Retro-Reflex Sensor

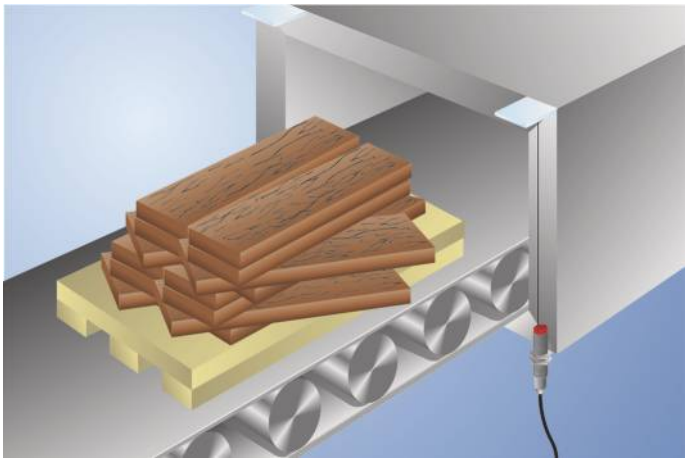
XD100NA3 LASER

Part Number



- **Range: 14 m**
- **Smallest recognizable part: 0,1 mm**
- **Stainless steel housing**
- **Switching frequency: 3 kHz**

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.



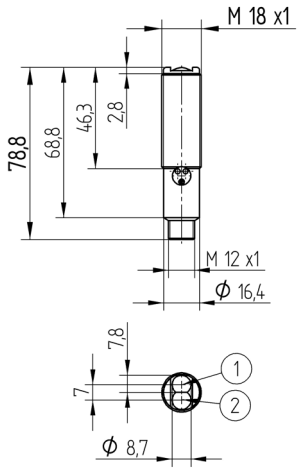
Technical Data

Optical Data	
Range	14000 mm
Reference Reflector/Reflex Foil	RQ100BA
Smallest Recognizable Part	100 µm
Switching Hysteresis	< 15 %
Light Source	Laser (red)
Wave Length	655 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Opening Angle	1 °
Beam Divergence	< 15 mrad
Spot Diameter	see Table 1
Focus Distance	350 mm
Two-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	3 kHz
Response Time	167 µs
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
NPN Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	0820386-000
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
NPN NO/NC antivalent	●
Connection Diagram No.	301
Control Panel No.	D6
Suitable Connection Technology No.	2
Suitable Mounting Technology No.	150

Complementary Products

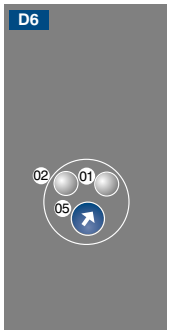
Dust extraction tube STAUBTUBUS-01

Reflector, Reflex Foil

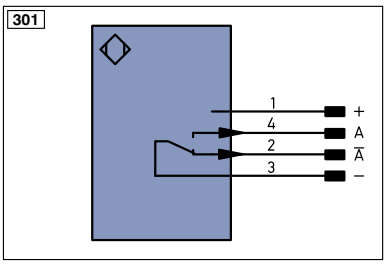


1 = Receiver Diode
2 = Transmitter Diode
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



01 = Switching Status Indicator
02 = Contamination Warning
05 = Switching Distance Adjuster



Legend

+	Supply Voltage +
–	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0 RS422	Encoder 0-pulse 0-0̄ (TTL)
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
O	Analog Output
O–	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/–	Ethernet Receive Path
Tx+/–	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(–)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring
ENA RS422	Encoder A/Ā (TTL)
ENB RS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance

Wire Colors according to DIN IEC 757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

Table 1

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

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,6...14 m	RR25_M	0,4...4,5 m
RE18040BA	0,6...9,5 m	RR25KP	0,3...2,5 m
RQ84BA	0,75...11 m	RR21_M	0,4...3 m
RR84BA	0,55...14 m	ZRAE02B01	0,7...4,5 m
RE9538BA	0,55...5 m	ZRME01B01	0,5...1,8 m
RE6151BM	0,35...10 m	ZRME03B01	0,5...5 m
RR50_A	0,65...9 m	ZRMR02K01	0,5...2 m
RE6040BA	0,5...11 m	ZRMS02_01	0,6...2,8 m
RE8222BA	0,7...5,5 m	RF508	0,4...1,1 m
RR34_M	0,6...5,5 m	RF258	0,4...1,6 m
RE3220BM	0,55...3,5 m	ZRDF__K01	0,4...7 m
RE6210BM	0,45...3,5 m		

Specifications are subject to change without notice