

Retro-Reflex Sensor

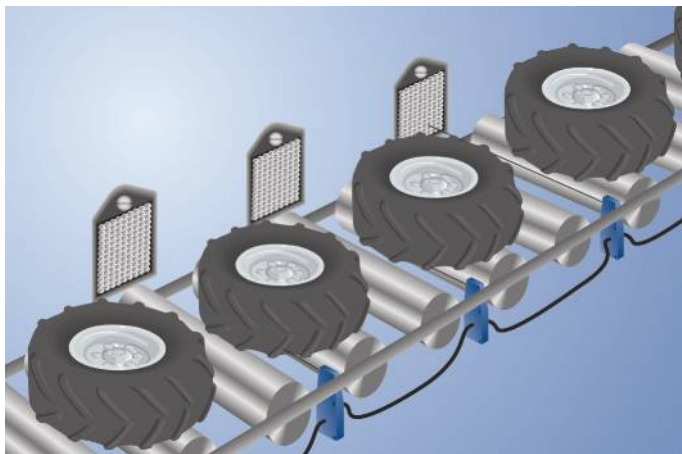
OPT1600

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 two rollers below the conveyor 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
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	yes
Single Discharge	yes
Block Forwarding	yes
Solenoid Valve	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	2 m

Pneumatic Solenoid Valve Unit

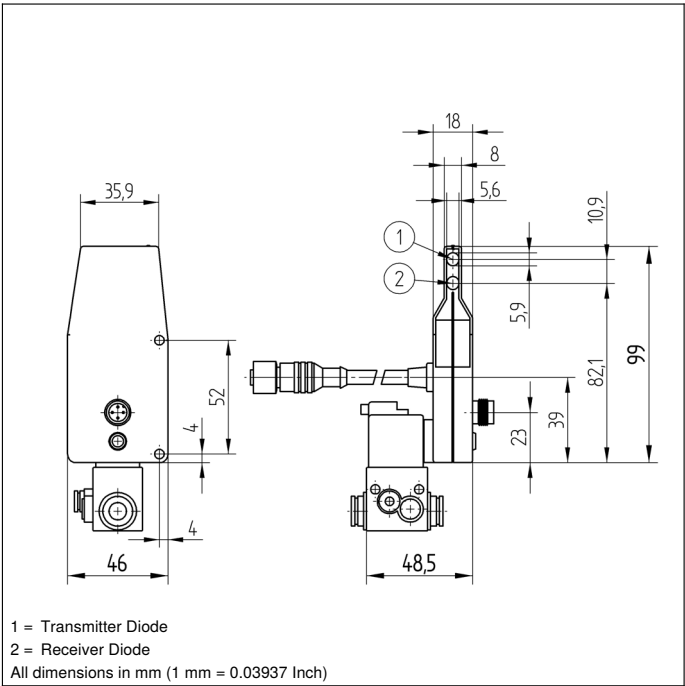
Valve no.	K04
Supply Voltage Valve	19,2...28,8 V
Current Consumption Valve	86 mA
Operating Pressure	4...7 bar
Nominal Width	0,8 mm
Nominal flow rate 1 -> 2	20 NL/min
Nominal flow rate 2 -> 3	100 NL/min
Supply-Line Connector Pipe	2× 8×1
Working-Line Connector Pipe	4×1
Valve function	3/2-Way
Switching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

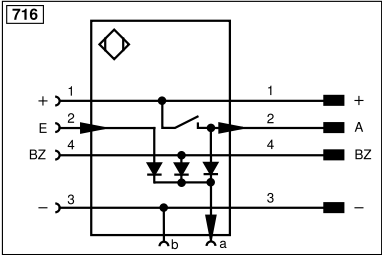


Ctrl. Panel

OP2



01 = Switching Status 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	Contactor 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
		AOK	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

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		

