

Retro-Reflex Sensor

Universal

OLDK503A0091

Part Number



- Clever inclusive mounting technology
- Glossy objects can be detected
- Minimal installation space
- Simple installation
- Switching distance adjuster

Technical Data

Optical Data

Range	5000 mm
Reference Reflector/Reflector Foil	RQ100BA
Switching Hysteresis	< 15 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	5 °
Light Spot Diameter	see Table
Two-Lens Optic	yes

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	700 Hz
Response Time	714 μs
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Residual Current Switching Output	< 50 μA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III

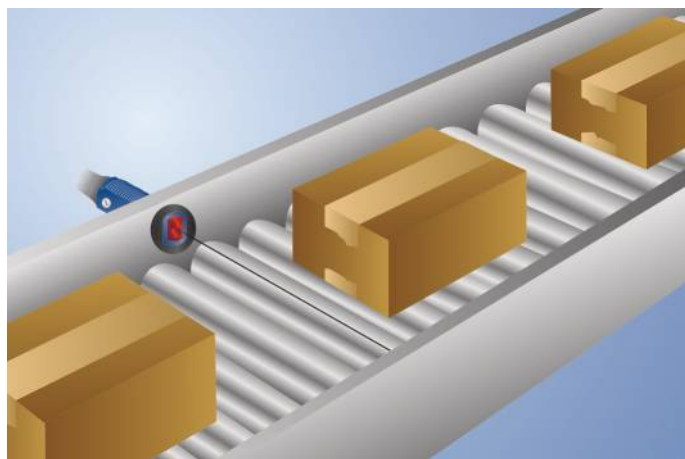
Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic
Degree of Protection	IP67
Connection	Cable, 4-wire, 2 m

Safety-relevant Data

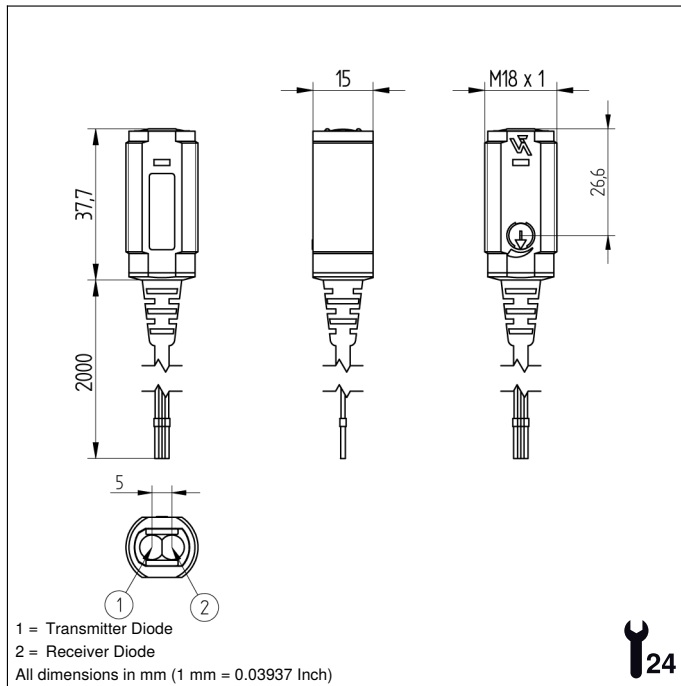
MTTFd (EN ISO 13849-1)	2165,94 a
Scope of delivery	Mounting Console
PNP NO/NC antivalent	●
Connection Diagram No.	201
Control Panel No.	DK1
Suitable Mounting Technology No.	150

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.



Complementary Products

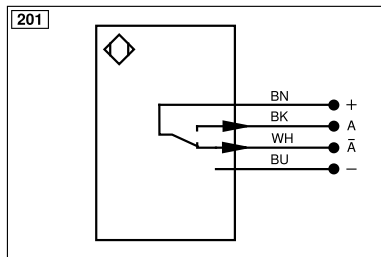
Dust Extraction Tube STAUBTUBUS-01
Reflector, Reflector Foil



Ctrl. Panel



05 = Switching Distance Adjuster
30 = Switching Status/Contamination Warning
68 = supply voltage indicator



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ů	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
Ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
		ENBRs422	Encoder B/B̄ (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		Ack	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		OLT	Brightness output
		M	Maintenance
		rsv	Reserved
		Wire Colors according to DIN IEC 60757	
		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	0,5 m	5 m
Light Spot Diameter	17 mm	35 mm	330 mm

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,01...5 m	ZRAE02B01	0,01...2,2 m
RE18040BA	0,01...4,5 m	ZRDS01R01	0,05...0,8 m
RQ84BA	0,01...4,5 m	ZRME01B01	0,01...0,5 m
RR84BA	0,01...4,5 m	ZRME03B01	0,01...2,5 m
RE9538BA	0,01...2,2 m	ZRMR02K01	0,01...0,7 m
RE6151BM	0,01...4,3 m	ZRMS02_01	0,01...1 m
RR50_A	0,01...3,5 m	RF505	0,05...1,5 m
RE6040BA	0,01...4 m	RF255	0,05...1,1 m
RE8222BA	0,01...2,6 m	RF508	0,05...1,5 m
RR34_M	0,01...2,5 m	RF258	0,05...1,1 m
RE3220BM	0,01...1,5 m	RF4050	0,05...1 m
RE6210BM	0,01...1 m	ZRAF07K01	0,05...1,1 m
RR25_M	0,01...1,3 m	ZRAF08K01	0,05...1,5 m
RR25KP	0,04...0,8 m	ZRDF03K01	0,04...3,4 m
RR21_M	0,01...1,1 m	ZRDF10K01	0,04...4,5 m

