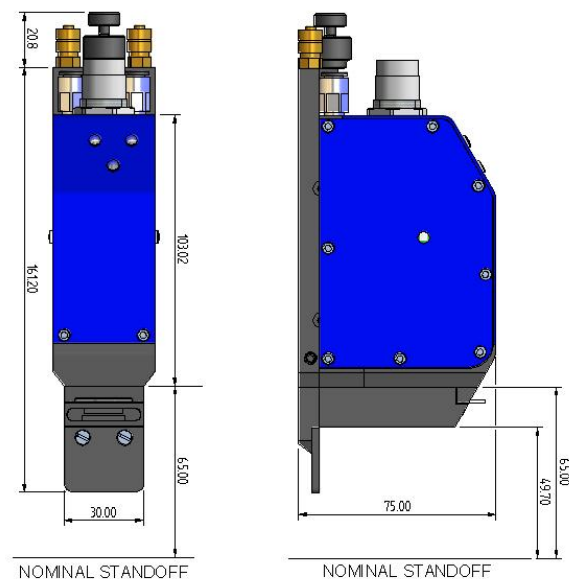


Smart Laser Sensor SLS-050

Preliminary Technical Information

Meta's SLS-050 is a new generation laser sensor for all types of mechanised, automated and robotic welding applications.

The sensor uses the well established triangulation principle to generate 3D profiles of the weld area, which are then analysed in the sensor head.



The unique feature of Meta's new Smart Laser Sensor family is that it integrates high quality full frame image processing within the sensor head itself.

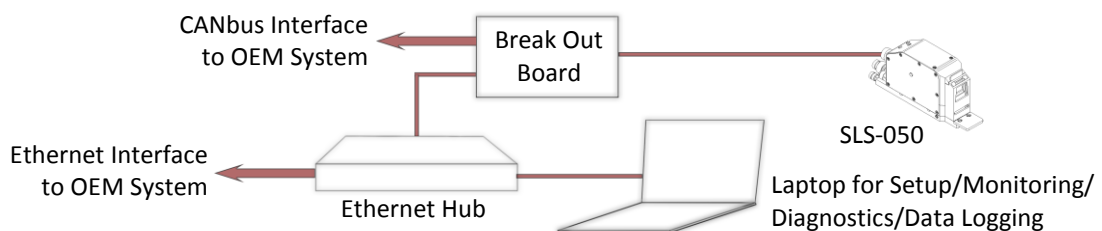
The sensor communicates with other equipment in the welding cell via a breakout board which provides a laser safety interface together with power supplies and protection.

CANbus and Ethernet interfaces are available directly from the breakout board.

Smart Laser Sensor Integration

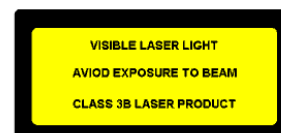
Setup, monitoring, diagnostics and data logging for the Smart Laser Sensor are all available on a laptop computer connected via the Ethernet interface.

OEMs can integrate the Smart Laser Sensor into their system using either the CANbus or Ethernet interface. When using the Ethernet interface, a hub is used to connect the sensor, OEM system and any local laptop.



Preliminary Specifications SLS-050

Sensor	SLS-050
Field of View	50 mm
Depth of Field	80 mm
Nominal Standoff Distance	65 mm
Horizontal Pixel Resolution	0.05 mm
Vertical Pixel Resolution	0.08 mm (at nominal standoff)
Tracking Position Measurement Accuracy:	
Horizontal	±0.1 mm
Vertical	±0.1 mm
Sensor Width	39mm
Sensor Height	118mm (excluding connectors)
Sensor Depth	67mm (75mm including mounting plate)
Body Surface Finish	Anodised
Sensor Weight (complete with bracket)	650g (excluding cable and services)
Physical Mounting Design	Quick release dovetail mount
Sensor Cooling	gas or chilled air Additional water cooling also possible
Operating Temperature Range	0-50 °C
Camera:	
Frame Rate	30 fps (full frame)
Image Sensor Technology	CMOS
Windowing	Yes
Laser:	
Power	30mW
Structure	Single Stripe
Wavelength	685 nm
Safety Class	3B (IEC60825-2001)
Electrical Interfaces:	Ethernet (100BaseT) – UDP/IP CANbus
Power Supply	24V (18-45 Input range,) 1.5A
Max Cable Length	50m to break-out board



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