available: thermostatically-controlled heater, thermostatically-controlled blower. The thermostats shall turn on the heaters when the internal housing temperature falls below 40° F (4.4°C) and turn on the blower when the temperature rises above 90° F (32.2° C).

The explosionproof housing shall be Vicon model V8540H-SP.



ELECTRICAL

Accessory Power: See Table 1.

MECHANICAL

External Dimensions: See Figure 1.
 Height: 6.0 in. (152 mm).
 Width: 5.25 in. (133 mm).
 Length: 20.1 in. (511 mm).
 With fittings, 26.7 in. (678 mm).

Weight: 16 lb (7.3 kg).
 With Options : 17.5 lb (7.94 kg)

Maximum Camera/Lens Dimensions: See NOTE, page 1.
 Height: 2.75 in. (70 mm).
 Width: 3.5 in. (89 mm).
 Length: 11.0 in. (279 mm).

Construction: Housing: tubular aluminum alloy.
 Window: 3/8-in. tempered glass.

Clear Window Area: 3.1 in. (79 mm) diameter.

Finish: Exterior: white baked enamel.

Cable Entry Ports: Two Crouse-Hinds EYS11 explosion proof factory sealed fittings, with 54 inches

of signal and power cable attached. (Belden 9254 13-conductor closed-circuit cable; Belden 19230 3 conductor power cable.)

Housing Mounting: Adjustable mounting bracket. Seven 0.281 in. (7.14 mm) diam. holes. See Figure 2.

Camera Mounting: Slide-out platform.

NEMA Standard: 3*.

CE Standard: IP54*.

UL Standard: 1203-1995 Class I, Division 1, Groups C and D, and Class II, Division 1, Groups E, F and G.

IEC Standard: IEC79-0-1998 and IEC79-1-1990, electrical apparatus for explosive gas atmospheres. ExdIIIC

Shipping Dimensions: Height: 11.5 in. (292 mm).
 Width: 10.75 in. (273 mm).
 Length: 30.4 in. (772 mm).
 20 lb (9.1 kg).
 2.2 ft³ (0.06 m³).
 Based on engineering evaluation and test.
 Not tested independently.

Model Number	Power Consumption	Heat Equivalent†
V8540H-H	50 W	2.8 btu/min (0.7 kg-cal/min)
V8540H-B	8.5 W	0.5 btu/min (0.1 kg-cal/min).

†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.

Table 1: Accessory Power

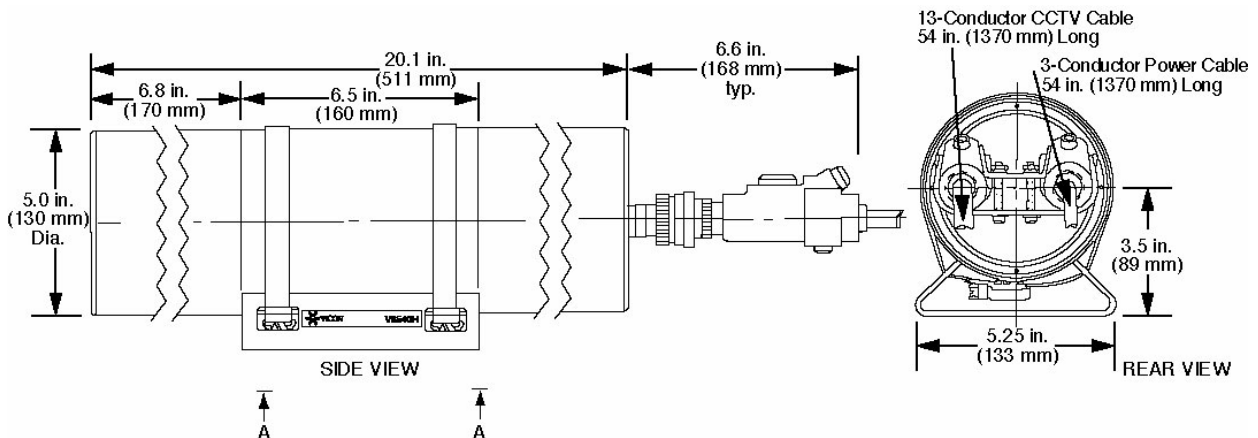


Figure 1: Outline Drawing



Model Number	V8612H
Product Code	1681
Description	TAMPERPROOF CEILING-MOUNTED HOUSING

NOTES SUPERSEDES PRODUCT SPECIFICATION 568-1088	SPEC NO. 568	REV. 1094	SEC. 6
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The compact Model V8612H Tamperproof Ceiling Housing provides an inconspicuous means of concealing small CCD cameras. It can be mounted in most types of ceilings. Optional mounting plates, Model V8612H-CP for fixed installations and V8612H-ACP for 360-degree adjustable installations, facilitate mounting in dropped (suspended) ceilings. The housing itself is a completely closed unit and provides effective protection from dust. The hinged bottom section is provided with a lock for tamperproof security. The housing is constructed so that the camera can be adjusted easily and the lens focused from below the ceiling. Provision is made for attachment of a 4-inch junction box on the upper housing for electrical connections. A 7/8-inch knock-out opening is also provided on top of the upper housing. The V8612H housing complies with UL standard 1409.

V8612H HOUSING ASSOCIATED EQUIPMENT AND ACCESSORIES

Model V8612H-CP Ceiling Panel: Provides simple drop-in installation in 2 x 2 ft ceiling grids. Off-white. Product code 1669.

Model V8612H-ACP Adjustable Ceiling Panel: Produces 360° positioning capability in 2 x 2 ft ceiling grids. Off-white. Product code 4115.

TECHNICAL INFORMATION

OPTICAL

Light Loss: 1/3 f-stop through viewing window.

Length: 12.6 in. (32.0 cm).

Maximum Camera/Lens Dimensions:

Height: 4.6 in. (11.7 cm).
Width: 4.6 in. (11.7 cm).
Length: 10.0 in. (25.4 cm).

MECHANICAL

Fire Rating: Lower housing: UL 94-VO.

Weight: 3.1 lb (1.4 kg).

Fire Safety: NEMA 2 standard.

Construction: Upper housing: plated steel.
Lower housing: high-impact vacuum molded thermoplastic.
Window: clear acrylic.

Maximum Load Rating: 20 lb (9.1 kg).

External Dimensions: Height: 6.5 in. (16.5 cm) overall.
Below ceiling height: 3.0 in. (7.6 cm).
Width: 6.4 in. (16.2 cm).

Clear Window Area: 2.9 in. (7.4 cm) high x 2.3 in. (5.8 cm) wide.

Finish: Exterior: white.

TAMPERPROOF CEILING-MOUNTED HOUSING

The housing shall be a tamperproof ceiling-mounted unit for small CCTV cameras and lenses. It shall be constructed with a hinged bottom section with a tamperproof lock for security. The plastic components shall have a UL flame rating of 94-VO. The housing shall comply with NEMA 2 standard. The maximum load rating shall be 20 lb (9.1 kg). The unit shall provide a low profile when mounted within a ceiling and shall not project more than 3 in. (8 cm) below the ceiling. Optional mounting plates for fixed and adjustable installations shall be available. Overall dimensions shall not exceed: height, 6.5 in. (16.5 cm); width, 6.4 in. (16.2 cm); length, 12.6 in. (32.0 cm). The weight shall not exceed 3.1 lb (1.4 kg). The housing shall be Vicon model V8612H.



Camera Housings

Cable Access: Provision for 4-in. junction box on top of upper housing. Also 7/8-in. knock-out on front end of upper housing.

Lock.: Lower housing: key-operated lock.

Housing Mounting: Upper housing can be mounted directly to a drop-ceiling panel or can be supported by the drop-ceiling grid structure by means of the optional V8612H-CP or V8612H-ACP Ceiling Panel.

Camera Mounting: Bracket adjustable for tilt and vertical position.

Shipping Dimensions: Height: 9.8 in. (24.8 cm).
Width: 8.4 in. (21.3 cm).
Length: 15.3 in. (38.7 cm).

Shipping Weight: 4.7 lb (2.2 kg).

Shipping Volume: 0.7 ft³ (0.02m³).

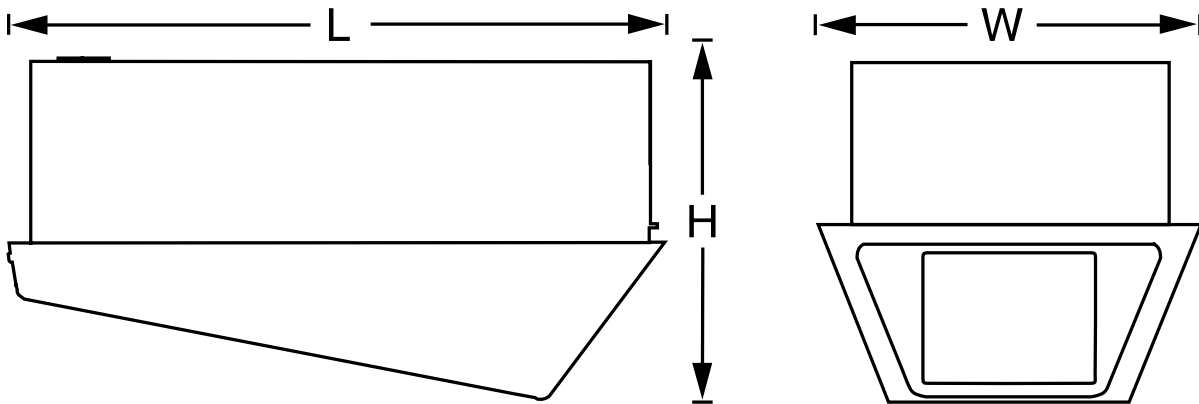


Figure 1
V8612H Housing Dimensions

NOTES	SPEC NO.	REV.	SEC.
SUPERSEDES PRODUCT SPECIFICATION 660-393	660	1198	6

Model Number	V894MSH
Product Code	4004
Description	MAXIMUM SECURITY HOUSING

- **Tamperproof**
- **Wall or ceiling mounting**
- **For use in high-risk locations**



The V894MSH Maximum Security Housing provides a tamper-resistant means of concealing a video camera on either a ceiling or wall and is intended for use in high-risk areas where surveillance equipment is vulnerable to physical or criminal violence. The housing is designed for small solid-state cameras with fixed-focal-length lenses.

The housing is constructed entirely of welded 10-gauge steel, making it virtually impenetrable. The exterior surface is painted cast-iron gray. It may be mounted directly to a solid ceiling or a wall. The housing is designed so that the camera and lens can be adjusted easily.

The window is constructed of 0.375-inch-thick (0.95-cm) high-impact Lexan*. A choice of two window locations is provided. The unused window is closed with a 10-gauge steel plate. The window selection is determined by where the housing is

V894MSH MAXIMUM SECURITY HOUSING

mounted (ceiling or wall) and the viewing area. See Figure 1. The cover is provided with a specially-keyed double-acting lock for security from tampering.

Provision is made for routing electrical connections, including AC power lines and video cables, into the housing. There are two holes for 1/2-inch (1.27-cm) conduit in the top of the housing. Since the cables pass directly into the wall or ceiling, they are not exposed at any point to vandalism. Other ease-of-use features include an axially adjustable camera platform and an uncomplicated but secure locking system.

MAXIMUM SECURITY HOUSING FOR VIDEO CAMERAS

The housing shall be a maximum security unit for small CCTV cameras and lenses. It shall be constructed of welded 10-gauge steel and have a 0.375-in. (0.95-cm) thick Lexan viewing window. The steel construction shall provide protection from radio frequency (RF) interference. It shall be provided with a tamperproof key-operated interactive lock for security. The housing shall be capable of either wall or ceiling mounting. The unit's maximum camera/lens combination shall be: length, 8.0 in. (20.3 cm); width, 4.0 in. (10.2 cm); height, 4.0 in. (10.2 cm). The external dimensions shall be: depth, 10.87 in. (27.6 cm); width, 7.75 in. (19.7 cm); height, 12.0 in. (30.5 cm). The unloaded unit weight shall not exceed 24.1 lb (10.9 kg).

The housing shall be Vicon's model V894MSH .



TECHNICAL INFORMATION

ELECTRICAL

Cable Access: Two 0.875-in. (2.22-cm) diameter openings provided so cabling is not exposed.

Width: 4.0 in. (10.2 cm).
Height: 4.0 in. (10.2 cm).

Construction: Housing: welded 10-gauge steel.
Camera window: 0.375-in. (0.95-cm) thick Lexan.

OPTICAL

Light Loss Through Window: Negligible.

Clear Window Area: 3.5 x 6.0 in. (8.9 x 15.2 cm).

Finish: Interior: cast-iron gray paint.
Exterior: cast-iron gray.

OPERATIONAL

Field-of-View Adjustments: Camera position may be adjusted horizontally and vertically in housing.

Mounting: Housing: four (4) holes for ceiling or wall mounting.
Camera: adjustable in four directions (swivel tilt up/down and forward/rearward).

Locking System: Heavy-duty high-security lock combined with second key-operated double-claw latching system.

NEMA Standard: 2.*

CE Standard: IP31.*

Shipping Dimensions: Height: 10.25 in. (26.0 cm).
Width: 13.4 in. (34.0 cm).
Depth: 14.0 in. (35.6 cm).

MECHANICAL

External Dimensions: See Figure 1.
Height: 12.0 in. (30.5 cm).
Width: 7.75 in. (19.7 cm).
Depth: 10.87 in. (27.6 cm).

Shipping Weight: 26.5 lb (12 kg).

Shipping Volume: 1.1 ft³ (0.03 m³).

Weight: 24.1 lb (10.9 kg).

Maximum Camera/Lens Dimensions: Length: 8.0 in. (20.3 cm).

**Based on engineering evaluation and test. Not tested independently.*

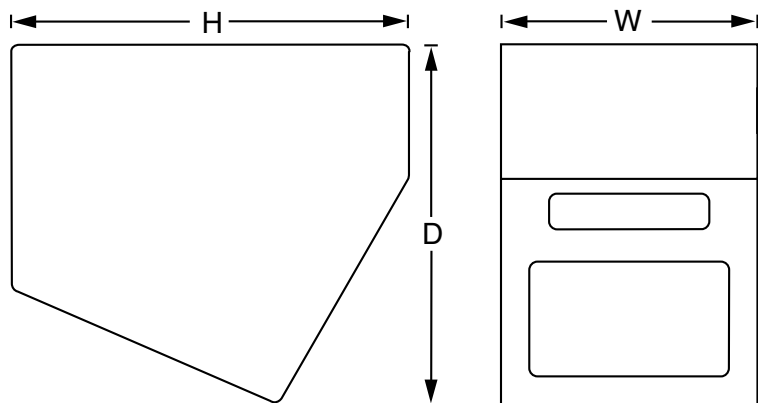


Figure 1

V894MSH Dimensions

NOTES	SPEC NO.	REV.	SEC.
	795	997	6

Model Number	V896MSH
Product Code	4005
Description	WEATHERPROOF MAXIMUM SECURITY HOUSING



- High resistance to vandalism
- Weatherproof
- Allows camera positioning
- Heater/defogger option available

The Vicon V896MSH Maximum Security Housing fills the need for a secure ceiling-mounted camera housing for high-risk applications.

Constructed of high-strength ten-gauge welded steel and a high-strength Lexan* viewing window, the V896MSH is capable of withstanding the most serious attempts of criminal or physical violence. Its high resistance to vandalism, coupled with its outdoor environmental design, make this maximum security housing ideal for parking garages, prisons, and sensitive installations not under constant patrol coverage.

The V896MSH is provided with a high-security cylindrical key lock coupled to a heavy-duty double claw closure system.

It can be mounted to a horizontal overhead support such as a ceiling, or it may be mounted to a vertical surface by using the V896MA mounting adapter.

NOTE: Since the V896MSH is heavy, any overhead support selected for it must be strong enough to support the weight of the housing.

The V896MSH permits internal adjustment of camera position without the need for accessory positioning devices.

V896MSH MAXIMUM SECURITY HOUSING

ASSOCIATED EQUIPMENT AND ACCESSORIES

Model V896MSH-H Heater/Defogger: Thermostatically-controlled option that consists of two blanket heaters mounted on radiator plates and a window heater. Operates at 120 V; provides 50 watts of heating power. Product Code 4180. Refer to Table 1.

Model V896MA Mounting Adapter: Used to mount the V896MSH housing to a vertical surface, such as a wall or pole. Product Code 4085.

Indoor/Outdoor Maximum Security Housing for Video Cameras

The housing shall be a maximum security environmental unit for small CCTV cameras and lenses. It shall be constructed of welded 10-gauge steel and have a 0.375-in. (0.95-cm) thick Lexan viewing window. The steel construction shall provide protection from radio frequency (RF) interference. It shall be provided with a tamperproof key-operated interactive lock for security. The housing shall be capable of ceiling mounting. The unit's maximum camera/lens combination shall be: length, 8.5 in. (21.6 cm); width, 3.25 in. (8.3 cm); depth, 3.5 in. (8.9 cm). The external dimensions shall be: length, 8.83 in. (22.4 cm); width, 7.50 in. (19.0 cm); depth, 12.75 in. (32.38 cm). The unloaded unit weight shall not exceed 18.75 lb (8.5 kg). The housing shall be Vicon's model V896MSH.



TECHNICAL INFORMATION

ELECTRICAL

Cable Access: Two 0.8125-in. (2.064-cm) diameter openings provided so cabling is not exposed.

OPTICAL

Light Loss Through Window: Negligible.

OPERATIONAL

Field-of-View Adjustments: Camera position maybe adjusted horizontally and vertically in housing.

Locking System: Heavy-duty high-security lock combined with second key-operated double-claw latching system.

MECHANICAL

External Dimensions: Height (H): 8.83 in. (22.4 cm).
Width (W): 7.50 in. (19.0 cm).
Depth (D): 12.75 in. (32.38 cm).

Weight: 18.7 lb (8.5 kg).
Maximum Camera/Lens Dimensions: Length: 8.5 in. (21.6 cm).
Width: 3.25 in. (8.3 cm).
Height: 3.5 in. (8.9 cm).

Construction: Housing: welded 10-gauge steel.
Camera window: 0.375-in. (0.95-cm) thick Lexan*.

Clear Window Area: 3.4 x 4.5 in. (8.6 x 11.4 cm).

Finish: Interior: black paint.
Exterior: cast-iron gray.

Mounting: Housing: four (4) holes for ceiling mounting.
Camera: mount adjustable in four directions (swivel tilt up/down and forward/rearward).

Shipping Dimensions: Height: 9.0 in. (23 cm).
Width: 9.5 in. (24 cm).
Depth: 14.0 in. (35.6 cm).

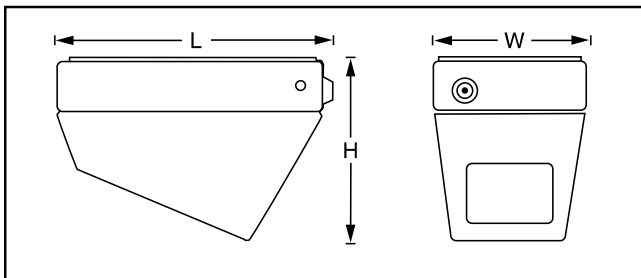
Shipping Weight: 19.0 lb (8.6 kg).

Shipping Volume: 0.7 ft³(0.02 m³).

ENVIRONMENTAL

Ambient Temperature Range: -10 to 110° F (-23 to 43.3° C) with V896MSH-H option.

***NOTE ON POLYCARBONATE WINDOWS:** Lexan polycarbonate plastic is one of the best and strongest of modern plastics. However, virtually all plastics, including polycarbonates, can be etched by exposure to various types of solvents. Do not place this housing in locations where such solvents may be in the air in high concentrations.



**TABLE 1
HEATER SPECIFICATIONS**

Model Number	Input Voltage (V)	Current (A)	Power Consumption (Max) (W, VA)	Heat Equivalent** btu/min (cal/min)	Weight lb (kg)
V896MSH-H	120	0.42	50	2.8 (0.72)	0.5 (0.2)

****Note:** The heat equivalent represents the conversion of 100% of the electrical energy to heat. The 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.

NOTES	SPEC NO.	REV.	SEC.
	804	493	6

Model Number	V898MSH
Product Code	4086
Description	MAXIMUM SECURITY HOUSING

The V898MSH Maximum Security Housing provides a tamper-resistant means of concealing a video camera and is intended for use in high-risk areas where surveillance equipment is vulnerable to physical or criminal violence. It is designed to be conveniently corner mounted and offers easy accessibility for camera and lens adjustment. The housing is designed for small solid-state cameras with fixed-focal-length lenses.

A hinged cover with a specially-keyed double-acting lock provides security from tampering. The housing is constructed of welded 10-gauge steel and the viewing window is impactresistant Lexan*, making the unit virtually impenetrable. The exterior surface is painted cast-iron gray.

Provision is made for routing electrical connections, including AC power lines and video cables, into the housing. There are four holes for 1/2-inch (1.27 cm) conduit in the back of the housing. Since the cables pass directly into the wall, they are not exposed at any point to vandalism.



V898MSH MAXIMUM SECURITY HOUSING

V898MSH Maximum Security Housing

The housing shall be a maximum-security unit for small CCTV cameras and lenses. It shall be constructed of welded 10-gauge steel and have a 3/8-in. (0.95 cm) impact-resistant Lexan viewing window. The steel construction shall provide protection against radio frequency (RF) interference. It shall be provided with a tamper-resistant specially-keyed double-acting lock for security. The housing shall be capable of corner mounting. The unit's overall dimensions shall not exceed: length 11.2 in. (28.4 cm), width 10.4 in. (26.4 cm), height 11.0 in. (27.9 cm). The maximum camera/lens dimensions shall be (l x w x h) 9.0 x 2.6 x 3.0 in. (23 x 6.6 x 3.0 cm). The unloaded unit weight shall not exceed 19.3 lb (8.8 kg). The housing shall be Vicon Model V898MSH.



TECHNICAL INFORMATION

ELECTRICAL

Cable Access: Four openings provided in the back of the housing so cabling is not exposed.

OPTICAL

Light Loss Through Window: Negligible.

OPERATIONAL

Field-of-View Adjustments: Camera position may be adjusted horizontally and vertically in housing.

Locking System: Tamper-resistant, specially-keyed double-acting lock.

MECHANICAL

External Dimensions: See Figure.
Height (H): 11.0 in. (27.9 cm).
Width (W): 10.4 in. (26.4 cm).
Depth (D): 11.2 in. (28.4 cm).

Weight: 19.3 lb (8.8 kg).

Maximum Camera/Lens Dimensions: Length: 9.0 in. (23 cm).
Width: 2.6 in. (6.6 cm).
Height: 3.0 in. (7.6 cm).

Construction: Housing: welded 10-gauge steel. Window: 0.375-in. (0.95-cm) thick Lexan.

Finish: Cast-iron gray.

Mounting: Housing: eight holes (4 on each side) provided; only four required (2 on each side) for mounting.
Camera: adjustable camera mount with mounting slots.

Shipping Dimensions: Height: 14.5 in. (36.8 cm).
Width: 14.0 in. (35.6 cm).
Depth: 14.1 in. (35.8 cm).

Shipping Weight: 22.4 lb (10.2 kg).

Shipping Volume: 1.7 ft³ (0.05 m³).

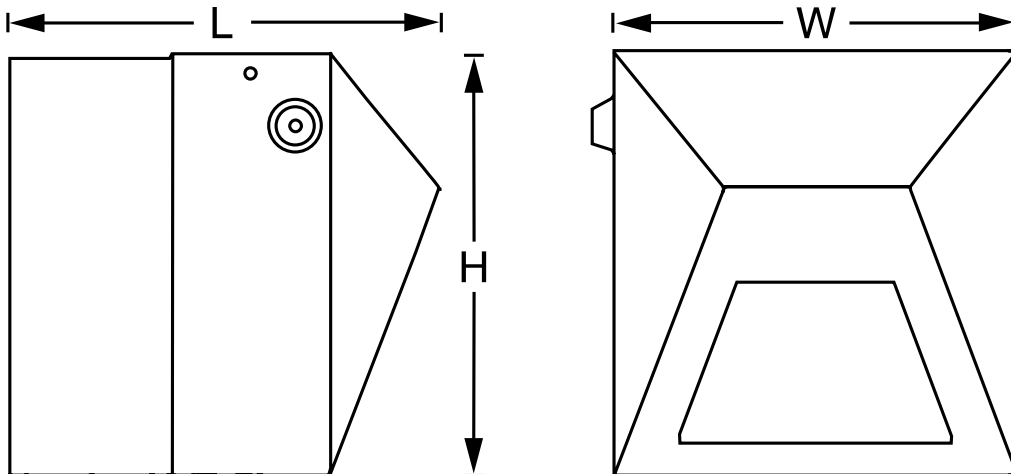


Figure 1
Outline Drawing



V9312H Series Environmental Housing

- Compact
- Available with heater and sunshield
- Weatherproof
- Easy serviceability and installation

Model V9312H Series of compact weatherproof housings is designed for smaller outdoor CCTV applications. A spring cover and latch provide easy access, and a weatherproof seal protects the camera/lens assembly from moisture. It is available in two model variations with different features, including a heater and sunshield. Refer to Table 1.

The V9312H is the basic housing. Model V9312H-HS-24 is equipped with a strip heater that provides 25 watts of power and a sunshield. The thermostatically-controlled heater goes on when the temperature drops to 50° F (10° C) and turns off when the temperature reaches 60° F (16° C). The sunshield provides long-term protection from UV radiation and corrosion. The viewing window is made from polycarbonate Lexan* for long lasting transparency.

Model Number	Product Code	Description
V9312H	6819	Basic housing
V9312H-HS-24	6819-02	Basic housing with 24 VAC heater and sunshield

Table 1: Models and Descriptions

Indoor/Outdoor Housing

The housing shall be an environmental camera enclosure offering weather protection to CCTV camera/lens combinations up to 9.0 inches (229 mm) long. The unit shall be available with a sunshield that shall provide protection against UV radiation and corrosion and a 24 VAC, 25 W heater system. The housing and sunshield shall be constructed of heavy-duty aluminum and the window shall be Lexan polycarbonate. One latch and a spring-hinged cover shall be provided. Rainproof elastomer seals and gaskets shall provide protection to the camera/lens assembly. The housing shall accommodate camera/lens assemblies up to 9.0 in. (229 cm) long, 3.5 in. (89 mm) wide, and 3.0 in. (76 mm) high. The housing shall

withstand winds up to 80 mph. Exterior dimensions for the basic housing shall not exceed: height, 4.5 in. (114 mm); width, 5.0 in. (127 mm); length, 14.5 in. (368 mm). The weight shall not exceed 3.1 lb (1.4 kg). Exterior dimensions for the housing with sunshield/heater shall not exceed: height, 5.0 in. (127 mm); width, 5.75 in. (146 mm); length, 15.6 in. (396 mm). The weight shall not exceed 4.1 lb (1.9 kg).

The environmental housing shall be Vicon model V9312H, basic housing, and V9312H-HS-24, housing with heater and sunshield.





Camera Housings

ELECTRICAL

V9312H-HS-24 Only

Input Voltage: 24 VAC.
Power Consumption: 25 W.
Heat Equivalent: 1.4 btu/min (0.36 cal/min).
 NOTE: These figures represent the conversion of 100% of the electrical energy to heat. The 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.

Heater Thermostat: Closes: 50° F (10° C).
 Opens: 60° F (16° C).

OPERATIONAL

Camera Platform: Adjustable fore and aft.

MECHANICAL

External Dimensions: V9312H
 Length (L): 14.5 in. (368 mm).
 Width (W): 5.0 in. (127 mm).
 Height (H): 4.5 in. (114 mm), including connectors.

V9312H-HS-24
 Length (L): 15.6 in. (396 mm).
 Width (W): 5.75 in. (146 mm).
 Height (H): 5.0 in. (127 mm), including connectors.

Maximum Camera/Lens Dimensions: Length: 9.0 in. (229 mm).
 Width: 3.5 in. (89 mm).
 Height: 3.0 in. (76 mm).

Weight: V9312H: 3.1 lb (1.4 kg).
 V9312H-HS-24: 4.1 lb (1.9 kg).

Construction: Housing: aluminum, painted light gray.
 Window: 0.125 in. (0.32 mm) thick clear Lexan polycarbonate.*

Clear Window Area: 2.75 in. (W) × 2.6 in. (H) (70 mm × 66 mm).

Cable Access: Two liquid tight fittings located at bottom of rear base, one compression fitting and one conduit fitting.

Camera Access: One latch on back of housing; spring hinge cover.

Camera Mounting: Three slots in camera tray.

Housing Mounting: Three 1/4-20 tapped holes provided on bottom for mounting and balancing (two must be used).

Shipping Dimensions: Height: 5.0 in. (127 mm).

Shipping Weight: Width: 6.25 in. (159 mm).
 Length: 16.25 in. (413 mm).
 V9312H: 3.6 lb (1.6 kg).
 V9312H-HS-24: 4.6 lb (2.1 kg).

ENVIRONMENTAL

Ambient Temperature Range: V9312H-HS-24: -30 to 120° F (-35 to 49° C).

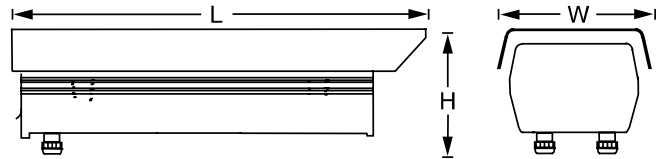
Moisture: Rainproof elastomer seals and gaskets.

Wind Resistance: Up to 80 mph (130 kph).

Storage Temperature Range: -40 to 150° F (-40 to 65° C).
Storage Humidity: Up to 90% relative, noncondensing.

NEMA Standard: 4. Based on engineering evaluation and test. Not tested independently.
CE Standard: IP65. Based on engineering evaluation and test. Not tested independently.

***NOTE ON POLYCARBONATE WINDOWS: Lexan polycarbonate plastic is one of the best and strongest of modern plastics. However, virtually all plastics, including polycarbonates, can be etched by exposure to various types of solvents. Do not place this housing in locations where such solvents may be in the air in high concentrations.**



Model Number	V9315H SERIES
Product Code	REFER TO TABLE 1
Description	ENVIRONMENTAL HOUSING

NOTES	SPEC NO.	REV.	SEC.
SUPERSEDES PRODUCT SPECIFICATION 486-1097	486	499	6

- **Several configurations available for any need**
- **Weatherproof**
- **Sunshield included**
- **Side opening for easy serviceability**
- **Lockable**



V9315H HOUSING

Model V9315H Series of compact, weatherproof housings is designed for smaller outdoor CCTV applications. Two sidelatches provide easy access, and a weatherproof seal protects the camera/lens assembly from moisture. A latch with a loop is provided for a padlock, if required. The V9315H accommodates CCTV camera and zoom lens combinations of up to 13.0 inches (33 cm) in length.

TABLE 1 MODELS AND PRODUCT CODES

The V9315H is available in seven versions that differ in internal features and input voltage. Refer to Table 1. All versions of the housing include a protective sunshield. The V9315HC-S is created specifically for those installations that do not require a heater. This version does include a factory-installed 120 VAC to 24 VAC camera transformer. The V9315HC-HS includes the transformer plus a 120 VAC heater. The V9315H-HS-24 includes the sunshield and 24 VAC heater. The V9315HC-HS-230 includes a transformer and a 230 VAC heater. Model V9315HC-WH includes a transformer and a 120 VAC wiper and heater. Model V9315HC-WH-230 includes a transformer and a 230 VAC wiper and heater. Model V9315H-WH-24 includes a 24 VAC wiper and heater. Additionally, two heater options are available for those installations where the V9315HC-S was installed and heaters were later required. See Associated Equipment and Accessories.

Model Number	Product Code	Description
V9315HC-S	6074	Includes sunshield and 24 VAC transformer. (120 VAC input.)
V9315HC-HS	6075	Includes sunshield, 120 VAC heaters, and 24 VAC transformer
V9315HC-HS-230	6075-01	Includes sunshield and 24 VAC heaters
V9315H-HS-24	6075-02	Includes sunshield and 24 VAC heaters
V9315HC-WH	6078	Includes sunshield, 120 VAC wiper and heater and 24 VAC transformer
V9315HC-WH-230	6078-01	Includes sunshield, 230 VAC wiper and heater and 24 VAC transforme
V9315H-WH-24	6078-02	Includes sunshield and 24 VAC wiper and heater

INDOOR/OUTDOOR HOUSING

The housing shall be an environmental camera enclosure offering weather protection to CCTV camera/lens combinations up to 13 inches (33 cm) long. The unit shall have a sunshield that shall provide protection against UV radiation and corrosion and a latch with a loop for a padlock as standard. Seven versions shall be available; one shall include a 24 VAC camera transformer (120 VAC input), a second shall include a 24 VAC transformer and a 120 VAC heater, and a third shall include a 24 VAC heater; a fourth shall include a 230 VAC heater and a 24 VAC transformer; a fifth shall include a 120 VAC wiper and heater and a 24 VAC transformer; a sixth shall include a 24 VAC wiper and heater; and a seventh shall include a 230 VAC wiper and heater and a 24 VAC transformer. A heater option shall be available. The housing and sunshield shall be constructed of heavy-duty aluminum and the window shall be glass for transparency. Two side latches shall be provided. Rainproof elastomer seals and gaskets shall provide protection to the camera/lens assembly. The housing shall withstand winds up to 80 mph (130 kph). Exterior dimensions shall not exceed: height, 5.75 in. (14.6 cm); width, 6.75 in. (17.1 cm); and length, 19.5 in. (49.5 cm). The environmental housing shall be Vicon Models V9315HC-S, V9315HC-HS, V9315H-HS-24, V9315HC-HS-230, V9315HC-WH, V9315HC-WH-24 and V9315HC-WH-230.



Camera Housings

The housing with heaters are equipped with two resistor-type heaters, totalling 50 watts of heating power. A thermostat automatically turns the heaters on when the temperature drops to 68 ...F (20...C) and turns them off when the temperature rises above 80...F (27...C). One of the heaters is mounted directly under the window and keeps the viewing window clear. The V9315H withstands winds of up to 80 mph with outside temperature ranging from -30 to 120...F (-35 to 49...C).

The V9315H housing and protective sunshield are constructed from heavy-duty aluminum with a light-gray finish. The

sunshield provides long-term protection from UV radiation and corrosion. The viewing window is made of glass for long lasting transparency. All materials are corrosion-resistant or

ASSOCIATED EQUIPMENT AND ACCESSORIES

Models V8315H-H and V8315H-H-24 Heater Assemblies: Two resistor-type heaters for the V9315HC-S. Offer a total of 50 W of heating power. Thermostat automatically turns on when temperature drops to 68F (20C) and turns off when the temperature rises above 80F (27C), 120 VAC and 24 VAC, respectively. Product codes 4749-00 and 4749-02, respectively.

TECHNICAL INFORMATION

ELECTRICAL

- Input Voltage:** Refer to Table 2.
- Transformer:** A 24-VAC transformer is provided for camera power in 120 and 230 VAC units.
- Connector:** Screw terminal strip supplied for connections to AC line.

Power Consumption: Refer to Table 2.

OPTICAL

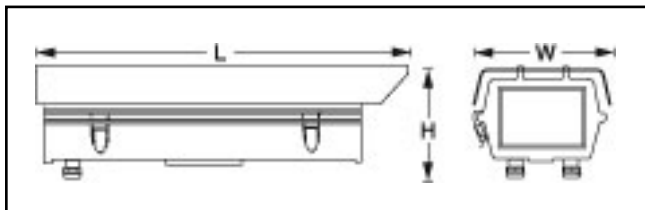
Light Loss through Window: Negligible

OPERATIONAL

Horizontal Adjustment: Adjustable camera platform.

MECHANICAL

External Dimensions: Length: 19.5 in. (49.5 cm).
Width: 6.75 in. (17.1 cm).
Height: 5.75 in. (14.6 cm).



Maximum Camera/Lens Dimensions: Fits camera/lens combinations of up to 13 in. (33 cm) long, 3.0 in. (7.6 cm) high, and 4.25 in. (10.8 cm) wide.

Lens Mounting Plate Heater Clearance: 0.25 in. (0.64 cm).

Weight: Approximately 6.5 lb (2.9 kg).
Wiper units: approximately 8.75 lb (4 kg).

Construction: End Caps: Plastic, light gray.
Housing: aluminum, painted light gray.
Window: 0.125 in. (0.32 cm) thick lime glass.

Clear Window Area: 4.0 in. (W) x 2.9 in. (H) (10.2 cm x 7.4 cm).

Cable Access: Two liquid tight compression fittings located at bottom of rear base.

Camera Access: Two latches on left side of housing.

Housing Mounting: Seven 1/4-20 tapped holes provided on bottom for mounting and balancing (two screws must be used). Adjustable fore and aft. See Figure 1.

Shipping Dimensions: Height: 8.25 in. (21.0 cm)
Width: 9.75 in. (24.8 cm)
Length: 22.1 in. (56.1 cm).

Shipping Weight: 8.5 lb (3.6 kg).
Wiper units: 10.75 lb (4.9 kg).

Shipping Volume: 1.03 ft³ (0.03 m³).

ENVIRONMENTAL

Operating Temperature Range: -30 to 120...F (-35 to 49...C).

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

Storage Humidity: Up to 90% relative, noncondensing.

Moisture: Rainproof elastomer seals and gaskets.

Wind Resistance: Up to 80 mph (130 kph).

NEMA Standard: 4. (Based on engineering evaluation and test. Not tested independently.)

CE Standard: IP65 (weep holes plugged). (Based on engineering evaluation and test. Not tested independently.)

TABLE 2 HEATER POWER SPECIFICATIONS

Model Number	INPUT VOLTAGE (VAC)	Current (A)	Power Consumption W, VA	Heat Equivalent** btu/min (cal/min)
V9315HC-HS, V8315H-H	120	0.42	50	2.8 (0.7)
V9315HC-WH	120	0.44	53	3.0 (0.76)
V9315H-HS-24,V8315H-H-24	24	2.08	50	2.8 (0.7)
V9315H-WH-24	24	2.2	53	3.0 (0.76)
V9315HC-HS-230	230	0.22	50	2.8 (0.7)
V9315HC-WH-230	230	0.23	53	3.0 (0.76)

****NOTE:** The heat equivalent represents the conversion of 100% of the electrical energy to heat. The 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.

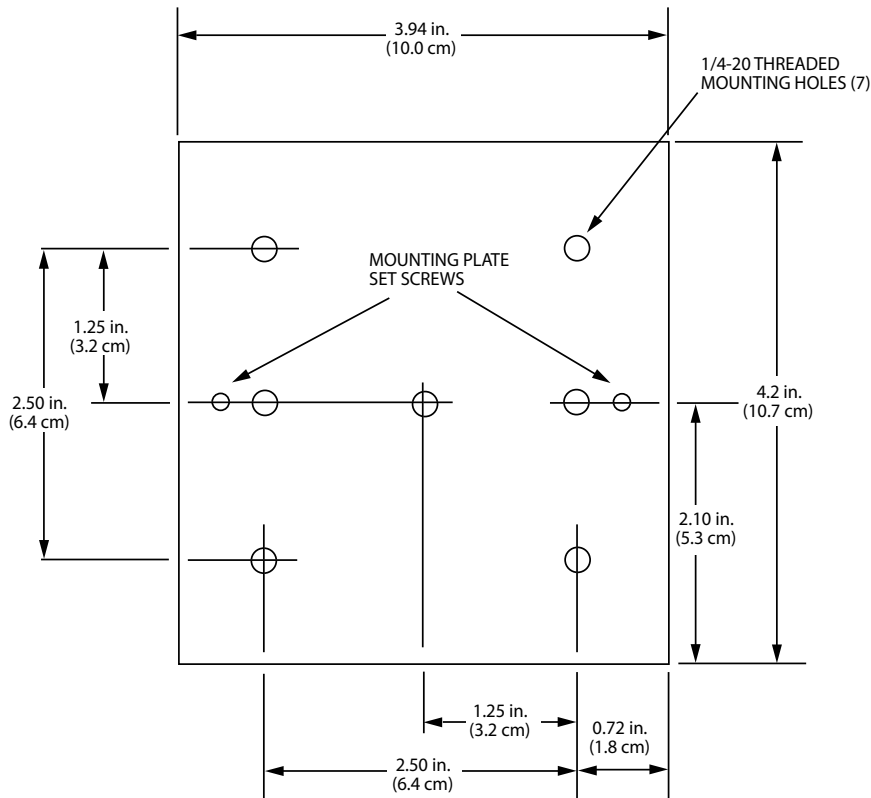


Figure 1 Mounting Diagram



NOTES	SPEC NO.	REV.	SEC.
SUPERSEDES PRODUCT SPECIFICATION 931-997	931	499	6

Model Number	V9317H SERIES
Product Code	REFER TO TABLE 1
Description	ENVIRONMENTAL HOUSING

- **Weatherproof**
- **Easy installation and serviceability**
- **Several configurations available for any need**
- **Sunshield and blower included**
- **Lockable**

Vicon's Model V9317H series of compact, weatherproof housings is designed for smaller outdoor CCTV applications. Two side latches provide easy access, and a weatherproof seal protects the camera/lens assembly from moisture. A latch with a loop is provided for a padlock, if required. The V9317H accommodates CCTV camera and lens combinations of up to 12.0 inches (30.5 cm) in length.

The V9317H is available in nine versions. All versions of the housing include a protective sunshield and a blower. The V9317HC-SB is created specifically for those installations that do not require a heater. This version does include a factory-installed 120-to-24 VAC camera transformer. A 230 VAC version, Model V9317HC-SB-230 (with transformer) and a 24 VAC version, Model V9317H-SB-24, are also available. The V9317HC-SHB includes the transformer plus a 120 VAC heater. The V9317HC-SHB-230 includes a transformer and a 230 VAC heater. The V9317HC-SHB-24 includes a 24 VAC heater. Model V9317HC-WHB includes a transformer and a 120 VAC wiper and heater. Model V9317HC-WHB-230 includes the transformer and a 230 VAC wiper and heater. Model V9317HC-WHB-24 includes a 24 VAC wiper and heater. Refer to Table 1. Model V9317H is used throughout this manual to refer to all versions of the housing unless specifically stated otherwise.



V9317H ENVIRONMENTAL HOUSING

TABLE 1 MODELS AND PRODUCT CODES

Model Number	Product Code	Description
V9317HC-SB	6076	120 VAC, blower, sunshield, 24 VAC transformer
V9317HC-SB-230	6076-01	230 VAC, blower, sunshield, 24 VAC transformer
V9317H-SB-24	6076-02	24 VAC, blower and sunshield
V9317HC-SHB	6077	120 VAC, blower, heater, sunshield, 24 VAC transformer
V9317HC-SHB-230	6077-01	230 VAC, blower, heater, sunshield, 24 VAC transformer
V9317H-SHB-24	6077-02	24 VAC, blower, heater and sunshield
V9317HC-WHB	6079	120 VAC, blower, heater, wiper, sunshield, 24 VAC transformer
V9317HC-WHB-230	6079-01	230 VAC, blower, heater, wiper, sunshield, 24 VAC transformer
V9317H-WHB-24	6079-02	24 VAC, blower, heater, wiper, sunshield, 24 VAC transformer

INDOOR/OUTDOOR HOUSING

The housing shall be an environmental camera enclosure offering weather protection to CCTV camera/lens combinations up to 12 inches (30.5 cm) long. Maximum camera height shall be 3.5 in. (8.9 cm) and width 4.25 in. (10.8 cm). The unit shall have a sunshield that shall provide protection against UV radiation and corrosion and a blower as standard. The housing shall provide a latch with a loop for a padlock. The housing shall be available in nine versions, one each for 120 VAC, 230 VAC and 24 VAC input; three versions equipped with heaters, one each for 120 VAC, 230 VAC and 24 VAC input; three versions equipped with heaters and wipers, one each for 120 VAC, 230 VAC, and 24 VAC. A 24-VAC transformer shall be provided for camera power in high-voltage models. The housing and sunshield shall be constructed of heavy-duty aluminum and the window shall be glass for transparency. Two side latches shall be provided. Rainproof elastomer seals and gaskets shall provide protection to the camera/lens assembly. The housing shall withstand winds up to 80 mph (130 kph). Exterior dimensions shall not exceed: height, 5.75 in. (14.6 cm); width, 6.75 in. (17.1 cm); and length, 21.9 in. (55.6 cm). The weight shall not exceed 8 lb (3.6 kg). The environmental housing shall be from the Vicon Model V9317H series.

The housings with heaters are equipped with two pad-type (strip) heaters, totaling 60 watts of heating power. A thermostat automatically turns the heaters on when the temperature drops to 68 ...F (20...C) and turns them off when the temperature rises above 80...F (27...C). The V9317H withstands winds up to 80 mph with outside temperature ranging from -30 to 120...F (-35 to 49...C).

The blower in the housings is thermostatically-controlled to activate when the temperature in the housing rises above

90...F (32...C) and automatically turns off the blower when the temperature falls below 80...F (27...C). The blower circulates and directs airflow across the window to prevent fogging.

The V9317H housing and protective sunshield are constructed from heavy-duty aluminum with a light-gray finish. The sunshield provides long-term protection from UV radiation and corrosion. The viewing window is made of glass for long lasting transparency. All materials are corrosion-resistant or stainless steel hardware.

TECHNICAL INFORMATION

ELECTRICAL

- Input Voltage:** Refer to Table 1.
- Power Consumption:** Refer to Table 2.
- Connector:** Screw terminal strip.
- Transformer:** A 24-VAC transformer is provided for camera power in 120 and 230 VAC units.
- Heater Thermostat:** Closes: 50...F (10...C).
Opens: 60...F (16...C).
- Blower Thermostat:** Closes: 90...F (32...C)
Opens: 80...F (27...C).

OPTICAL

- Light Loss through Window:** Negligible.

OPERATIONAL

- Horizontal Adjustment:** Adjustable camera platform and mounting plate.

MECHANICAL

- External Dimensions:** Length (L): 21.9 in. (55.6 cm).
Width (W): 6.75 in. (17.1 cm).
Height (H): 5.75 in. (14.6 cm).

- Maximum Camera/Lens Dimensions:** Height: 3.5 in. (8.9 cm).
Width: 4.25 in. (10.8 cm).
Length: 12.0 in. (30.5 cm).

- Lens Mounting Plate Heater Clearance:** 0.25 in. (0.64 cm).

- Weight:** Approximately 8 lb (3.6 kg).
Wiper units: approximately 10.25 lb (4.6 kg).

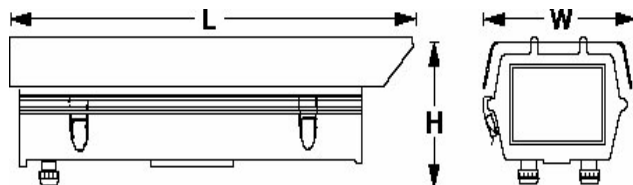


TABLE 2 HEATER AND BLOWER POWER SPECIFICATIONS

Model Number	INPUT VOLTAGE (VAC)	Current (A) Blower	Current (A) Heater	Current (A) Wiper	Power (W, VA) Heater	Power (W, VA) Blower	Power (W, VA) Wiper	Heat Equivalent† (btu/min (cal/min))
V9317HC-SB	120	0.13	-	-	-	16	-	0.9 (0.23)
V9317HC-SB-230	230	0.07	-	-	-	16	-	0.9 (0.23)
V9317H-SB-24	24	0.7	-	-	-	16	-	0.9 (0.23)
V9317HC-SHB	120	0.13	0.5	-	60	16	-	4.3 (1.1)
V9317HC-SHB-230	230	0.07	0.26	-	60	16	-	4.3 (1.1)
V9317H-SHB-24	24	0.7	2.5	-	60	16	-	4.3 (1.1)
V9317HC-WHB	120	0.13	0.5	0.025	60	16	3	4.5 (1.13)
V9317HC-WHB-230	230	0.07	0.26	0.013	60	16	3	4.5 (1.13)
V9317H-WHB-24	24	0.7	2.5	0.125	60	16	3	4.5 (1.13)



Camera Housings

- | | |
|--|---|
| Construction: End caps: plastic, light gray.
Housing: aluminum.
Window: 0.125 in. (0.32 cm) thick lime glass. | Shipping Volume: 0.8 ft ³ (0.02 m ³). |
| Clear Window Area: 4.0 in.x 2.9 in.
(10.2 cm x 7.4 cm). | ENVIRONMENTAL |
| Cable Access: Two liquid tight compression fittings located at bottom of rear base. | Operating Temperature Range: -30 to 120...F (-35 to 49...C). |
| Camera Access: Two latches on left side of housing. | Storage Temperature Range: -40 to 150...F (-40 to 65...C). |
| Housing Mounting: Seven 1/4-20 tapped holes provided on bottom for mounting and balancing (two screws must be used). Adjustable fore and aft. See Figure 1. | Storage Humidity: Up to 90% relative, noncondensing. |
| Shipping Dimensions: Height: 7.0 in. (17.8 cm).
Width: 8.5 in. (21.6 cm).
Length: 23.6 in. (59.7 cm). | Moisture: Rainproof elastomer seals and gaskets. |
| Shipping Weight: 9.2 lb (4.2 kg).
Wiper units: 11.7 lb (5.3 kg). | Wind Resistance: Up to 80 mph (130 kph). |
| | NEMA Standard: 4. Based on engineering evaluation and test. Not tested independently. |
| | CE Standard: IP65 (weep holes plugged).
Based on engineering evaluation and test. Not tested independently. |

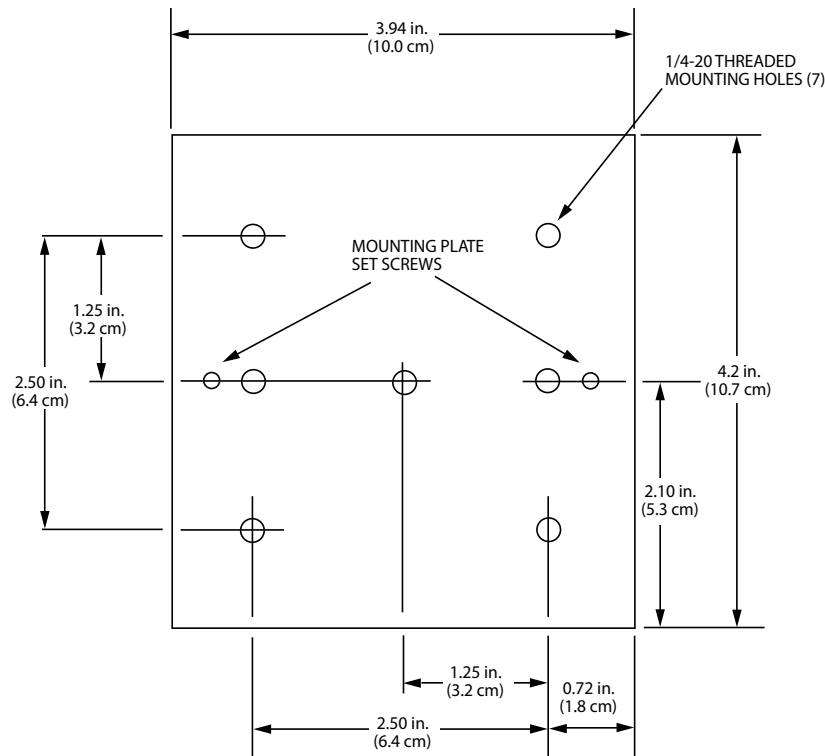


Figure 1 Mounting Diagram