

CUTTING EDGE 3D SENSORS FOR **ACCURATE INSPECTION AND PRECISE MEASUREMENT**

ECCO X
3D INSPECTION SENSOR



EXTRAORDINARY SPEED
UP TO 40KHZ



EXCEPTIONAL RESOLUTION
4096 3D POINTS



MAXIMUM FLEXIBILITY
4 CONNECTOR OPTIONS



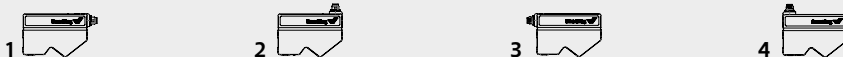
COMPACT DESIGN
SMALLEST IN ITS CLASS

SmartRay

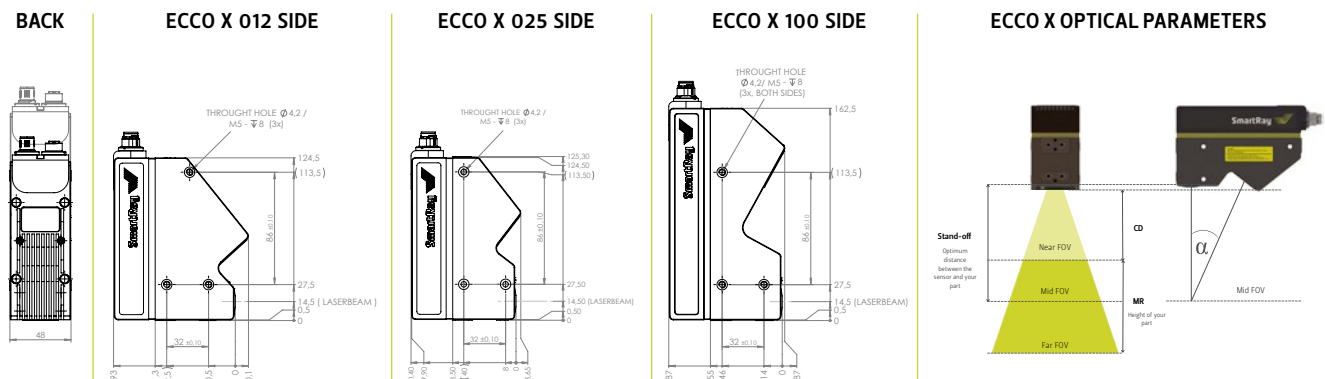
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Certainty in metrology

KEY SPECIFICATIONS

Model	ECCO X 012 prelim	ECCO X 025	ECCO X 100 prelim
Field of view (near mid far)	11 12 13 mm	22 25 28 mm	79 100 121 mm
Typical measurement range (MR)	6 mm	20 mm	100 mm
Clearance distance (CD)	17.5 mm	50 mm	138 mm
Stand-off distance	30.5 mm	64 mm	191 mm
Typical vertical resolution	0.3 - 0.4 μ m	0.9 - 1.4 μ m	4 - 9.5 μ m
Typical lateral resolution	2.7 - 3.2 μ m	5.0 - 7.0 μ m	17 - 30 μ m
Z-linearity	0.006%	0.005%	0.0023%
Z-repeatability	0.06 μ m	0.2 μ m	0.5 μ m
Triangulation angle (α) (lens laser angle Measured at the center of field of view)	47.5°	36.7°	27.5°
Laser wavelength	450 nm (brilliant blue laser)	450 nm (brilliant blue laser)	450 nm (brilliant blue laser) 660 nm (red)
part number connector position 1 (standard)	3.004.135	3.002.131	3.002.132 3.002.133
part number connector position 2 (optional)	3.104.135	3.102.131	3.102.132 3.102.133
part number connector position 3 (optional)	3.204.135	3.202.131	3.202.132 3.202.133
part number connector position 4 (optional)	3.304.135	3.302.131	3.302.132 3.302.133
Possible connector positions			
Laser class standard optional	3R 2	2	2 3R
Weight	800g	742g	850g
Maximum points / 3D profile	4096		
Typical scan rate ¹	Up to 40 kHz		
Typical 3D point rate ¹	Up to 163 million points/sec		
Interface	Gigabit Ethernet (1 Gbit/sec)		
Inputs	2x Inputs (10-24 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, DATA Trigger support on Quadrature Encoder Input (Max. DATA trigger rate: 1 MHz), DATA Trigger support on Input 2 (Max. DATA trigger rate: 5 kHz)		
Input voltage power	24 VDC, $\pm$ 15% 10 W		
EMC test	as per EN 61000, EN IEC 61326-1, EN IEC 61326-2-2		
Electrical safety	as per EN 61 010-1		
Vibration test	IEC TR 60721-4-3:2003 (3M4); IEC 60068-2-6, 5-200Hz		
Shock test	IEC TR 60721-4-3:2003 (3M4); IEC 60068-2-27		
Laser safety inputs	24 V DC $\pm$ 15%		
Enclosure rating	IP67		
Air humidity	Maximum 90%, non-condensing		
Temperature operation storage	0 - 40°C -20 - 70°C		
Compatible accessories	Power-I/O-Encoder cable: 6.320.0XX; 6.322.0XX; 6.327.0XX & Ethernet cable: 6.303.0XX; 6.308.0XX; 6.328.0XX		

¹ 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 μ sec, min-max MR and full FOV. The typical scan rate can be further boosted by windowing the FOV. Note: Typical values can vary up to 5% due to optical tolerances.



최적의 ALL-IN-1 솔루션을 제안합니다.

솔루션, 제품, 서비스에 대해 궁금하신 내용을 남겨주시면 빠른 시일 내로 회신 드리겠습니다.

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