Proxitron
SENSORS MADE IN GERMANY

Laser-Distance Sensor
LMA 101A

- Measuring range up to 150 m
- Measuring frequency 20 Hz
- For objects up to +1350 °C
- Parameterization with RS 485 + Software
- Analog output 0/4 – 20 mA
- 3 switching outputs (can be parameterized)
- Alarm output
- Trigger input
- Modbus RTU
- Plug S12 (M12 x 1)
- G3/4“ thread for protection hose connection

Product Characteristics

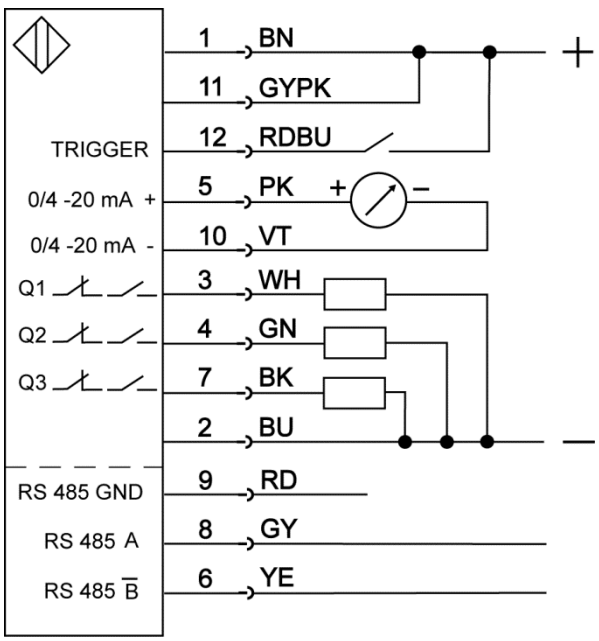
Type	**LMA 101A**
Art.-No.	**5200l**
Application	distance measuring on hot objects, positioning in furnaces, hot rolling, pressing, forging, heat treatment

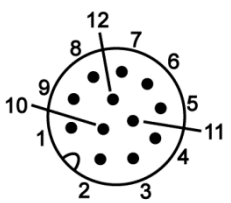
Technical Data

Measuring range (can be parameterized)	40 – 150 m (reflecting targets) 0,05 – 100 m (white surfaces) 0,05 – 50 m (natural surfaces e.g. on hot objects up to +1350°C)
Measurement accuracy[1]	+/- 3,0 mm (+/- 1,5 mm at 1 σ)
Repeatability[1]	+/- 0,8 mm (+/- 0,4 mm at 1 σ)
Measurement resolution	0,1 mm
Time for measured value output[1]	50 ms – 4 s
Measurement interval	50 ms – 24 h (can be parameterized)
Averaging	0 – 200 values (can be parameterized)
Trigger function	distance measurement with external triggering
Alarm function output 3	can be parameterized
Laser	red wavelength: 620-690 nm, laser class 2 with max power <1 mW complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019. [EN 60825-1:2014]
Laser life time typical	50000 h at 20 °C
Supply voltage	24 V DC
Ripple	max. 10 %
Current consumption	< 100 mA
Analog output	0/4 – 20 mA (16-bit resolution)
Load impedance	0 - 700 Ω
Digital communication	RS 485 MODBUS RTU (galvanically isolated)
Trigger input	24 V DC
Output 1 distance value	PNP normally open / normally closed (can be parameterized)
Output 2 distance value	PNP normally open / normally closed (can be parameterized)
Output 3 distance value or alarm	PNP normally open / normally closed (can be parameterized)
Continuous current	0 - 200 mA
Short-circuit protection	yes, pulsing
Voltage drop	< 2,5 V
Readiness delay	0,5 s
Ambient temperature	-10 … +40 °C
Protection class	IP 67
Housing material	stainless steel
Functional display	Duo-LED red/green
Status display	RGB-LED
Connection	plug S12 (M12 x 1) 12 pole with G3/4“ thread for protective hose

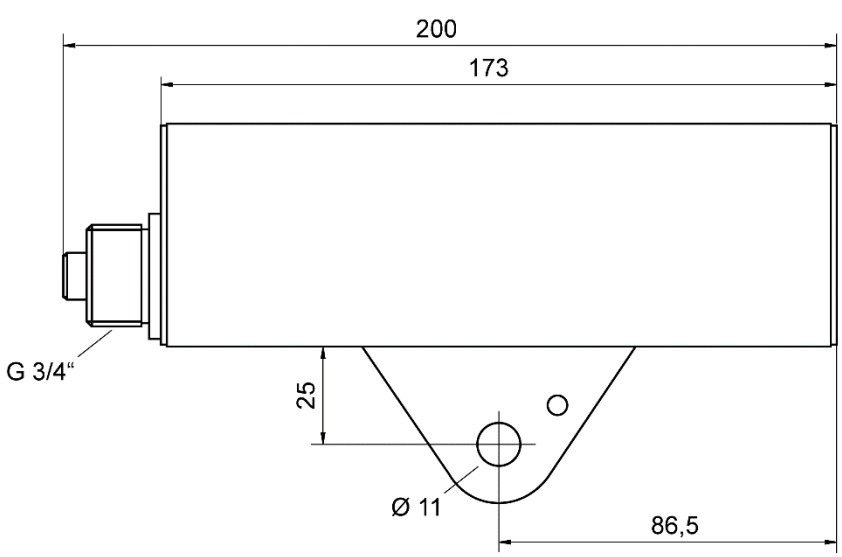
[1]depending on the reflectivity of the object, scattered light, measuring frequency and ambient conditions as well as distance.

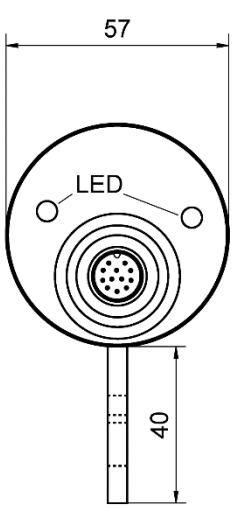
Connection





Dimension (mm)





Accessories (not in scope of supply)

	Type	Art.-No.
2 m connection cable with female straight plug S12, 8 wire shielded	ST S12-2S	9851J
5 m connection cable with female straight plug S12, 8 wire shielded	ST S12-5S	9851K
10 m connection cable with female straight plug S12, 8 wire shielded	ST S12-10S	9851L
Swivel stand	HM 2	9816B
Adapter for protection hose connection (suitable protection hoses available)	HG 2	9855B
Air purge attachment	OL 34	9828Q
Tube for Air purge attachment	OL 46	9829C
Interface converter RS485, female plug S4 (M12 x 1 A) 5-pole to USB (Power supply PPS 2 required to supply the sensor with power)	SIC 485U	9861B
Power supply 90-260 V AC, 24 V DC / 1 A (for SIC 485U)	PPS 2	9853B
Adapter S12 female plug to plug S4-pin (suitable for SIC 485U)	ST 041/4 S12-2	9851M
Interface converter RS485, plug Sub D 9-pole to USB (External power supply for sensor necessary)	SIC 485UD	9861E

Further Information

	Document
Manual	BDA_LMB101_D_E
Protection hoses	P46