

Retro-Reflex Sensor for Roller Conveyor Systems

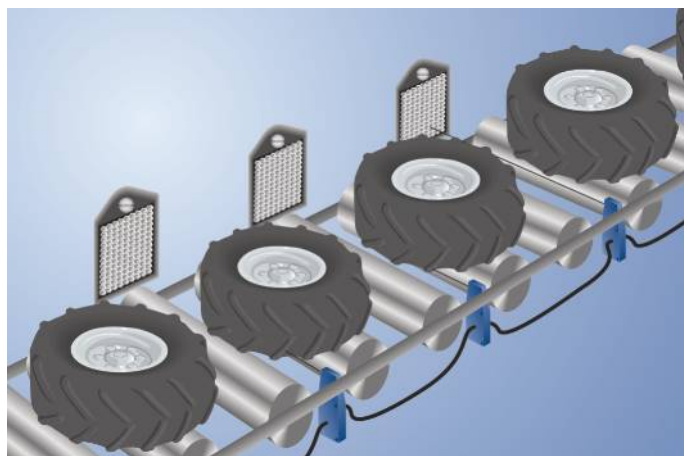
OPT162-P06

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)	< 25 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
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	yes
Block Forwarding	yes
Valve Control	yes
Protection Class	III

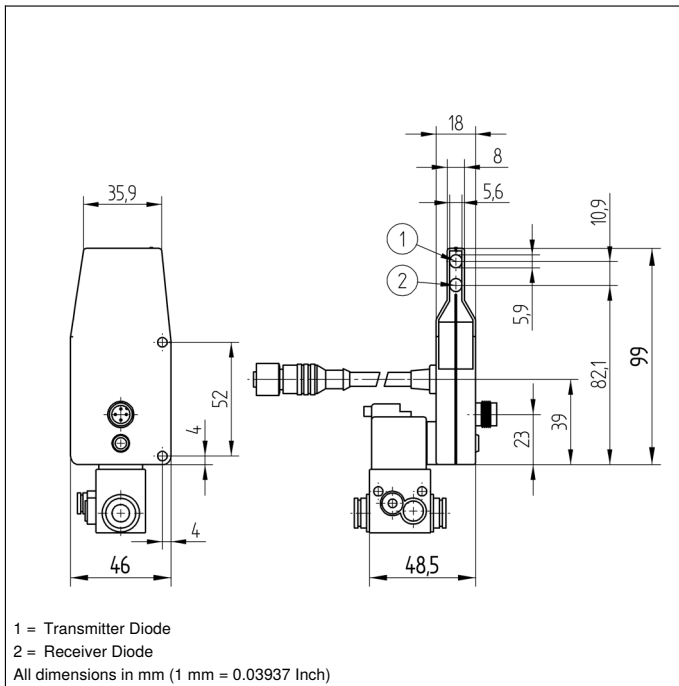
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
Cable Length	150 cm

Pneumatic Solenoid Valve Unit	
Valve no.	K04
Supply Voltage Valve	19,2...28,8 V
Current Consumption Valve	86 mA
Operating Pressure	4...7 bar
Nominal Width	0,8 mm
Nominal flow rate 1 -> 2	20 NL/min
Nominal flow rate 2 -> 3	100 NL/min
Supply-Line Connector Pipe	2 × 8 × 1
Working-Line Connector Pipe	4 × 1
Valve function	3/2-Way
Switching function	NC

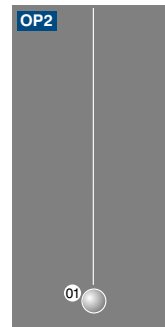
PNP NO	●
Connection Diagram No.	716
Control Panel No.	OP2
Suitable Connection Equipment No.	2 2s
Suitable Mounting Technology No.	420

Complementary Products

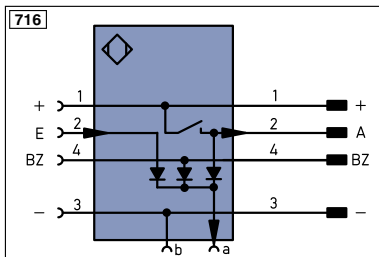
Adapter OPT70N, OPT70S, OPT70P
Reflector, Reflector Foil



Ctrl. Panel



01 = Switching Status Indicator



Legend		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN ^A RS422	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN ^B RS422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN ^A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN ^B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A _{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A _{MAX}	Digital output MAX
Ṽ	Contamination/Error Output (NC)	O	Analog Output	A _{OK}	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY _{in}	Synchronization In
T	Teach Input	BZ	Block Discharge	SY _{OUT}	Synchronization OUT
Z	Time Delay (activation)	A _{WV}	Valve Output	O _{LT}	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
RxD	Interface Receive Path	b	Valve Control Output 0 V	r _{SV}	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to DIN IEC 757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	±	Grounding	OG	Orange
	IO-Link	S _n R	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/-	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Signal	Signal Output	L _a	Emitted Light disengageable	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN ⁰ RS422	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactur Monitoring	GNVE	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
RR84BA	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		

