

Retro-Reflex Sensor Universal

OLD104C0003

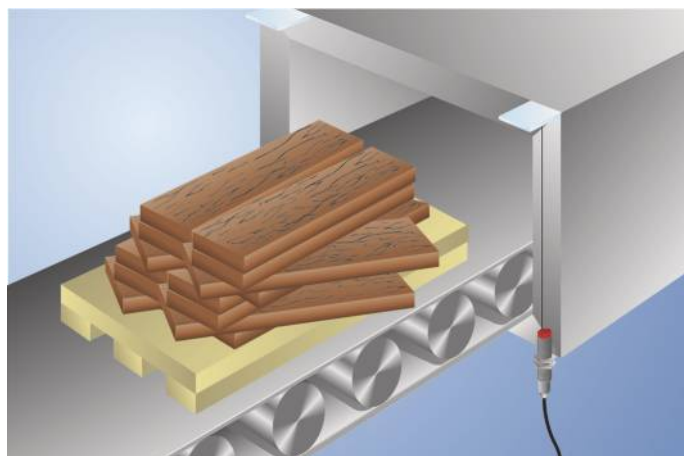
LASER

Part Number



- Smallest recognizable part: 0,1 mm
- Special coated optics
- Stainless steel housing

A reflector must be used in combination with these sensors. They can be installed in all kinds of industrial environments thanks to ample functional reserve. Even reflective objects can be reliably recognized through the use of polarized light.



Technical Data

Optical Data	
Range	10000 mm
Reference Reflector/Reflector Foil	RQ100BA
Smallest Recognizable Part	100 μ m
Switching Hysteresis	> 15 %
Light Source	Laser (red)
Wavelength	655 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Opening Angle	1 °
Beam Divergence	< 15 mrad
Light Spot Diameter	see Table 1
Focus Distance	350 mm
Two-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	500 Hz
Response Time	1 ms
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	1120739-000
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Stainless Steel
Coated Optics	yes
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Contamination Output	●
PNP NO/NC switchable	●
Connection Diagram No.	105
Control Panel No.	D5
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150

Complementary Products

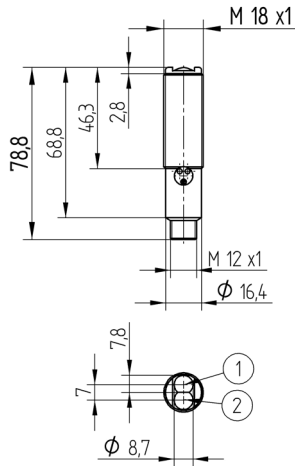
Dust Extraction Tube STAUBTUBUS-01
PNP-NPN Converter BG2V1P-N-2M
Reflector, Reflector Foil

Ctrl. Panel

D5



01 = Switching Status Indicator
02 = Contamination Warning
05 = Switching Distance Adjuster
08 = NO/NC Switch

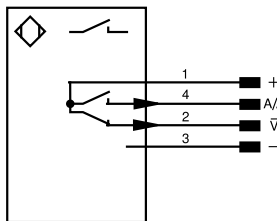


1 = Receiver Diode
2 = Transmitter Diode

All dimensions in mm (1 mm = 0.03937 Inch)



105



Legend

+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ū	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/Ā (TTL)		

Table 1

Working Distance	0,2 m	5 m	10 m
Light Spot Diameter	2 mm	42,5 mm	85 mm

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,65...10 m	RR25KP	0,4...2 m
RE18040BA	0,65...6,5 m	RR21_M	0,5...2,3 m
RQ84BA	0,8...8,5 m	ZRAE02B01	0,8...4 m
RR84BA	0,7...9 m	ZRME01B01	0,5...1,5 m
RE9538BA	0,65...3,3 m	ZRME03B01	0,5...3,5 m
RE6151BM	0,55...8 m	ZRMR02K01	0,55...1,5 m
RE6151BH	0,6...3,2 m	ZRMS02_01	0,85...2 m
RR50_A	0,8...6,5 m	RF505	0,7...1,3 m
RE6040BA	0,65...9 m	RF255	0,7...1,3 m
RE8222BA	0,75...4,5 m	RF508	0,55...1 m
RR34_M	0,65...4 m	RF258	0,55...1,5 m
RE3220BM	0,65...2,5 m	ZRAF07K01	0,7...1,3 m
RE6210BM	0,65...2,3 m	ZRAF08K01	0,7...1,3 m
RR25_M	0,5...3 m	ZRDF_K01	0,6...5 m

