

Retro-Reflex Sensor for Roller Conveyor Systems

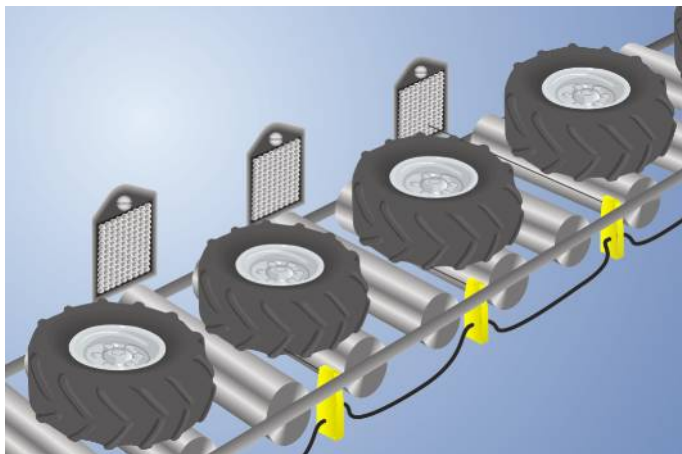
OPT247

Part Number



- Fully encapsulated
- Integrated logic
- Large working range
- Recognition of high-gloss and jet black objects

These sensors have been specially designed for use in accumulation roller conveyors. Their compact design allows for installation between rollers below the transport level. They are thus protected against mechanical damage.



Technical Data

Optical Data	
Range	6500 mm
Reference Reflector/Reflector Foil	RQ100BA
Min. Distance to Reflector	100 mm
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 °
Two-Lens Optic	yes

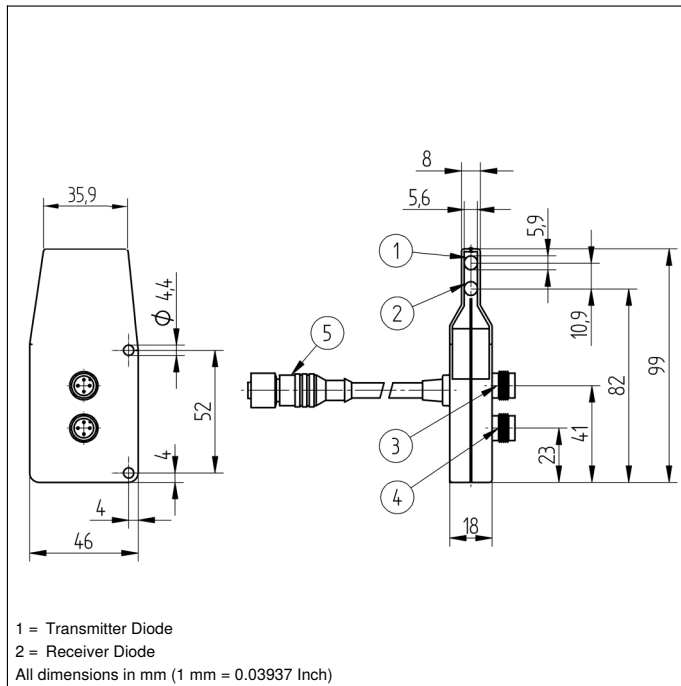
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption Sensor (U _b = 24 V)	< 30 mA
Switching Frequency	100 Hz
Response Time	5 ms
Temperature Drift	< 10 %
Temperature Range	-15...50 °C
Number of Switching Outputs	1
Switching Output Voltage Drop	< 0,8 V
PNP Switching Output/Switching Current	200 mA
Valve or Motor Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	yes
Single Discharge	yes
Block Forwarding	yes
Output Magnetic Valve/Engine	yes
Protection Class	III

Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP54
Connection	M12 × 1; 4-pin
Cable Length	88 cm

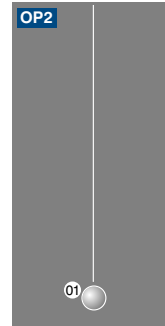
PNP NO	●
Connection Diagram No.	724
Control Panel No.	OP2
Suitable Connection Equipment No.	2 2s
Suitable Mounting Technology No.	420

Complementary Products

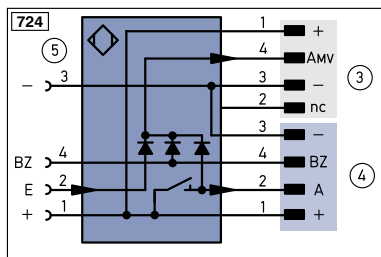
Adapter OPT70N, OPT70S, OPT70P
Reflector, Reflector Foil



Ctrl. Panel



01 = Switching Status Indicator



Legend

+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
Ṽ	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...SAZ	Encoder 0-pulse 0-0 (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W-	Ground for the 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
SY-	Ground for the 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	Contactur Monitoring

ENARSAZ	Encoder A/Ā (TTL)
ENBPSAZ	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
rsv	reserved
Wire Colors according to 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

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,25...6,5 m	ZRAE02B01	0,2...1,8 m
RE18040BA	0,1...4 m	ZRME03B01	0,15...2 m
RQ84BA	0,25...5 m	RF505	0,15...1,9 m
RR84BA	0,2...5 m	RF508	0,15...1,9 m
RE9538BA	0,15...2 m	RF258	0,15...1,5 m
RR50_A	0,15...3 m	ZRDF03K01	0,1...3,5 m
RE6040BR	0,2...2,5 m	ZRDF10K01	0,1...4,5 m
RE8222BA	0,25...1,8 m		

