

Reflex Sensor for Roller Conveyor Systems

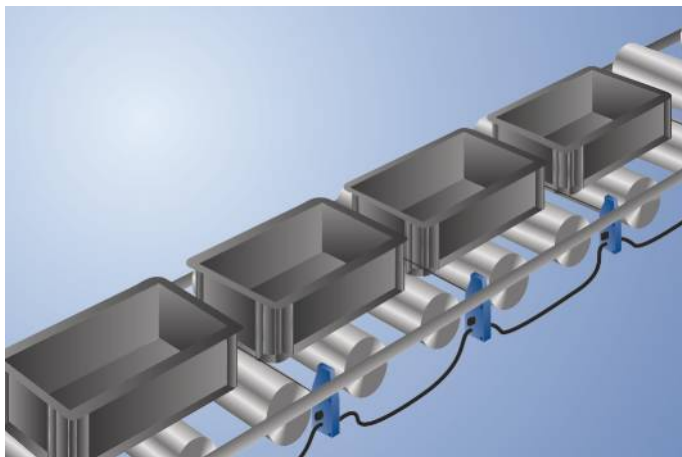
OPT1540

Part Number



- Energy savings thanks to EcoMode
- Increased capacity thanks to intelligent functions
- Optimized performance
- Time-saving initial start-up with fast-clip mounting system and quick wiring
- Wireless settings via NFC

These sensors have been specially designed for use in accumulation roller conveyors. Their compact design allows for installation between rollers below the transport level. High-precision background suppression makes it possible to reliably detect even black objects at up to 900 mm. Settings are entered via wireless NFC, which is even possible in the de-energized state. Thanks to the innovative fast-clip mounting system and quick wiring, the sensors are installed and ready for use in no time flat.



Technical Data

Optical Data	
Range	900 mm
Switching Hysteresis	< 5 %
Light Source	Infrared Light
Wavelength	860 nm
Service Life (T = +25 °C)	100000 h
Risk Group (EN 62471)	1
Max. Ambient Light	90000 Lux
Opening Angle	3 °

Electrical Data	
Supply Voltage	20,6...30 V DC
Current Consumption Sensor (U _b = 24 V)	< 16 mA
EcoMode	yes
Switching Frequency	100 Hz
Response Time	5 ms
Temperature Drift	< 5 %
Temperature Range	-40...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 0,9 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
Automatic Roller Shutdown	yes
Protection Class	III

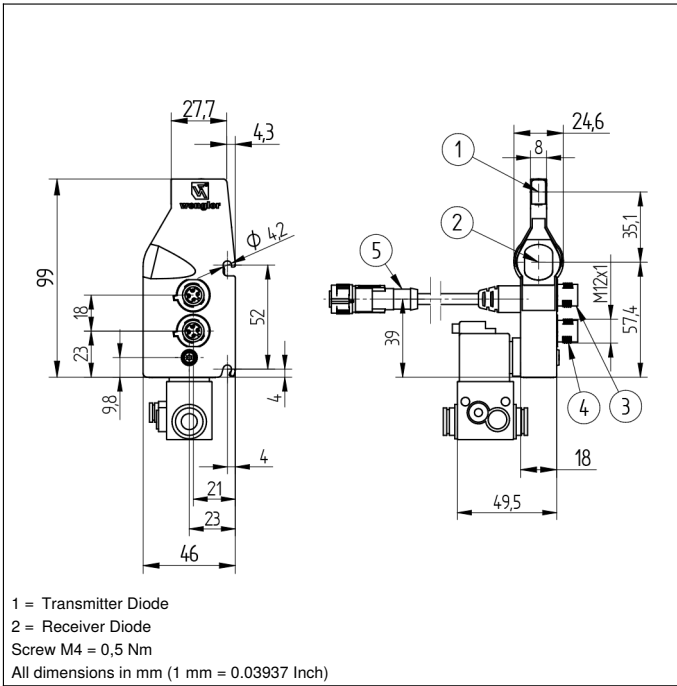
Mechanical Data	
Setting Method	NFC
Housing Material	Plastic
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
Cable Length	100 cm

Pneumatic Solenoid Valve Unit	
Valve no.	K04
Supply Voltage Valve	19,2...28,8 V
Current Consumption Valve	86 mA
Valve temperature range	-15...50 °C
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/NC switchable	●
NFC Receiver Category 3	●
Connection Diagram No.	146
Control Panel No.	OP3
Suitable Connection Equipment No.	2 2s
Suitable Mounting Technology No.	421

Complementary Products

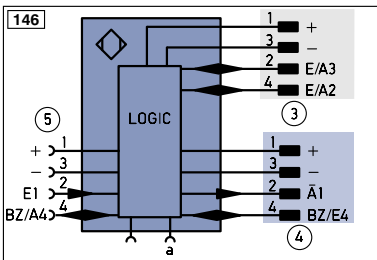
Adapter OPT70N, OPT70S, OPT70P	
Software	
USB NFC Adapter	
ZPTX001 Quick Mount	



Ctrl. Panel



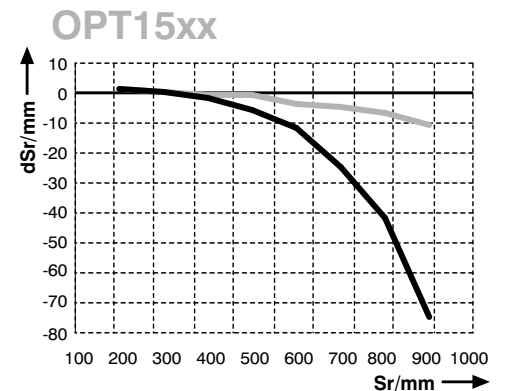
2a = NFC interface
 3a = Switching Status Indicator/Error Indicator



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	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
Ṽ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	AW	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	SrR	Switching Distance Reduction
	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
Bl..D +/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
EN0..5422	Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring
EN1..5422	Encoder A/Ā (TTL)		
EN2..5422	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 757			
BK	Black		
BN	Brown		
RD	Red		
OG	Orange		
YE	Yellow		
GN	Green		
BU	Blue		
VT	Violet		
GY	Grey		
WH	White		
PK	Pink		
GNVE	Green/Yellow		

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



Sr = Switching Distance
 dSr = Switching Distance Change
 — black 6 % remission
 — grey 18 % remission

