Reflex Sensor
for Roller Conveyor Systems

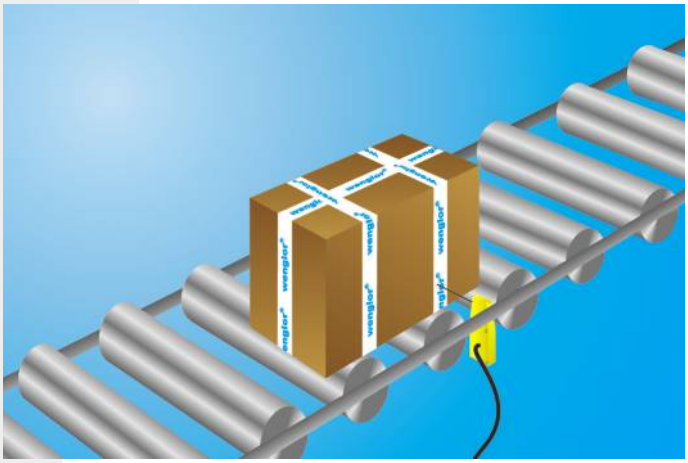
OPT89
Part Number

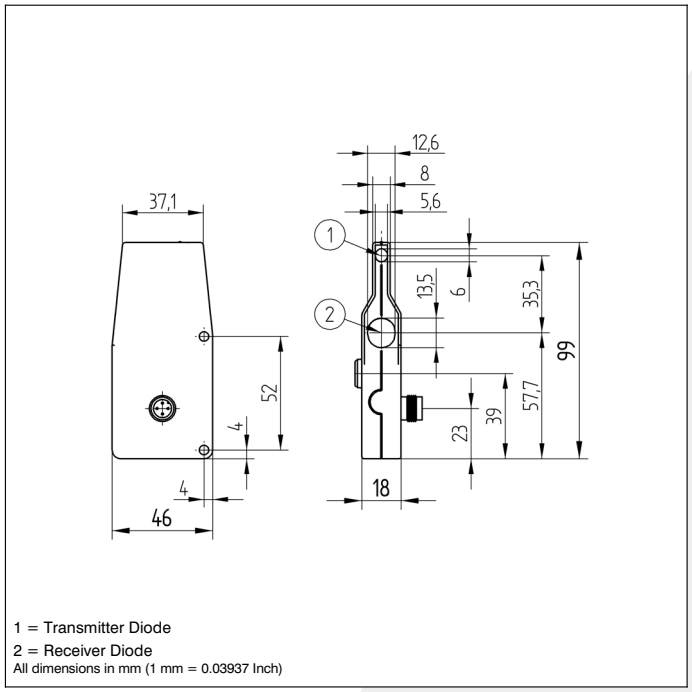
- **Electronic Background Suppression**
- **Fully Encapsulated**
- **Scaled switching Distance Adjuster**

Technical Data

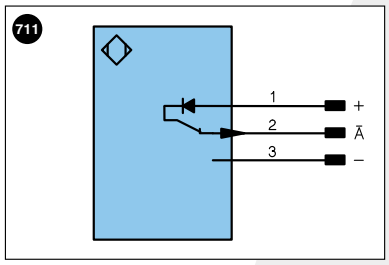
Optical Data	
Range	550 mm
Potentiometer min	220...270 mm
Potentiometer center	320...400 mm
Potentiometer max	550...630 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Wave Length	880 nm
Service Life (T = +25 °C)	100000 h
Risk Group (EN 62471)	1
Max. Ambient Light	10000 Lux
Opening Angle	5 °
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	-25...60 °C
Switching Outputs	1
Switching Output Voltage Drop	< 1,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	no
Protection Class	III
Mechanical Data	
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
PNP NC	
Connection Diagram No.	
Control Panel No.	
Suiting Connection Technology No.	
Suiting Mounting Technology No.	

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.





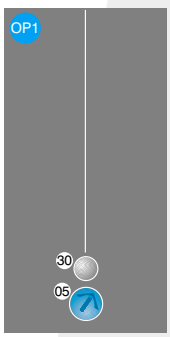
1 = Transmitter Diode
2 = Receiver Diode
All dimensions in mm (1 mm = 0.03937 Inch)



Legend

+	Supply Voltage +		U	Test Input		PoE	Power over Ethernet
–	Supply Voltage 0 V		Ū	Test Input inverted			
~	Supply Voltage (AC Voltage)		W	Trigger Input			
A	Switching Output	(NO)	O	Analog Output		Wire Colors according to DIN IEC 757	
Ā	Switching Output	(NC)	O–	Ground for the Analog Output			
V	Contamination/Error Output	(NO)	BZ	Block Discharge		BK	Black
V̄	Contamination/Error Output	(NC)	AMV	Valve Output		BN	Brown
E	Input (analog or digital)		a	Valve Control Output +		RD	Red
T	Teach Input		b	Valve Control Output 0 V		OG	Orange
Z	Time Delay (activation)		SY	Synchronization		YE	Yellow
S	Shielding		E+	Receiver-Line		GN	Green
RxD	Interface Receive Path		S+	Emitter-Line		BU	Blue
TxD	Interface Send Path		⏚	Grounding		VT	Violet
RDY	Ready		SnR	Switching Distance Reduction		GY	Grey
GND	Ground		Rx+/–	Ethernet Receive Path		WH	White
CL	Clock		Tx+/–	Ethernet Send Path		PK	Pink
E/A	Output/Input programmable		Bus	Interfaces-Bus A(+)/B(–)		GNYE	Green Yellow
	IO-Link		La	Emitted Light disengageable			

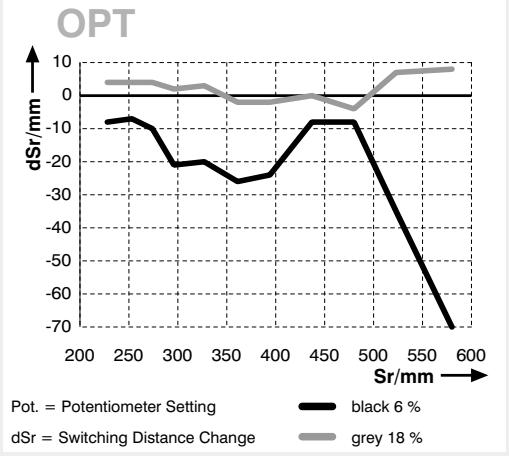
Ctrl.Panel



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

Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90 %



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