MV-SC3004M

0.4 MP 1/2.9" Vision Sensor

Introduction

With built-in positioning and measurement algorithms, MV-SC3004M vision sensor can detect object's existence, quantity, location, etc. It can be monitored and operated via the SCMVS client. It can output results via RS-232 and Ethernet, and cooperate with other processes via IO. The vision sensor supports multiple result output methods and customized result text output.

Key Features

- Adopts embedded hardware platform for high-speed image processing.
- Adopts built-in positioning and measurement algorithms to detect object's existence, quantity, location, etc.
- Multiple IO interfaces for input and output signals.
- Multiple indicators for displaying device status.
- Adopts light source to ensure uniform brightness in the illuminated area.
- Supports multiple communication protocols, including Serial Port, TCP, UDP, FTP, Profinet, Modbus, etc.

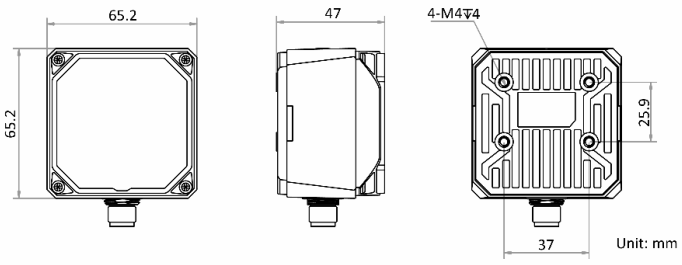
Available Model

- 6 mm focal length: MV-SC3004M-06M-WBN
- 12.4 mm focal length: MV-SC3004M-12M-WBN
- 14.8 mm focal length: MV-SC3004M-15M-WBN

Applicable Industry

Consumer electronics, food and medical industry, automobile, etc.

Dimension



Specification

Model	MV-SC3004M-06M-WBN	MV-SC3004M-12M-WBN	MV-SC3004M-15M-WBN
Tool			
Vision tool	● Count: Pattern count, spot count, edge count ● Defect detection: Exception detection ● Existence: Pattern existence, spot existence, edge existence, circle existence, line existence ● Location: Match location, match calibration ● Logic tool: If module, condition judge, logic judge, combination judge, character comparison, calculator ● Measurement: L2L angle, diameter measurement, brightness average value, contrast measurement, width measurement, P2L measurement, greyscale size, line angle, edge width measurement ● Recognition: OCR, code recognition		
Solution capacity	Supports solution importing and exporting, up to 32 solutions and 40 modules can be stored.		
Communication protocol	Serial Port, TCP, UDP, FTP, Profinet, Modbus, Ethernet/IP		
Camera			
Sensor type	CMOS, global shutter		
Pixel size	6.9 μm × 6.9 μm		
Sensor size	1/2.9"		
Resolution	704 × 540		
Max. frame rate	100 fps		
Dynamic range	74 dB		
SNR	41 dB		
Gain	0 dB to 15 dB		
Exposure time	16 μs to 1 sec		
Pixel format	Mono 8		
Mono/color	Mono		
Electrical features			
Data interface	Fast Ethernet		
Digital I/O	17-pin M12 connector provides power, Ethernet, digital I/O, and serial port: Input signal × 2 (Line 0/1), output signal × 3 (Line 5/6/7), bi-directional I/O × 3 (Line 2/3/4), and external button input × 1. Output signal can be set as NPN or PNP.		
Power supply	24 VDC		
Max. power consumption	Approx. 48 W@24 VDC		
Mechanical			
Lens mount	M12-mount, mechanical autofocus lens		
Focal length	6 mm (0.2")	12.4 mm (0.5")	14.8 mm (0.6")
Lens cap	Transparent lens cap. Polarization or infrared filter lens cap is optional.		
Light source	White light by default. Red/blue/near-infrared is optional.		
Indicator	Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG)		
Dimension	65.2 mm × 65.2 mm × 47 mm (2.6" × 2.6" × 1.9")		
Weight	Approx. 280 g (0.6 lb.)		
Ingress protection	IP67 (under proper installation of lens and wiring)		
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% to 95% RH, non-condensing
General	
Client software	SCMVS
Certification	CE, FCC, KC

Detection Range

Lens focal length	Installation distance	Field of view	Single pixel accuracy
6 mm (0.2")	5 mm (0.2")	4.05 mm × 3.11 mm (0.2" × 0.1")	0.006 mm
	2000 mm (78.7")	1619.20 mm × 1242 mm (63.7" × 48.9")	2.300 mm
12.4 mm (0.5")	70 mm (2.8")	27.42 mm × 21.03 mm (1.1" × 0.8")	0.039 mm
	2000 mm (78.7")	783.48 mm × 600.97 mm (30.8" × 23.7")	1.113 mm
14.8 mm (0.6")	80 mm (3.1")	26.26 mm × 20.14 mm (1.0" × 0.8")	0.037 mm
	2000 mm (78.7")	656.43 mm × 503.51 mm (25.8" × 19.8")	0.932 mm