

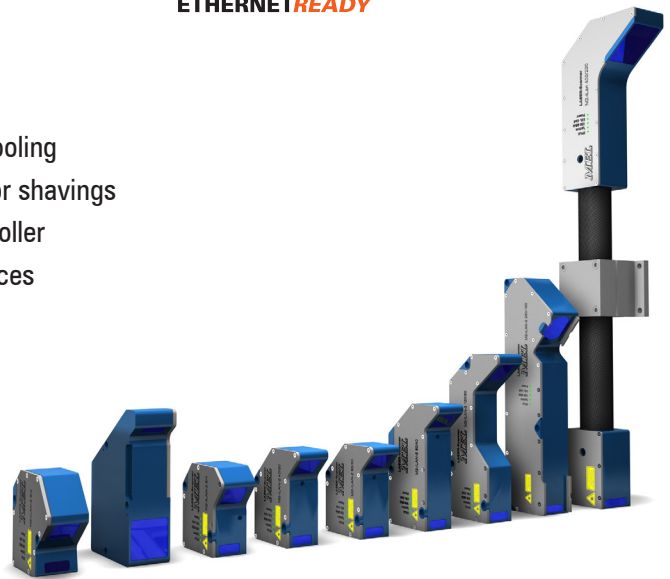
# Laser Scanner for profile recognition

## M2-iLAN-2



### Special features

- » Very precise resolution up to 0,003 mm
- » In use at up to 400 °C ambient temperature with water cooling
- » Protection by a changeable shield against weld spillings or shavings
- » Integrated electronic system without any additional controller
- » Precise measuring results even on high-gloss metal surfaces
- » Reliable at changing colours and surfaces
- » Robust measurement even in scattered light
- » Encoder input at scanner head
- » Ethernet TCP/IP 10/100 Mbit and integrated Web-Server
- » External trigger (by software or hardware)
- » Data output directly in x / z - coordinates



*Weld-seam tracking with position control*



*Gap measurement*



*Geometric control of tubes and pipes*

### Characteristic applications

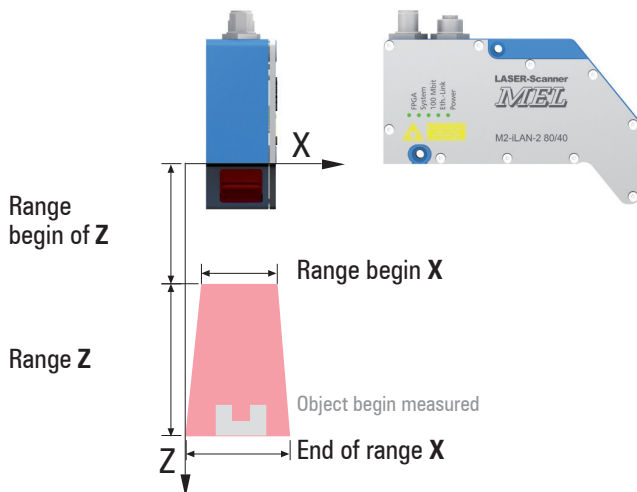
- » Secure capturing of different profiles
- » Weld-seam tracking with position control
- » Weld-seam control
- » Controlling of tube and pipe welding plants
- » Gap measurement
- » Rail measurement
- » Surveillance of pick-and-place machinery
- » Surveillance of adhesive beadings
- » Edge pursuit and strip position surveillance
- » Surface-aquisition in ceramic production
- » Controlling of concrete sleeper grinding plants
- » Inspection of nuclear reactor seals in atomic power plants
- » Controlling of ultrasonic transducers in pipeline building
- » Automatic inspection of gear drive assembly
- » Controlling of silicium grinding plants
- » Robot control: Bin picking with 3D capturing
- » 3D surface measurement
- » 3D parts recognition

	6/4	10/13 <sup>1)</sup>	20/10 <sup>1)</sup>	40/20 <sup>1)</sup>	60/30 <sup>1)</sup>	80/40 <sup>1)</sup>	120/60 <sup>1)</sup>	260/100 <sup>1)</sup>	400/200	600/300	800/400	1000/500
Range Z	6	10	20	40	60	80	120	260	400	600	800	1000
Range begin Z	38.6	65	55	50	53	63	84	150	325	500	650	845
Range begin X	4	13	10	20	30	40	60	100	200	300	400	500
End of range X	4.5	15	13	26	40	55	80	170	280	420	550	700
Resolution Z <sup>2)</sup>	0.003	0.01	0.02	0.02	0.035	0.045	0.06	0.13	0.2	0.6	0.8	1.0
Resolution X <sup>2)</sup>	0.008	0.025	0.02	0.04	0.07	0.09	0.14	0.29	0.83	1.24	1.64	2.07
Linearity [% of range]	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Scan rate [Hz]	100	100	100	100	100	100	100	100	100	100	100	100

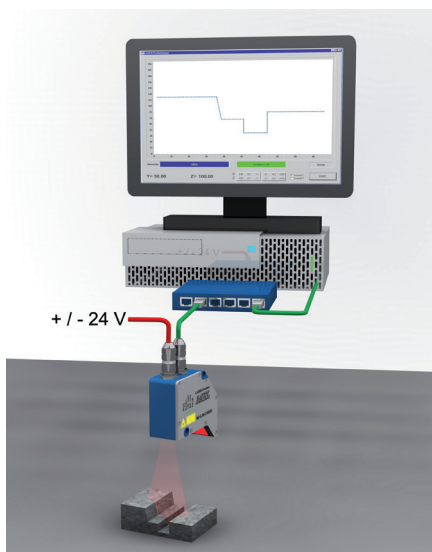
Unless otherwise stated, all values are given in mm

<sup>1)</sup> Available with protection shield and water cooling as well

<sup>2)</sup> Measurement on dull white diffuse reflecting surfaces



Description measuring range



System setup

## Composition and system description

In M2-iLAN-2 laser scanners a CCD camera, a line laser as well as the electronic for the data processing of the digital image data is already integrated in the sensor's head. The separate electronic device, which was required so far is obsolete now. Only a cable for the voltage supply and an Ethernet cable are still necessary to run the system.

Scanner models for welding applications can be equipped with a protection shield and a water cooling system and therefore are immune to dirt or overheating.

Due to a special construction of the guide bar, an attached protection shield is easily exchangeable (even by a robot).

## Software

In real time the measurement data is submitted to the analysing PC via the Ethernet interface and can be displayed and analysed by the software. During inline operation specific values can be kept under surveillance and needed correction signals can be send to the machine control.



An individual software solution for your measuring tasks