

SMART VISION SENSOR

AMS3X Series



INTRODUCTION

The **AMS3X** Series is a feature-rich smart vision sensor powered by an embedded high-speed hardware platform. Upgraded with deep learning capabilities and native industrial protocols, it delivers high-precision, synchronized inspection directly to the factory floor.



FEATURES

Deep Learning Inspection: Upgraded algorithms for advanced counting, presence, position, measurement, and deep-learning-based recognition.

Expanded Connectivity: Native support for RS-232, Ethernet, IO, Modbus, Profinet, and TCP.

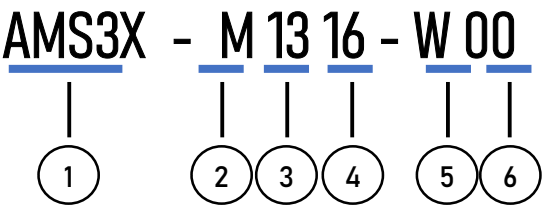
Synchronized Performance: Integrated embedded IO, hardware acceleration, and built-in light source ensure high-speed processing.

Flexible Deployment: Compact housing featuring a rotatable cable tail design for narrow industrial spaces.

Industrial Ruggedness: IP67-rated protection against harsh manufacturing environments.

Streamlined Workflow: Configured and deployed quickly via standard SCMVS Client Software.

AVAILABLE MODELS



1	PRODUCT SERIES	AMS3X = AMS3X Smart Vision Sensor Series
2	MONO / COLOR	M = Mono, C = Color
3	SENSOR RESOLUTION	13 = 1.3MP, 30 = 3.0MP, 50 = 5.0MP
4	LENS FOCAL LENGTH	08 = 8mm, 12 = 12mm, 16 = 16mm
5	BUILT-IN LED LIGHT	W = White, R = Red, B = Blue, I = IR
6	REMARK	00 = General Model

SPECIFICATION

Sensor Characteristic	
Sensor type	CMOS, Global shutter
Pixel size	6.9 μm x 6.9 μm (For 1.3MP) / 3.45 μm x 3.45 μm (For 5MP)
Sensor size	1/1.45"
Resolution	1,216 x 1,024 pixels (1.3MP) / 2,432 x 2,048 pixels (5MP)
Max frame rate	60 fps (For 1.3MP) / 40 fps (For 5MP)
Gain	0 dB to 15 dB
Exposure time	6 μs to 1 s
Electrical Information	
Data interface	Fast Ethernet
Digital I/O	12 pin M12 connector provides power and I/O, including opto isolated input (LINE 0/1/2) x 3, opto isolated output (LINE 3/4/5) x 3, and RS 232 x 1 Supports triggering device via pressing top trigger button
Power supply	24 VDC
Power consumption	Approx. 7W @ 24VDC / Max 22W @ 24VDC (light source enabled)
Mechanical Information	
Lens Mount	M12-mount, mechanical autofocus lens
Focal Length	8mm / 12mm / 16mm (Selectable)
Lens cap	Transparent cap. Polarized or Infrared filter cap is optional
Light source	White LED. Red / Blue / NIR is optional + Orange Aiming Light
Indicator	360° visual indicator
Dimension	80.1 mm x 43 mm x 44.3 mm (Straight angle) 58.5 mm x 43 mm x 65.4 mm (Right angle)
Weight	Approx 190 g.
Ingress Protection	IP67 (under proper installation of lens and wiring)
Temperature	Working Temp: 0 °C to 50 °C Storage Temp: -30 °C to 70 °C
Humidity	20% to 95% RH, non-condensing
Others	
Client software	SCMVS
Certification	CE, KC
Software	
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, for mat 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	Support up to 32 solutions
Communication protocol	RS-232, TCP, UDP, FTP, PROFINET, Modbus, EtherNet/IP, MELSEC/SLMP, FINS, Keyence KV

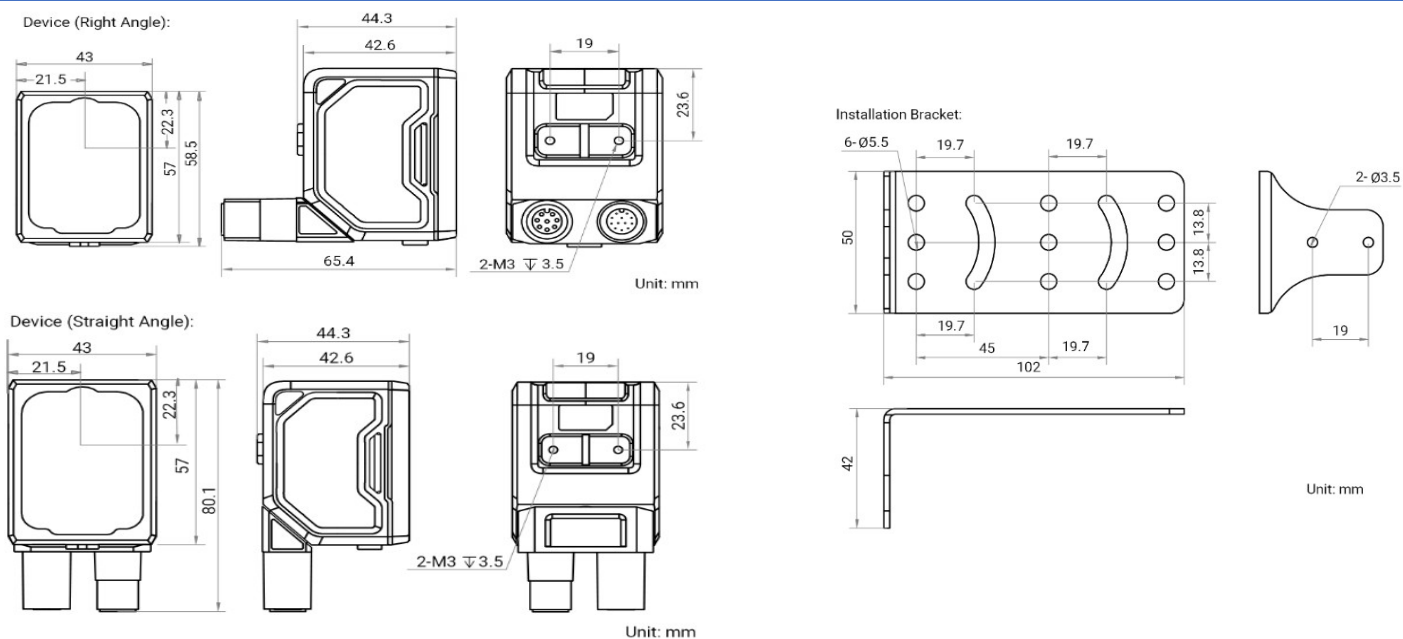
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DETECTION RANGE

Lens Focal Length	Working Distance	Field of View		Single Pixel Accuracy	Diagram of Field of View
		H	V		
8	30	31	26	0.03	
	100	103	87	0.08	
	200	206	173	0.17	
	300	308	260	0.25	
	600	617	520	0.51	
	1000	1028	866	0.85	
	2000	2056	1732	1.69	
12	60	42	35	0.03	
	100	70	59	0.06	
	200	140	118	0.12	
	300	210	177	0.17	
	600	420	353	0.35	
	1000	699	589	0.58	
	2000	1398	1178	1.15	
16	110	58	49	0.05	
	200	105	88	0.09	
	300	157	132	0.13	
	600	315	265	0.26	
	1000	524	442	0.43	
	2000	1049	883	0.86	

DIMENSIONS



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