

MV-SC3050XC-S

5 MP Color Vision Sensor

With built-in high-precision vision algorithms, MV-SC3050XC-S 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.
- Provides built-in algorithms for high-precision positioning, measurement, and recognition which can be applied in applications such as counting, defect detection, existence, and positioning.
- Adopts multiple IO interfaces for input and output signals.
- Supports viewing the device's status in real time via multi-angle visual indicator, convenient for debugging and maintenance.
- Adopts polarized, diffuser, and full-transparent multiple optical lighting with good environmental adaptability.
- Supports RS-232, TCP, UDP, FTP, ModBus, PROFINET, EtherNet/IP and other communication modes.

Typical Application

- Consumer electronics
- Food and pharmaceutical
- Automobile



Specification

Model	MV-SC3050XC-08M-WBN-S	MV-SC3050XC-12M-WBN-S	MV-SC3050XC-16M-WBN-S
Tool			
Vision tool	● Measurement: P2P measurement, P2L measurement, contrast measurement, grayscale size, edge width measurement, width measurement, brightness analysis, 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 detection registration, OCR, learning 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	1/1.45"		
Resolution	2432 × 2048		
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	17-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	Multi-angle visual indicator		
Dimension	43 mm × 57 mm × 45.9 mm (1.7" × 2.2" × 1.8")		
Weight	Approx. 200 g (0.4 lb.)		
Ingress protection	IP65		
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. Bare device withstands 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. Bare device withstands 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions)		
General			
Client software	SCMVS		
Certification	CE, KC		

Available Models

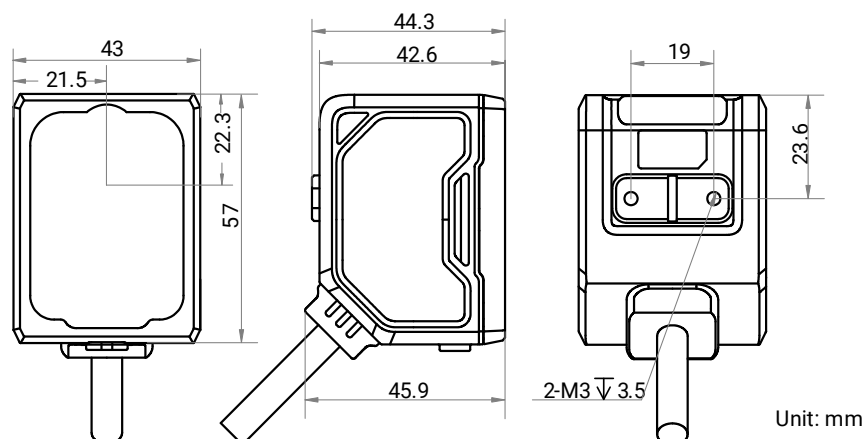
- 8 mm focal length: MV-SC3050XC-08M-WBN-S
- 12 mm focal length: MV-SC3050XC-12M-WBN-S
- 16 mm focal length: MV-SC3050XC-16M-WBN-S

Detection Range

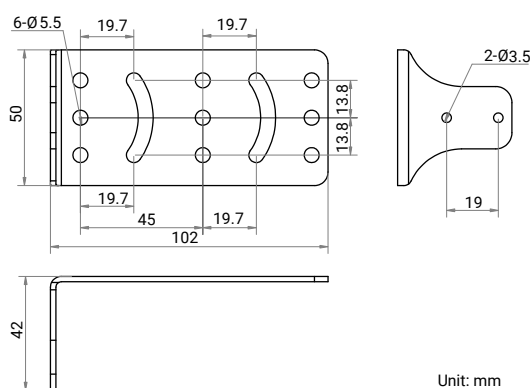
MV-SC3050XC-S (Unit: mm)					
Lens Focal Length	Working Distance	Field of View		Single Pixel Accuracy	Diagram of Field of View
		H	V		
8	25	26	22	0.01	
	100	103	87	0.04	
	200	206	173	0.08	
	300	308	260	0.13	
	600	617	520	0.25	
	1000	1028	866	0.42	
	2000	2056	1732	0.85	
12	60	42	35	0.02	
	100	70	59	0.03	
	200	140	118	0.06	
	300	210	177	0.09	
	600	420	353	0.17	
	1000	699	589	0.29	
	2000	1398	1178	0.58	
16	60	31	26	0.01	
	150	79	66	0.03	
	300	157	132	0.06	
	600	315	265	0.13	
	1000	524	442	0.22	
	2000	1049	883	0.43	

Dimension

Device:



Installation Bracket:



Device and Installation Bracket:

