Distance sensors

OM20-P0120.HH.TXN

Performance sensor

Article number: 11235101

Overview

- Automatic adjustment of exposure time for precise measurements on changing materials
- High immunity to ambient light for reliable measurements regardless of ambient conditions
- Point beam shape for a precise measurement
- Adjustable filters for particularly stable measurement results

Picture similar

Technical data

General data	
Type	Distance measuring
Measuring distance Sd	16 … 120 mm
Measuring range Mr	104 mm
Adjustment	Teach-in: button / RS485
Power on indication	LED green
Output indicator	LED yellow
Repeat accuracy	1 … 13 µm
Linearity error	± 0.1 % Mr , 16 ... 70 mm ± 0.16 % Mr , 16 ... 120 mm
Beam type	Point
Temperature drift	0,04 % Sde/K
Light Source	
Light source	Pulsed red laser diode
Wave length	660 nm
Laser class	1
Maximum pulse power	2 mW
Pulse duration	0.001 ... 0.5 ms
Pulse period	0.2 ... 3.4 ms
Electrical data	
Response delay	0.4 ms
Measuring frequency	5000 Hz
Voltage supply range +Vs	12 … 28 VDC
Current consumption max. (no load)	50 mA
Output circuit	RS485

Electrical data	
Short circuit protection	Yes
Reverse polarity protection	Yes, Vs to GND
Communication interface	
Interface	RS485
Baud rate	57600, adjustable
Protocol	Modbus RTU
Mechanical data	
Width / diameter	13 mm
Height / length	37 mm
Depth	34.5 mm
Type	Rectangular, front view
Housing material	Die-cast zinc
Front (optics)	Glass
Connection types	Connector M8 4 pin
Weight	41 g
Ambient conditions	
Ambient light immunity	< 100 kLux
Protection class	IP 67
Operating temperature	-10 … +50 °C
Storage temperature	-20 … +60 °C
Vibration (sinusoidal)	IEC 60068-2-6:2008 1 mm p-p at f = 10 - 55 Hz, duration 5 min per axis 30 min endurance at f = 55 Hz per axis
Shock (semi-sinusoidal)	IEC 60068-2-27:2009 30 g / 11 ms, 6 jolts per axis and direction

OM20-P0120.HH.TXN

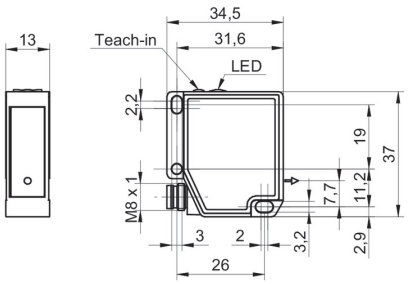
Performance sensor

Article number: 11235101

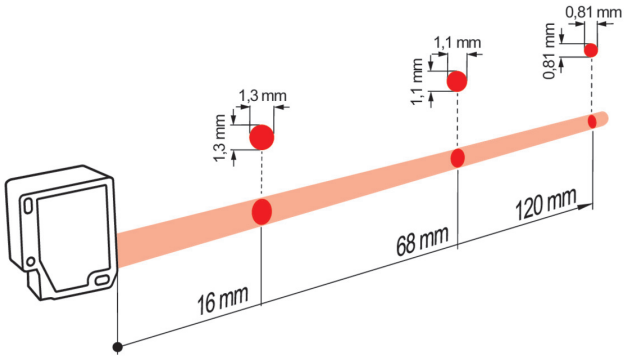
Remarks

- Measurement with Baumer standardized measuring equipment and targets (Measurement on 90% remission (white)). Values of Resolution, linearity error and repeat accuracy apply to a measurement with filter setting (Median: 9, Average: 128).

Dimension drawing



Beam characteristic (typically)

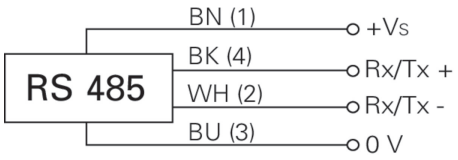


Laser warning

CLASS 1 LASER PRODUCT

IEC 60825-1/2014
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

Connection diagram



Pin assignment