Distance sensors

OM20-P0120.HH.YUN

Performance sensor

Article number: 11231077

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 / IO-Link
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	Analog and digital
Output signal	0 … 10 VDC / 0 … 5 VDC
Load resistance	> 100 kOhm
Output current	< 100 mA
Short circuit protection	Yes
Reverse polarity protection	Yes, Vs to GND

Communication interface	
IO-Link	Yes
Interface	IO-Link V1.1
Baud rate	230,4 kBaud (COM 3)
Cycle time	≥ 1 ms
Process data length	48 Bit
Process data structure	Smart Sensor Profile - DMS PDI48.INT32_INT8 Bit 0 = SSC1 (distance) Bit 2 = quality Bit 3 = alarm Bit 8-15 = scale factor Bit 16-47 = 32 Bit measurement
IO-Link port type	Class A
Mechanical data	
Width / diameter	34,5 mm
Height / length	37 mm
Depth	13 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
Operating temperature	-10 … +50 °C
Protection class	IP 67
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

2021-07-29 EN/20170206 Design and specifications subject to change without notice

OM20-P0120.HH.YUN

Performance sensor

Article number: 11231077

Technical data

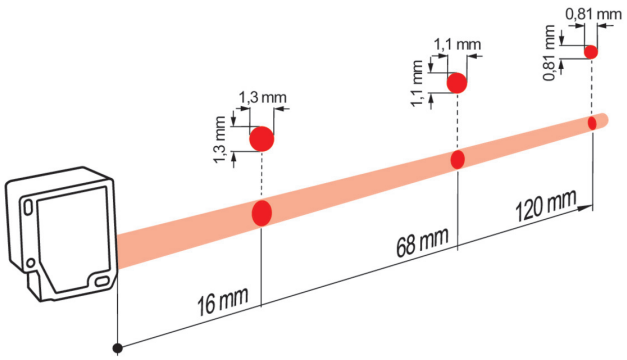
Ambient conditions

Shock (semi-sinusoidal)	IEC 60068-2-27:2009 30 g / 11 ms, 6 jolts per axis and direction

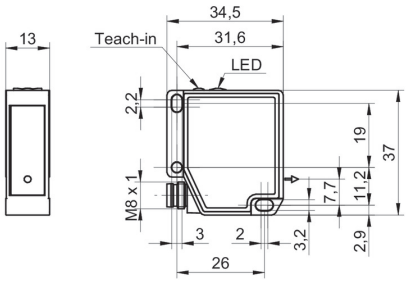
Remarks

- 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).

Beam characteristic (typically)



Dimension drawing

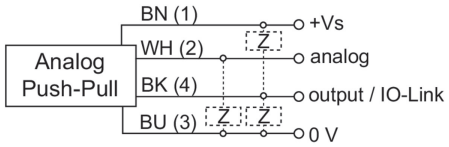


Laser warning

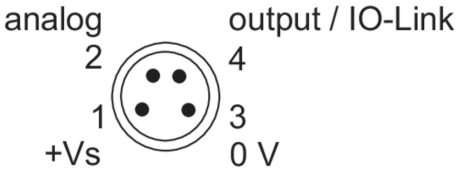
CLASS 1 LASER PRODUCT

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



2021-07-29 EN/20170206 Design and specifications subject to change without notice