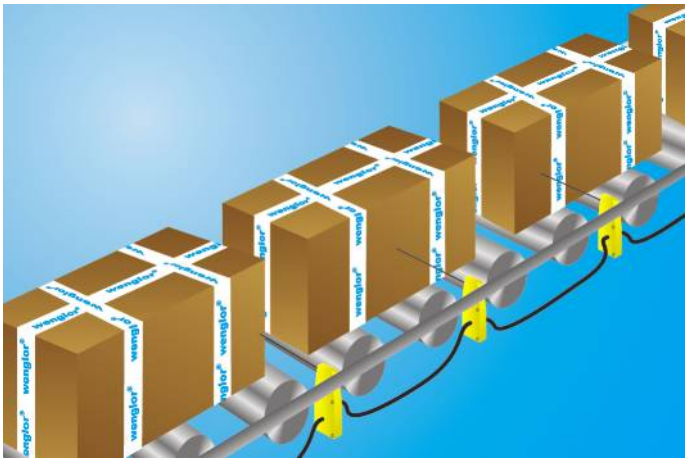
Reflex Sensor
for Roller Conveyor Systems

OPT107-P05
Part Number

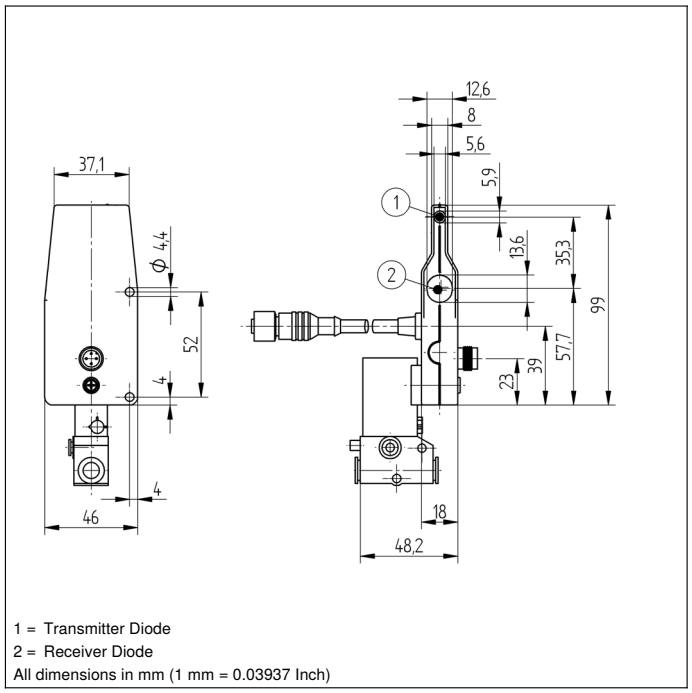
- **Electronic background suppression**
- **Fully encapsulated**
- **Integrated logic**
- **Scaled switching distance adjuster**

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.

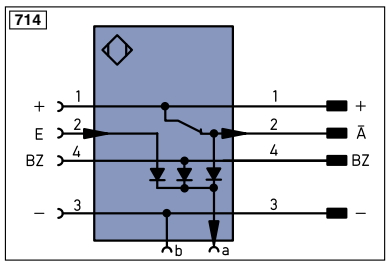


Technical Data

Optical Data	
Range	550 mm
Potentiometer min	220...270 mm
Potentiometer center	320...400 mm
Potentiometer max	550...630 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Wave Length	880 nm
Service Life (T = +25 °C)	100000 h
Risk Group (EN 62471)	1
Max. Ambient Light	10000 Lux
Opening Angle	5 °
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption Sensor (Ub = 24 V)	< 30 mA
Switching Frequency	100 Hz
Response Time	5 ms
Temperature Drift	< 10 %
Temperature Range	-15...50 °C
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 Discharge	yes
Valve Control	yes
Protection Class	III
Mechanical Data	
Adjustment	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
Cable Length	125 cm
Pneumatic Solenoid Valve Unit	
Valve no.	K03
Supply Voltage Valve	21,6...26,4 V
Current Consumption Valve	42 mA
Operating Pressure	0...8 bar
Nominal Width	0,9 mm
Nominal flow rate 1 -> 2	22 NL/min
Nominal flow rate 2 -> 3	25 NL/min
Supply line connector pipe	2× 8×1
Working line connector pipe	4×1
Valve function	3/2-Way
Switching function	NO
PNP NC	●
Connection Diagram No.	714
Control Panel No.	OP1
Suitable Connection Technology No.	2 | 2s
Suitable Mounting Technology No.	420



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



Legend

+	Supply Voltage +	nc	not connected
–	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	O	Analog Output
V	Contamination/Error Output (NO)	O–	Ground for the Analog Output
V̄	Contamination/Error Output (NC)	BZ	Block Discharge
E	Input (analog or digital)	AMV	Valve Output
T	Teach Input	a	Valve Control Output +
Z	Time Delay (activation)	b	Valve Control Output 0 V
S	Shielding	SY	Synchronization
RxD	Interface Receive Path	E+	Receiver-Line
TxD	Interface Send Path	S+	Emitter-Line
RDY	Ready	⏚	Grounding
GND	Ground	SnR	Switching Distance Reduction
CL	Clock	Rx+/–	Ethernet Receive Path
E/A	Output/Input programmable	Tx+/–	Ethernet Send Path
	IO-Link	Bus	Interfaces-Bus A(+)/B(–)
PoE	Power over Ethernet	La	Emitted Light disengageable
IN	Safety Input	Mag	Magnet activation
OSSD	Safety Output	RES	Input confirmation
Signal	Signal Output	EDM	Contactor Monitoring

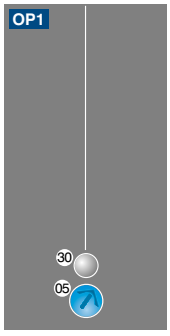
Wire Colors according to DIN IEC 757

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

Complementary Products

Adapter OPT70N, OPT70S, OPT70P

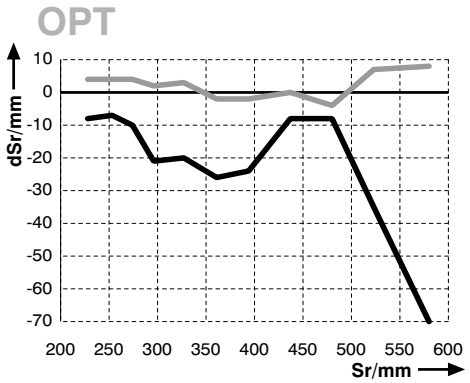
Ctrl. Panel



05 = Switching Distance Adjuster
30 = Switching Status/Contamination Warning

Switching Distance Deviation

Typical characteristic curve based on Kodak white (90 % remission)



Pot. = Potentiometer Setting
dSr = Switching Distance Change
black 6 % remission
grey 18 % remission