

CS Series DATA SHEET

PN: 202209079, Model: C6-S7-2040-CS-14-160-197-SX-1G-405-3B



The CS sensor series sets new standards in 3D laser triangulation technology with resolutions of up to 4096 pixels, profile frequencies of up to 162 kHz and fields of view of 7 to 1300 mm. These robust sensors with protection class IP67 and M12 connections for a reliable power supply and data transmission are available in various housing sizes. Integration is straightforward and takes place via standard interfaces such as Gigabit Ethernet or GenICam. The CS series thus offers a powerful, maintenance-free solution for OEM customers and end users in demanding industrial environments.

- **Highly standardized, factory-calibrated 3D sensors**
- **Large selection of models with X-FOV 7 - 1290 mm**
- **Four different sensor resolutions available (1280, 2040, 3070, 4090)**
- **High industrial protection class IP67 Available with different laser classes and wavelengths**



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Model Information

Model Name	C6-S7-2040-CS-14-160-197-SX-1G-405-3B
Part Number	202209079

General Data

Points per Profile	2048
Triangulation Angle	14 °
Working Distance	197 mm
Laser Safety Class	class3b
Laser Wavelength	405 nm
Laser Output Power	150 mW
Laser Line Width	-
Linearity Z-Axis	0.031 % of calibrated Z-Range
Profile speed with 200-row region	1818 Hz
Maximum profile speed	43478 Hz

Field of View

	Nominal	Near Field	Far Field
Scan Width	163.2 mm	122.9 mm	203.2 mm
X-Resolution	79.6 µm	60 µm	99.2 µm
Z-Resolution	3.6 µm	-	-

Z-Range

	Full	Near Field	Far Field
Z-Range	120 mm	60 mm	60 mm

Technical Specifications

Interface	Gigabit-Ethernet (1GigE)
Inputs	Encoder A+, A-, B+, B-, Z+, Z- (TTL level) Two freely configurable digital inputs (+5 to +24 VDC)
Outputs	Two freely configurable digital outputs (+5 to +24 VDC)
Power Supply	Sensor supply +10 to +24 VDC (max. +27 VDC) Laser supply +10 to +24 VDC
Housing	Anodized aluminum IP67 certified
Environmental Conditions	Operating temperature: 0 to +40 °C Storage temperature: -20 to +80 °C Relative humidity: 20 to 80 % (non-condensing)
Vibration Resistance	Sinusodial: DIN EN 60068-2-6:2008-10: 2g, 10-150 Hz Random: DIN EN 60068-2-64:2020-09: 7g, 10-500 Hz
Shock Resistance	DIN EN 60068-2-27: 2010-02: 15g, 3ms
Supported Standards	GenICam GigEVision
Firmware Features	RegionTracking, RegionSearch, Multiple Regions, MultiPart, AutoStart, HistoryBuffer, MultiSlope, MultiPeak
Software	SolutionPackage, MetrologyPackage, cxSDK for C, C++, .Net, Python, Matlab, Halcon

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