

Reflex Sensor with Background Suppression

HO08PA3

Part Number



- Adjustable switching distance
- Excellent ambient light suppression
- High switching frequency
- Large detection range

Technical Data

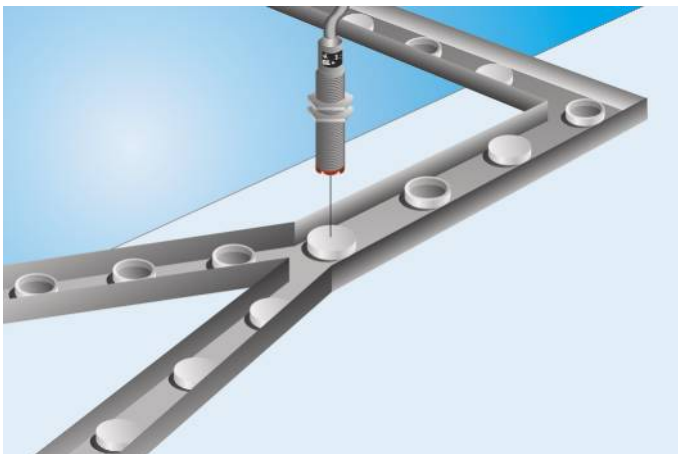
Optical Data	
Range	80 mm
Adjustable Range	25...80 mm
Switching Hysteresis	see Table 1
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

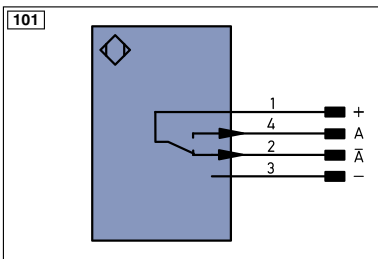
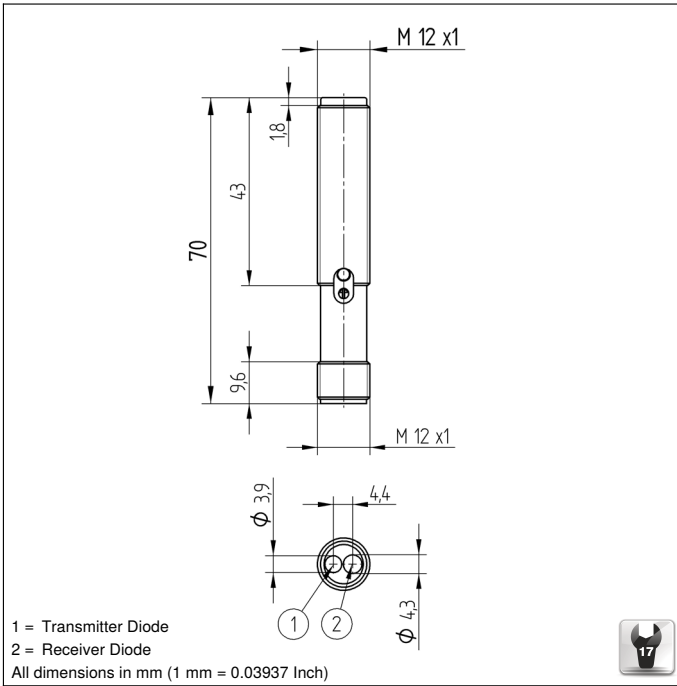
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Switching Frequency	1 kHz
Response Time	500 μs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III

Mechanical Data	
Adjustment	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	O3
Suitable Connection Technology No.	2
Suitable Mounting Technology No.	170

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance. Also these sensors don't influence each other if their light spots are pointed onto the same spot or against each other.





Legend		Wire Colors according to DIN IEC 757
+	Supply Voltage +	BK Black
-	Supply Voltage 0 V	BN Brown
~	Supply Voltage (AC Voltage)	RD Red
A	Switching Output (NO)	OG Orange
A̅	Switching Output (NC)	YE Yellow
V	Contamination/Error Output (NO)	GN Green
V̅	Contamination/Error Output (NC)	BU Blue
E	Input (analog or digital)	VT Violet
T	Teach Input	GY Grey
Z	Time Delay (activation)	WH White
S	Shielding	PK Pink
RxD	Interface Receive Path	GNYE Green Yellow
TxD	Interface Send Path	
RDY	Ready	
GND	Ground	
CL	Clock	
E/A	Output/Input programmable	
	IO-Link	
PoE	Power over Ethernet	
IN	Safety Input	
OSSD	Safety Output	
Signal	Signal Output	
nc	not connected	
U	Test Input	
U̅	Test Input inverted	
W	Trigger Input	
O	Analog Output	
O-	Ground for the Analog Output	
BZ	Block Discharge	
AWV	Valve Output	
a	Valve Control Output +	
b	Valve Control Output 0 V	
SY	Synchronization	
E+	Receiver-Line	
S+	Emitter-Line	
±	Grounding	
SrR	Switching Distance Reduction	
Rx+/-	Ethernet Receive Path	
Tx+/-	Ethernet Send Path	
Bus	Interfaces-Bus A(+)/B(-)	
La	Emitted Light disengageable	
Mag	Magnet activation	
RES	Input confirmation	
EDM	Contacting Monitoring	

Table 1

	40 mm	60 mm	80 mm
Detection Range	40 mm	60 mm	80 mm
Light Spot Diameter	3 mm	5 mm	7 mm
Switching Hysteresis	< 2 mm	< 3 mm	< 8 mm

Complementary Products

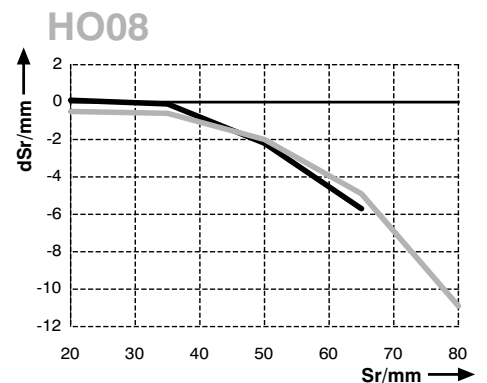
PNP-NPN Converter BG2V1P-N-2M

Ctrl. Panel


 05 = Switching Distance Adjuster
 31 = Switching Status/Contamination-/Short Circuit Warning

Switching Distance Deviation

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


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