MCS Series Data Sheet

PN: 602345212, Model: C6-S7-4090-MCS-15-1130-820-SX-1G-405-3B

The Modular 3D Compact Sensor (MCS) from AT - Automation Technology is revolutionizing 3D image processing with its unique modularity, flexibility and high performance. This innovative system allows individual configuration in terms of scan width, measurement accuracy, speed, triangulation angle and working distance to perfectly match the needs of specific applications. With an unprecedented profile speed of 200 kHz and a resolution of 4096 points per profile, the MCS sets technological standards. It overcomes traditional hurdles such as high NRE costs and long development times by combining the reliability of a series product with the flexibility of a customized solution, without additional costs or minimum order quantities.

- **Freely configurable, factory-calibrated modular 3D sensors for individual solutions**
- **Five triangulation angles available (15, 20, 25, 30, 40)**
- **Four different sensor resolutions available (1280, 2040, 3070, 4090)**
- **No extra costs, long delivery times or minimum order quantities**
- **Available with different laser classes and wavelengths**

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Model Information

Model Name	C6-S7-4090-MCS-15-1130-820-SX-1G-405-3B
Part Number	602345212
Sensor configuration	Single

Detector/Performance specifications

Detector	CMOS | Global Shutter
Resolution	4096 x 3072 pixels
Physical size	22.528 x 16.896 mm
Pixel size	5.5 x 5.5 µm
Points per profile	4096
Profile speed at 200 rows	2092.0 Hz
Maximum profile speed	24875.0 Hz
Linearity Z-Axis	0.011 % of calibrated Z-Range

X Field of View

	Nominal	Near Field	Far Field
Scan Width	1117.3 mm	922.5 mm	1311.2 mm
X-Resolution	272.8 µm	225.2 µm	320.1 µm
Z-Resolution	18.6 µm	-	-

Z Field of View

	Full	Near Field	Far Field
Z-Range	300.0 mm	150.0 mm	150.0 mm

Laser/Geometry specifications

Working Distance	827.0 mm
Triangulation Angle	15.0 °
Laser Safety Class	3B
Laser Wavelength	405.0 nm
Laser Output Power	-
Laser Line Width	-

Interface specifications

Ethernet	Gigabit-Ethernet | 1.000 Mbit/s
Encoder	A, B, Z | RS-422 | TTL
Digital inputs	2x isolated digital inputs | 5V - 24V DC
Digital outputs	2x isolated digital outputs | 5V - 24V DC

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Electrical/Mechanical specifications

Sensor power supply	12V - 24V DC | 27V DC Max.
Power consumption	- W
Laser power supply	12V - 24V DC
Connectors	Power&I/O: M12-Connector | 17-pin Ethernet: M12-Connector | 8-pin | A-coded
Housing material	Anodized aluminium
Dimensions (L x W x H)	0.0 x 60.0 x 0.0 mm
Weight	0.6 g

Environmental conditions

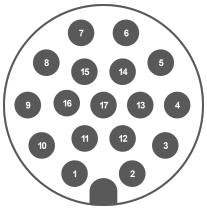
Temperatures	Operating: 0 °C - +40 °C Storage: -20 °C - +80 °C
Humidity	20 % - 80 % (non-condensing)
Vibration resistance	Sinusoidal: DIN EN 60068-2-6:2008-10: 2 g | 10 Hz - 150 Hz Random: DIN EN 60068-2-64:2020-09: 7 g | 10 Hz - 500 Hz
Shock resistance	DIN EN 60068-2-27: 2010-02: 15 g | 3 ms
Protection class	IP67 | According to IEC 60529

Software/Features

Supported standards	GenICam | GigEVision
Firmware features	RegionTracking | RegionSearch | MultiRegion | MultiPart | AutoStart | HistoryBuffer | MultiSlope | MultiPeak
Software	SolutionPackage | MetrologyPackage | cxSDK with wrappers for C, C++, Python and Matlab

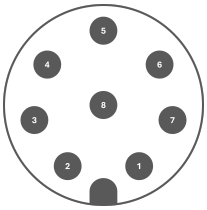
Connectors

M12 17-Pin: A-Coded Male Connector



1	ENC_Z-
2	LASER_Supply
3	ENC_Z+
4	ENC_B+
5	GND
6	ENC_B-
7	ENC_A-
8	VCC_EXT
9	GND_EXT
10	ENC_A+
11	ENC_GND
12	OUT2
13	IN1
14	IN2
15	OUT_Supply
16	OUT1
17	IO_GND
Shield	SHIELD

M12 8-Pin: A-Coded Female Connector



1	BI_DC-
2	BI_DD+
3	BI_DD-
4	BI_DA-
5	BI_DB+
6	BI_DA+
7	BI_DC+
8	BI_DB-
Shield	SHIELD

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