

3.1.3 In-Sight Remote Head Vision System Specifications

Table 3-3: 5400R Vision System Specifications

Specification		In-Sight 5400R
Minimum Firmware Requirement		In-Sight version 3.2.0
Memory	Job/Program	32MB non-volatile flash memory; unlimited storage via remote network device.
	Image Processing	64MB
I/O	Trigger	1 opto-isolated, acquisition trigger input. Remote software commands via Ethernet and RS-232C.
	Discrete Inputs	None built-in. Additional inputs available using a compatible I/O module (see Table 1-3). Unlimited inputs when using an Ethernet I/O system.
	Discrete Outputs	2 built-in, high-speed outputs. Additional outputs available using a compatible I/O module (see Table 1-3). Unlimited outputs when using an Ethernet I/O system.
	Status LEDs	Power, Network Status, Network Traffic, 2 user configurable.
Communications	Network	1 Ethernet port, 10/100 BaseT, TCP/IP protocol. Supports DHCP (factory default) or static IP address.
	Serial	RS-232C when connected to an optional I/O module.
Power		24VDC $\pm 10\%$, 250mA maximum.
Mechanical	Material	Die-cast aluminum housing.
	Finish	Painted.
	Mounting	Four M4 threaded mounting holes on back of vision system.
	Dimensions	34.0mm (1.34in) x 136.0mm (5.35in) x 61.4mm (2.42in)
	Weight	295g (10.4 oz.)
Environmental	Temperature	Operating: 0°C to 55°C (32°F to 131°F) Storage: -30°C to 80°C (22°F to 176°F)
	Humidity	95%, non-condensing (Operating and Storage)
	Protection	IP67
	Shock	80 G shock per IEC 68-2-27.
	Vibration	10 G from 10-500 Hz per IEC 68-2-6.
Regulatory Compliance		CE, UL, CUL, FCC, RoHS

1. Maximum frames per second is job dependent and based on an 8ms exposure and a full image frame capture.
2. Expected variability in the physical position of the CCD, from vision system-to-vision system. This equates to $\sim \pm 17$ pixels on a 640 x 480 resolution CCD.

Table 3-4: Remote Head Camera Specifications

Specification		Remote Head Camera
Image	Sensor	1/3-inch CCD
	Sensor Properties	5.92mm diagonal, 7.4 x 7.4µm sq. pixels.
	Resolution (pixels)	640 x 480
	Electronic Shutter Speed	25µs to 1000ms (except value selected must be in increments of 50µs i.e., 25µs, 75µs, 125µs, etc.).
	Acquisition	Rapid reset, progressive scan (supports partial scan), full-frame integration.
		256 grey levels (8 bits/pixel).
		Gain controlled by software.
		31 full frames per second. ¹
Mechanical	Lens Type	CS-mount and C-mount (with 5mm extension, included).
	CCD Alignment Variability ²	±0.254mm (0.01in), (both x and y) from lens C-mount axis to center of imager.
	Material/Finish	Anodized, aluminum housing.
	Mounting	Three M3 threaded holes.
Environmental	Dimensions	32.0mm (1.26in) diameter, 50.6mm (1.99in) length
	Weight	68 g (2.4 oz.) without lens
	Temperature	Operating: 0°C to 45°C (32°F to 113°F) Storage: -30°C to 80°C (22°F to 176°F)
	Humidity	95% non-condensing (Operating and Storage).
	Protection	For environments where protection is required, use the optional protective Remote Head Camera Enclosure, Cognex P/N 800-5783-1.
	Shock	80 G Shock with 150 g or lighter lens per IEC 68-2-27. Remote head properly mounted using Cognex mounting bracket with vibration dampener tube.
	Vibration	10 G from 10-500Hz Vibration per IEC 68-2-6 with 150 g or lighter lens attached. Remote head properly mounted using Cognex mounting bracket with vibration damper tube.
Regulatory Compliance		CE, UL, CUL, FCC, RoHS

Table 3-5: Remote Head Camera Enclosure Specifications

Specification		Remote Head Camera Enclosure
Mechanical	Material/Finish	Anodized aluminum housing with glass window. Stainless steel housing with polycarbonate window (optional).
	Mounting	Three M3 threaded holes.
	Dimensions	Without remote head camera: 66.6mm (2.62in) high x 46.0mm (1.81in) diameter. Nominal height with remote head camera: 79.2mm (3.12 in) to 93.6mm (3.69 in).
	Weight	136.1 g (4.8 oz.), without remote head camera.
	Protection	IP67

3.3.3 5400R Vision System Dimensions

Notes:	• All dimensions are in millimeters [inches] and are for reference purposes only.
	• All specifications may be changed without notice.

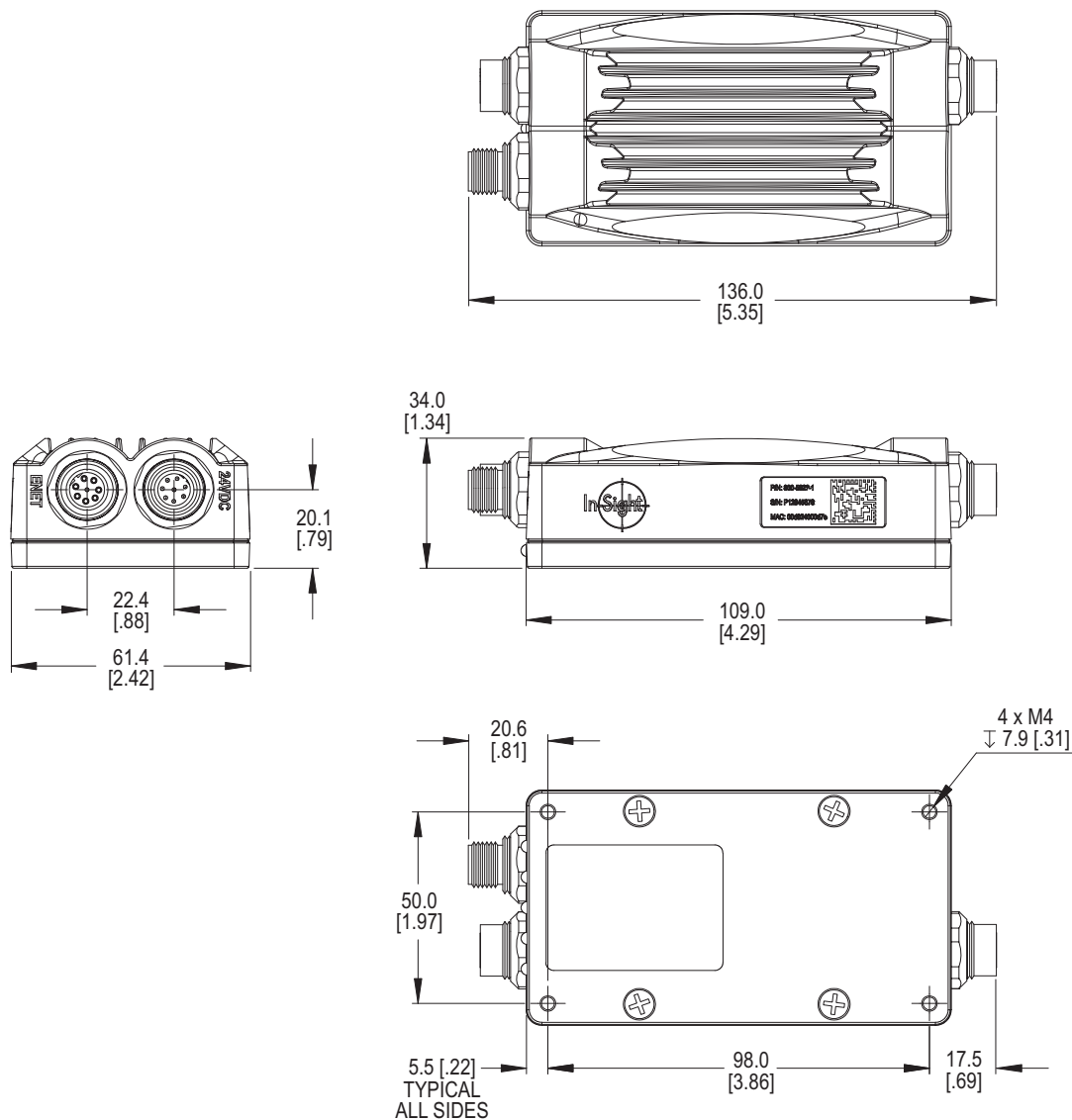


Figure 3-10: 5400R Vision System Dimensions

3.3.4 Remote Head Camera Dimensions

Notes:

- All dimensions are in millimeters [inches] and are for reference purposes only.
- All specifications may be changed without notice.

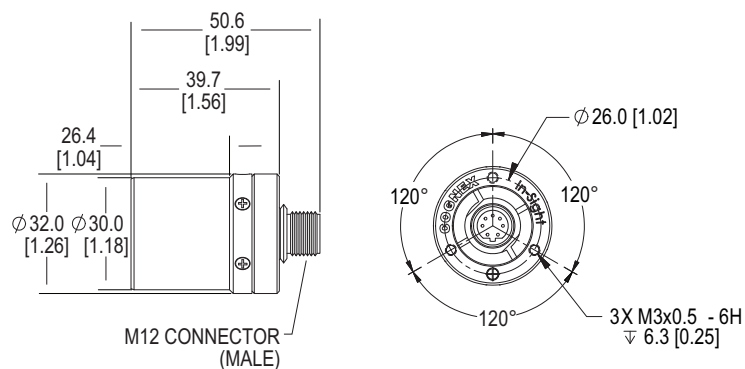


Figure 3-11: Remote Head Camera Dimensions

3.3.5 Remote Head Camera Enclosure Dimensions

Notes:	• All dimensions are in millimeters [inches] and are for reference purposes only. • All specifications may be changed without notice.
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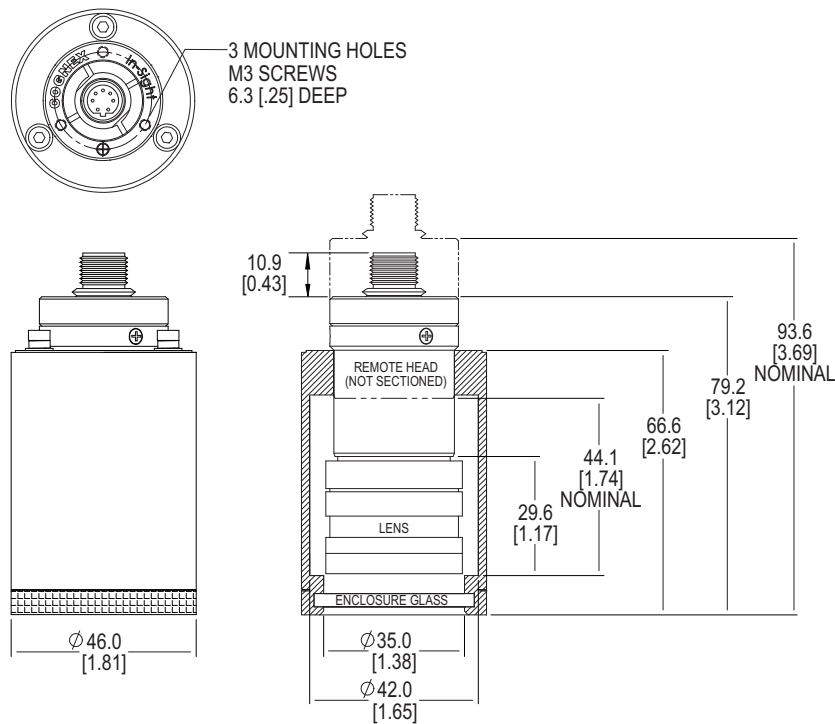


Figure 3-12: Remote Head Camera Enclosure Dimensions

3.3.6 Remote Head Camera Mount Dimensions

Notes:

- All dimensions are in millimeters [inches] and are for reference purposes only.
- All specifications may be changed without notice.

The remote head mounting bracket dimensions are illustrated below. Refer to Appendix A for installation instructions.

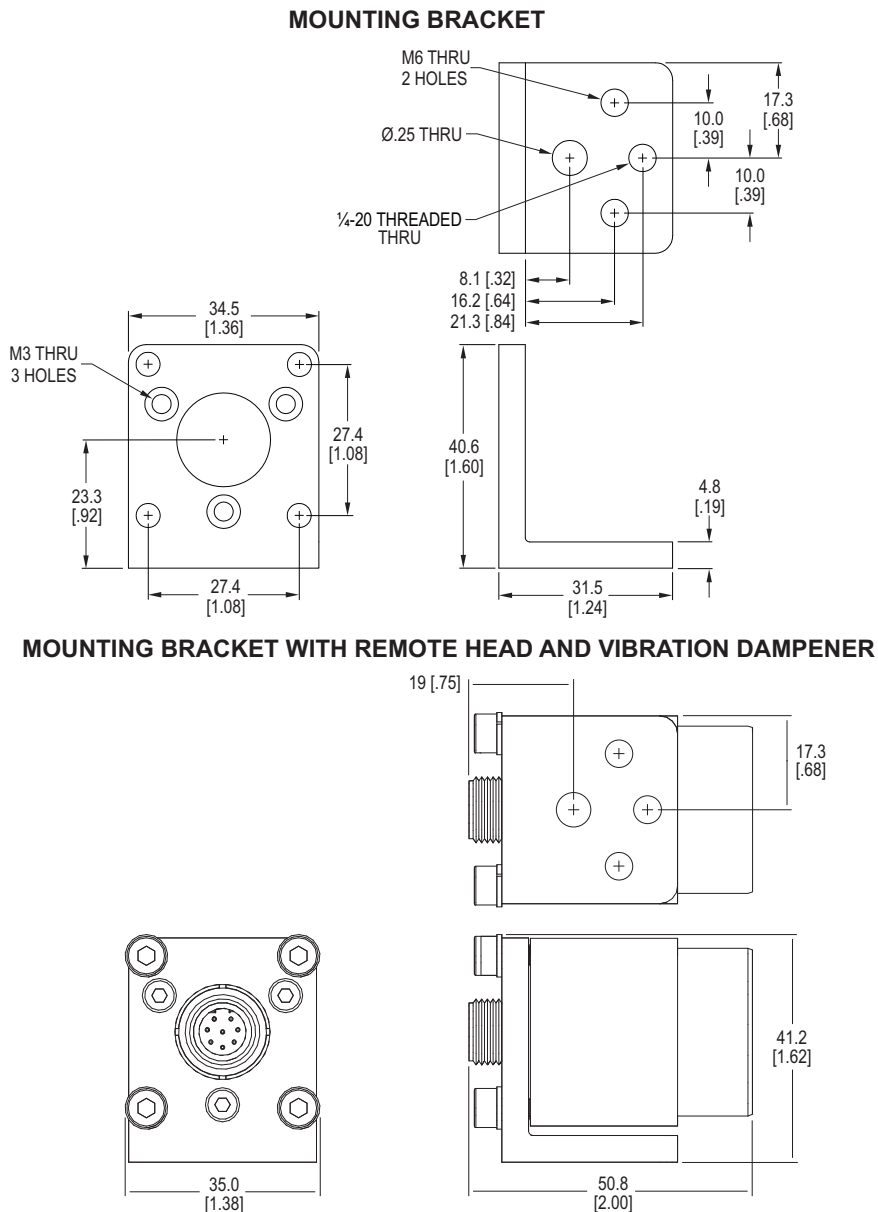


Figure 3-13: Remote Head Camera Mount Dimensions