

MV-SC3030XC

3 MP Color Vision Sensor

With built-in high-precision vision algorithms, MV-SC3030XC vision sensor can realize counting, existence, measurement, recognition and other functions. It can be easily configured and operated via the SCMVS client software, and it uses RS-232 and Ethernet to output vision tool results and customized results.



Key Features

- Adopts embedded hardware platform to realize high-speed image processing.
- Built-in high-precision positioning, measurement and recognition algorithms for counting, defects, existence, positioning and other functions.
- Supports RS-232, TCP, UDP, FTP, Modbus, PROFINET, EtherNet/IP and other communication modes.
- Adopts multiple IO interfaces for input and output signals.
- Supports viewing the device's status in real time via 360° visual indicator, convenient for debugging and maintenance.
- Rotatable cable tail design, suitable for narrow space.
- Adopts polarized, diffuser, and full-transparent multiple optical lighting with good environmental adaptability.
- IP67 protection without fear of harsh industrial application environments.

Typical Application

- Consumer electronics
- Food and pharmaceutical
- Automobile



Specification

Model	MV-SC3030XC-08M-WBN	MV-SC3030XC-12M-WBN	MV-SC3030XC-16M-WBN
Tool			
Vision tool	● Measurement: P2P measurement, P2L measurement, contrast measurement, grayscale size, edge width measurement, width measurement, brightness average value, L2L angle, color measurement, color size, diameter measurement, line angle ● Existence: Spot existence, edge existence, contour existence, pattern existence, circle existence, line existence, anomaly judge, existence detection ● Count: Spot count, edge count, contour count, pattern count, learning-based count, color count ● Recognition: Multi-object count, code recognition, color contrast, color recognition, category recognition, classification registration, object registration, OCR, learning-based OCR, character horizontal stripe detection ● Logic: Calculator, if module, logic judge, format output, condition judge, character comparison, combination judge ● Location: Calibration convert, single point alignment, point rectify, point grasp, scale transformation, fixture ● Deep learning: DL classification, DL object detection ● Defect detection: Anomaly detection ● Industry tools: OCR and defect detection		
Solution capacity	Supports importing and exporting project, up to 32 projects can be stored.		
Communication protocol	RS-232, TCP, UDP, FTP, PROFINET, Modbus, EtherNet/IP, MELSEC/SLMP, FINS, Keyence KV		
Camera			
Sensor type	CMOS, global shutter		
Pixel size	3.45 μm × 3.45 μm		
Sensor size	1/1.8"		
Resolution	2048 × 1536		
Max. frame rate	40 fps		
Gain	0 dB to 15 dB		
Exposure time	6 μs to 1 sec		
Pixel format	RGB 8, Mono 8		
Mono/color	Color		
Electrical feature			
Data interface	Fast Ethernet (100 Mbit/s)		
Digital I/O	12-pin M12 connector provides power and I/O, including opto-isolated input (LINE 0/1/2) × 3, opto-isolated output (LINE 3/4/5) × 3, and RS-232 × 1 Supports triggering device via pressing top trigger button		
Power supply	24 VDC		
Power consumption	Avg. 7 W @ 24 VDC (light source enabled) Max. 22 W @ 24 VDC (light source enabled)		
Mechanical			
Lens mount	M12-mount, mechanical autofocus supported		

Focal length	8 mm	12 mm	16 mm
Lens cap	Polarized + diffuser + full-transparent lens cap		
Light source	White spot light source. Red/blue/IR point light source is optional		
Aiming system	1 LED		
Indicator	360° visual indicator		
Dimension	Straight angle: 80.1 mm × 43 mm × 44.3 mm (3.2" × 1.7" × 1.7") Right angle: 58.5 mm × 43 mm × 65.4 mm (2.3" × 1.7" × 2.6")		
Weight	Approx. 190 g (0.4 lb.)		
Ingress protection	IP67 (under proper installation of waterproof lens cap)		
Temperature	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: −30 °C to 70 °C (−22 °F to 158 °F)		
Humidity	20% RH to 95% RH (no condensation)		
Vibration resistance	Meets standard IEC 60068-2-6:2007. Device only (without installation bracket): 10 Hz to 55 Hz, 1.5 mm peak-to-peak amplitude, 2 hours per axis (X, Y, Z)		
Shock resistance	Meets standard IEC 60068-2-27:2008. Device only (without installation bracket): 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions)		
General			
Client software	SCMVS		
Certification	CE, KC		

Available Models

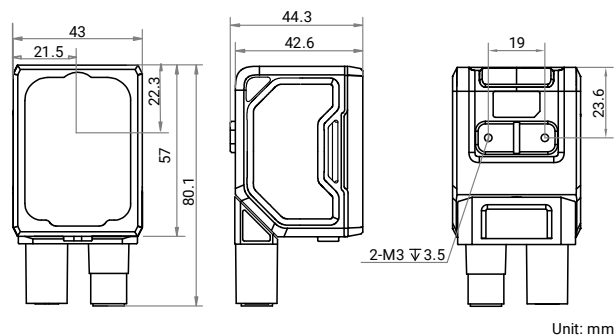
- 8 mm focal length: MV-SC3030XC-08M-WBN
- 12 mm focal length: MV-SC3030XC-12M-WBN
- 16 mm focal length: MV-SC3030XC-16M-WBN

Detection Range

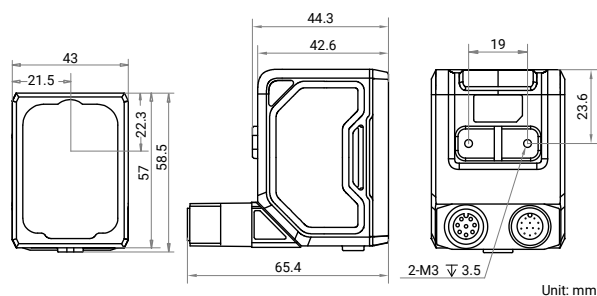
MV-SC3030XC (Unit: mm)					
Lens Focal Length	Working Distance	Field of View		Single Pixel Accuracy	Diagram of Field of View
		H	V		
8	30	26	19	0.01	
	100	87	65	0.04	
	200	173	130	0.08	
	300	260	195	0.13	
	600	520	390	0.25	
	1000	866	649	0.42	
	2000	1732	1299	0.85	
12	60	35	26	0.02	
	100	59	44	0.03	
	200	118	88	0.06	
	300	177	132	0.09	
	600	353	265	0.17	
	1000	589	442	0.29	
	2000	1178	883	0.58	
16	110	49	36	0.02	
	200	88	66	0.04	
	300	132	99	0.06	
	600	265	199	0.13	
	1000	442	331	0.22	
	2000	883	662	0.43	

Dimension

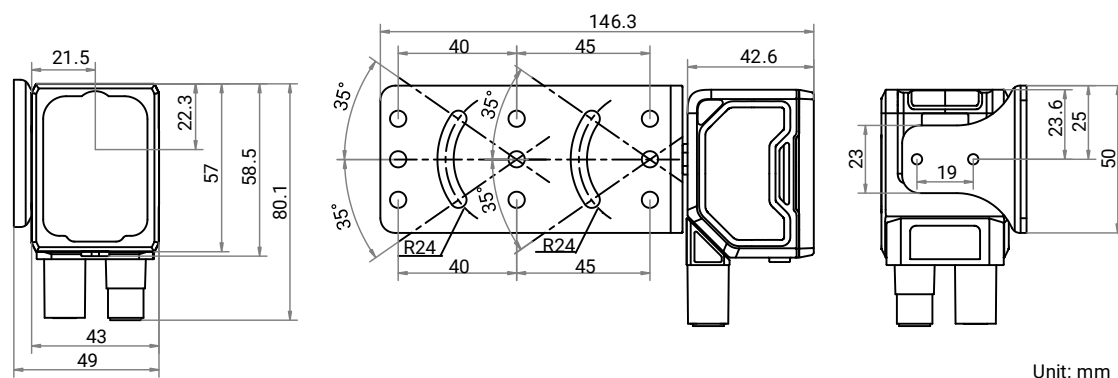
Device (Straight Angle):



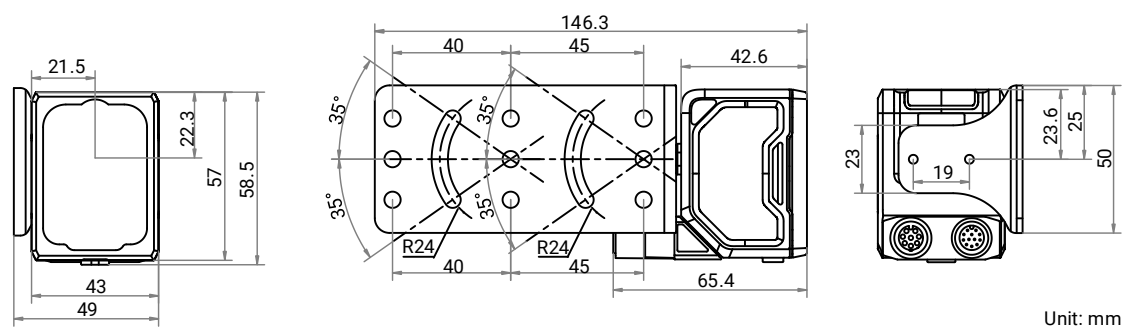
Device (Right Angle):



Device and Installation Bracket (Straight Angle):



Device and Installation Bracket (Right Angle):



Installation Bracket:

