

# MV-SC1003M

## 0.3 MP 1/6" Vision Sensor



### Introduction

With built-in positioning and measurement algorithms, MV-SC1003M 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.

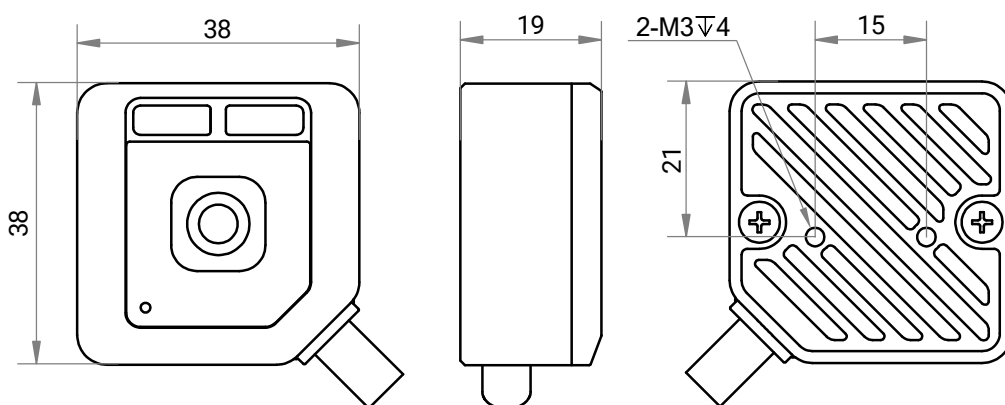
### Available Model

- Standard distance:  
MV-SC1003M-03S-WBN-SR
- Near distance:  
MV-SC1003M-03S-WBN-NR

### Applicable Industry

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

### Dimension



(Cable bending length 30 mm)

Unit: mm

### Key Features

- Adopts small-size design for all types of machines and compact workstations.
- Adopts embedded hardware platform for high-speed image processing.
- Adopts built-in positioning and measurement algorithms to detect object's existence, quantity, location, etc.
- Integrated LED aimer to allow the field-of-view to be clearly.
- Provides multiple indicators for displaying device status.
- Supports multiple communication protocols, including Modbus, EtherNet/IP, Profinet, FTP, UDP, TCP, and Serial Port.

## Specification

Model	MV-SC1003M-03S-WBN-SR	MV-SC1003M-03S-WBN-NR
<b>Tool</b>		
<b>Vision tool</b>	<ul style="list-style-type: none"> <li>● Count: Spot count, edge count, pattern count</li> <li>● Existence: Circle existence, line existence, spot existence, edge existence, contour existence</li> <li>● Location: Position fixture</li> <li>● Logic tool: Condition judge, logic judge, combination judge, calculator</li> <li>● Measurement: L2L angle, diameter measurement, brightness analysis, contrast measurement, width measurement, P2L measurement, greyscale size, line angle, edge width measurement</li> <li>● Recognition: Classification registration</li> </ul>	
<b>Solution capacity</b>	Supports solution importing and exporting, and up to 8 solutions and 40 modules can be stored.	
<b>Communication protocol</b>	Modbus, EtherNet/IP, Profinet, FTP, UDP, TCP client, TCP server, Serial Port, MELSEC/SLMP, FINS, Keyence KV	
<b>Camera</b>		
<b>Sensor type</b>	CMOS, global shutter	
<b>Pixel size</b>	3.74 μm × 3.74 μm	
<b>Sensor size</b>	1/6"	
<b>Resolution</b>	640 × 480	
<b>Max. frame rate</b>	15 fps	
<b>Dynamic range</b>	60 dB	
<b>SNR</b>	40 dB	
<b>Gain</b>	1 dB to 15 dB	
<b>Exposure time</b>	60 μs to 7000 μs	
<b>Pixel format</b>	Mono 8	
<b>Mono/color</b>	Mono	
<b>Electrical features</b>		
<b>Data interface</b>	Fast Ethernet (100 Mbit/s)	
<b>Digital I/O</b>	Green terminal provides power, digital I/O, and serial port, including input signal × 1 (IN0), output signal × 1 (OUT0), and RS-232 × 1. Supports triggering device via pressing top trigger button.	
<b>Power supply</b>	12 VDC to 24 VDC	
<b>Max. power consumption</b>	Approx. 3 W @12 VDC	
<b>Mechanical</b>		
<b>Lens mount</b>	M5.5-mount	
<b>Focal length</b>	3.1 mm	
<b>Working distance</b>	240 mm	120 mm
<b>Lens cap</b>	Transparent lens cap	
<b>Light source</b>	White LED	
<b>Aiming system</b>	Orange LED	
<b>Indicator</b>	Power indicator (PWR), result indicator (OK/NG)	
<b>Dimension</b>	38 mm × 38 mm × 19 mm (1.5" × 1.5" × 0.7")	
<b>Weight</b>	Approx. 40 g (0.09 lb.) without cable	
<b>Ingress protection</b>	IP54	

<b>Temperature</b>	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)
<b>Humidity</b>	20% RH to 95% RH, no condensation
<b>General</b>	
<b>Client software</b>	SCMVS
<b>Certification</b>	CE, KC

## Detection Range

Device Model	Installation Distance	Field of View	Single Pixel Accuracy
MV-SC1003M-03S-WBN-NR	80 mm	61.28 mm × 45.96 mm	0.048 mm
	120 mm	91.92 mm × 68.94 mm	0.072 mm
	160 mm	122.57 mm × 91.92 mm	0.096 mm
MV-SC1003M-03S-WBN-SR	200 mm	153.21 mm × 114.91 mm	0.12 mm
	240 mm	183.85 mm × 137.89 mm	0.143 mm
	280 mm	214.49 mm × 160.87 mm	0.168 mm

