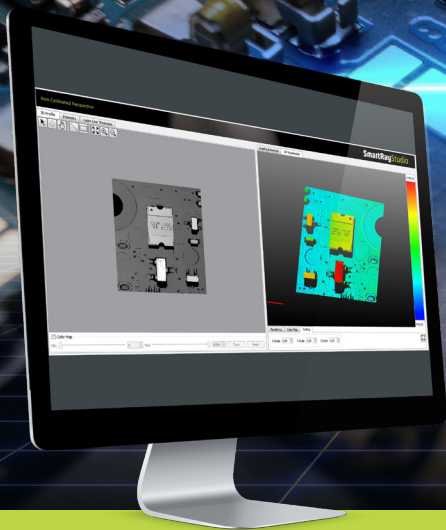


# CUTTING EDGE 3D SENSORS FOR **INSPECTION, GUIDANCE AND MEASUREMENT**

**ECCO 95+**

3D INSPECTION SENSOR



**ECONOMIC & COMPACT** HIGH SPEED 3D SCANNING, ULTRA HIGH RESOLUTION

**SUPERIOR 3D IMAGE QUALITY**  
BEST REPEATABILITY UNDER CHALLENGING CONDITIONS

**REDUCED POWER CONSUMPTION**  
LOWER OPERATING TEMPERATURE FOR BETTER METROLOGY PERFORMANCE

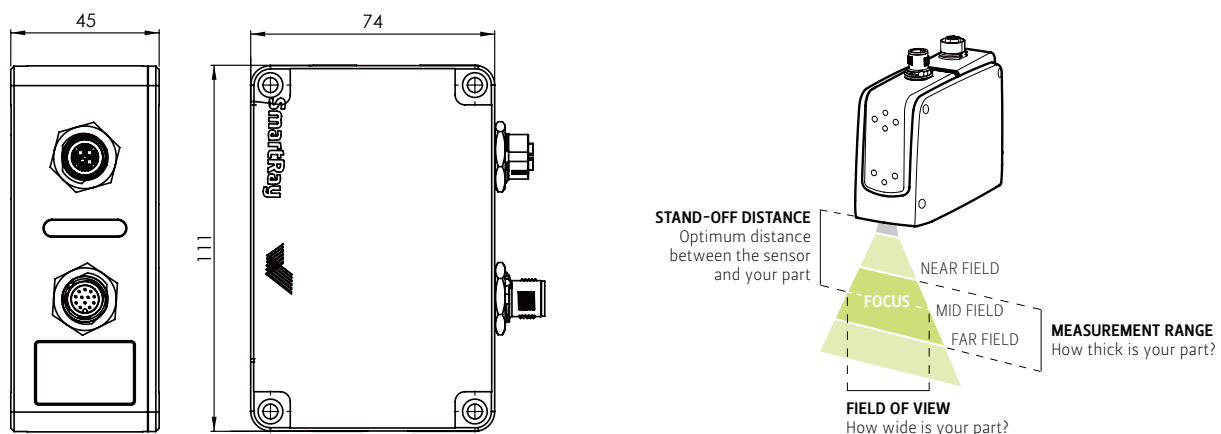
**INDUSTRIAL COMPACT HOUSING**  
BETTER STABILITY AND FLEXIBILITY FOR MACHINE AND ROBOT INTEGRATION

# KEY SPECIFICATIONS

Model	ECCO 95.010+	ECCO 95.020+	ECCO 95.040+	ECCO 95.100+	ECCO 95.200+
Field of view (near   mid   far)	10.5   <b>11</b>   11.5 mm	22   <b>25</b>   28 mm	34   <b>36</b>   38 mm	72   <b>98</b>   124 mm	125   <b>190</b>   280 mm
Typical measurement range	5 mm	16 mm	16 mm	100 mm	300 mm (-125 mm, +175 mm)
Stand-off distance	25 mm	63 mm	55 mm	145 mm	320 mm
Typical vertical resolution	0.37-0.45 $\mu\text{m}$	1.1-1.6 $\mu\text{m}$	1.4-1.8 $\mu\text{m}$	5-12 $\mu\text{m}$	12-50 $\mu\text{m}$
Typical lateral resolution	5.8-6.8 $\mu\text{m}$	11.5-14.5 $\mu\text{m}$	18-20 $\mu\text{m}$	42-70 $\mu\text{m}$	66-138 $\mu\text{m}$
Z-linearity	0.015%	0.005%	0.006%	0.002%	0.015%
Z-repeatability	0.1 $\mu\text{m}$	0.2 $\mu\text{m}$	0.4 $\mu\text{m}$	2 $\mu\text{m}$	3.3 $\mu\text{m}$
Mounting distance	49 mm	89 mm	79 mm	174 mm	349 mm
Laser wavelength	450 nm (brilliant blue laser)				660 nm (red laser)
Part number					
laser class 2	3.001.202	3.001.201	3.001.203	3.001.200	3.005.204
laser class 3R	3.004.202	3.004.201	3.004.203	3.004.200	3.008.204
Laser class (standard   optional)	2   3R				
Maximum points / 3D profile	1920				
Weight	<550 g				
Typical scan rate <sup>1</sup>	Approx. from 1 kHz up to 10 kHz				
Typical 3D point rate <sup>1</sup>	Approx. from 0.7 up to 15 million points/sec				
Interface	Gigabit Ethernet (1 Gbit/sec)				
Inputs	2x Inputs (5 – 24 VDC) Quadrature Encoder (AB-Channel, RS-422 standard)				
Outputs	2 x Outputs, 24 VDC (max. 20 mA)				
Trigger	The following triggers are supported: START Trigger support on Input 1 – 2 DATA Trigger support on Quadrature Encoder Input (Max. DATA trigger rate: 1 MHz) DATA Trigger support on Input 2 (Max. DATA trigger rate: 10 kHz)				
Input voltage   power	24 VDC, $\pm$ 15%   7.5 W				
Maximum ambient light	10,000 lx				
EMC test	as per EN 61 000-6-2, EN 61 000-6-4, EN 61326-1:2013-07				
Electrical safety	as per EN 61 010-1-3				
Protection class	III, as per EN 61 040-3				
Laser safety inputs	24 VDC   0V				
Enclosure rating	IP65				
Air humidity	Maximum 90%, non-condensing				
Temperature operation   storage	0 - 40°C   -20 - 70°C				
Compatible accessories	Power-I/O-Encoder cable: 6.320.OXX Ethernet cable: 6.303.OXX				

Note: Typical values may vary up to  $\pm$ 5% due to optical and production tolerances

<sup>1</sup> Scan rate & point rate are dependent on the configured field of view, measurement range and exposure time. A 'scan' by definition considers maximum points/3D profile i.e. full FOV. The typical scan/point rate range has been estimated considering an exposure time of 1  $\mu\text{sec}$ , min-max MR and full FOV. The typical scan rate can be further boosted by windowing the FOV



## FOR MORE INFORMATION PLEASE CONTACT US:

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