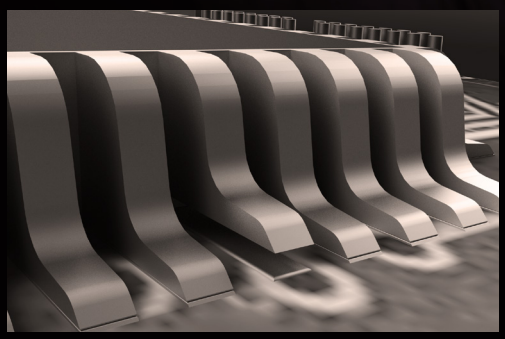
SmartRay CUTTING-EDGE 3D SENSORS FOR INSPECTION, GUIDANCE AND MEASUREMENT


# ECCO 95



## ECONOMIC & COMPACT
3D GOES HIGH DEFINITION IN HIGH SPEED

**HIGH SPEED 3D SCANNING**
FOR FASTER PRODUCTION LINES & THROUGHPUT

**ULTRA-HIGH RESOLUTION**
RESOLVE EXTREMELY FINE FEATURES

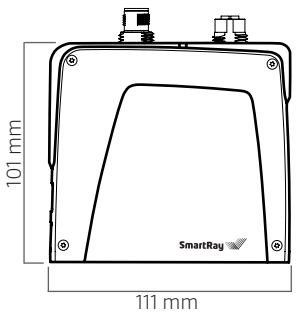
**SUPERIOR 3D IMAGE QUALITY**
BEST REPEATABILITY UNDER CHALLENGING CONDITIONS

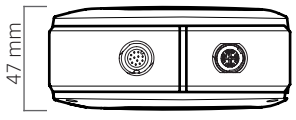
| MODEL | ECCO 95.010 | ECCO 95.040 | ECCO 95.100 |
|---|---|---|---|
| **Typical field of view** [1] near \| **mid** \| far | 10.5 \| **11** \| 11.5 mm | 34 \| **36** \| 38 mm | 72 \| **98** \| 124 mm |
| **Measurement range** [1] | 4 mm | 16 mm | 100 mm |
| **Stand-off distance** | 23.5 mm | 60 mm | 150 mm |
| **Typical vertical resolution (Z)** [1] | 0.37 – 0.45 µm | 1.4 – 1.8 µm | 5 – 12 µm |
| **Typical lateral resolution (Y)** [1] | 5.8 – 6.8 µm | 18 – 20 µm | 42 – 70 µm |
| **Weight** | Approx. 650 g | Approx. 490 g | Approx. 490 g |
| **Part number** | 3.002.152 (laser class 2M)<br>3.003.152 (laser class 3B) | 3.002.153 (laser class 2M)<br>3.003.153 (laser class 3B) | 3.002.150 (laser class 2M)<br>3.003.150 (laser class 3B) |

| | |
|---|---|
| **Maximum points / 3D profile** | 1920 |
| **Typical scan rate** [2] | Approx. from 400 Hz up to 8 kHz |
| **Typical 3D point rate** [2] | Approx. from 0.7 up to 15 million points/sec |
| **Interface** | Gigabit Ethernet (1 Gbit/sec) |
| **Inputs** | 2 x Inputs, 5 – 24 VDC<br>Quadrature Encoder (AB-Channel, RS-422 standard) |
| **Outputs** | 2 x Outputs, 24 VDC (max. 20 mA) |
| **Trigger** | START Trigger support on Input 1-2<br>DATA Trigger support on Quadrature Encoder Input (Max. DATA trigger rate: 1 MHz)<br>DATA Trigger support on Input 2 (Max. DATA trigger rate: 10 kHz) |
| **Input voltage \| Power** | 24 VDC, ± 15% ripple \| 8.5 W |
| **Laser wavelength** | 450 nm |
| **Laser class** standard \| optional | 2M \| 3B |
| **Maximum ambient light** | 10,000 lx |
| **EMC test** | as per EN 61 000-6-2, EN 61 000-6-4 |
| **Vibration / Shock test** | as per EN 60 068-2-6, -27, -29, -64 |
| **Electrical safety** | as per EN 61 010-1-3 |
| **Protection class** | III, as per EN 61 040-3 |
| **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: 6.320.0XX<br>Ethernet cable: 6.303.0XX |

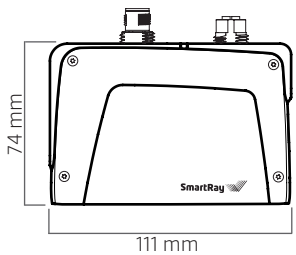
1 Typical values can vary up to 5% due to optical tolerances
2 Scan rate & point rate are dependent on the configured field of view, measurement range and exposure time. A ‚scan' by definition considers maximum points/3D profile i.e. full FOV. The typical scan/point rate range has been estimated considering an exposure time of 1 µsec, min-max MR and full FOV. The typical scan rate can be further boosted by windowing the FOV

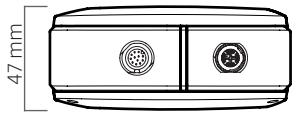
**ECCO 95.010**

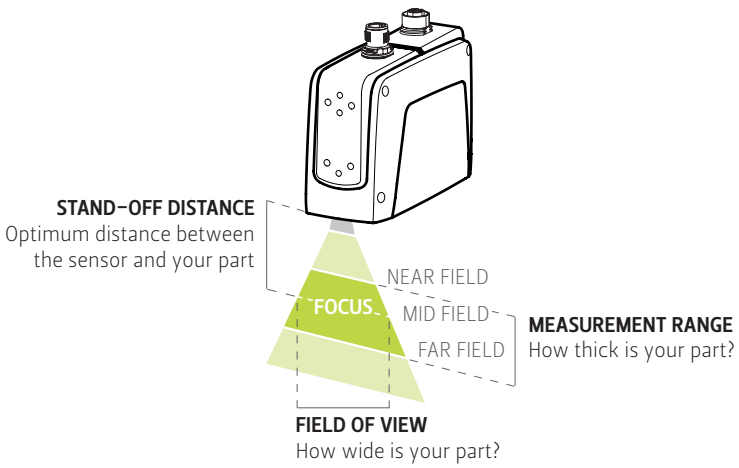



**ECCO 95.040 | ECCO 95.100**

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