

Reflex Sensor with Background Suppression

HN55PA3

Part Number



- Precision background suppression
- Red light
- Stainless steel plug (V2A)

Technical Data

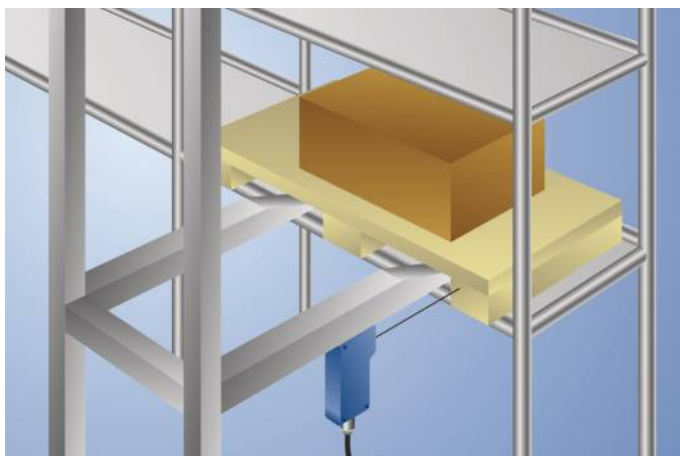
Optical Data	
Range	500 mm
Adjustable Range	70...500 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Spot Diameter	see Table 1

Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	30 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	
Setting Method	Potentiometer
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

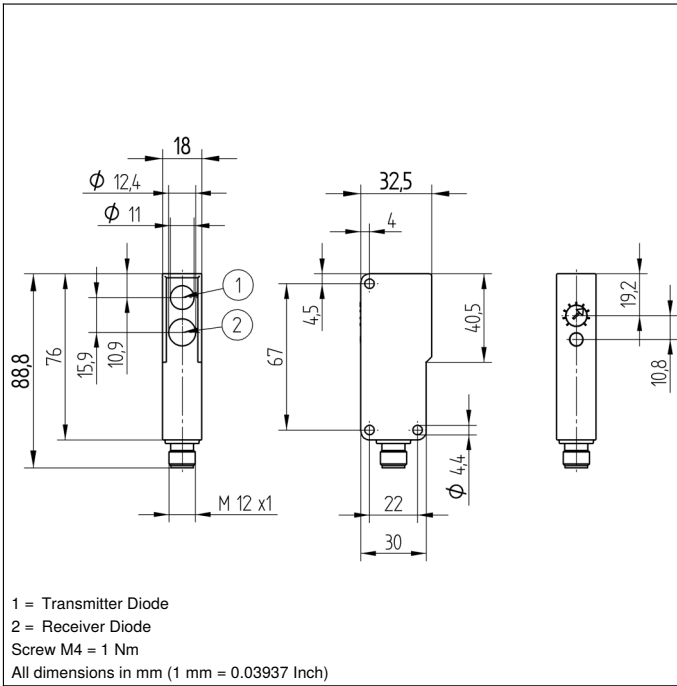
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	N3
Suitable Connection Technology No.	2
Suitable Mounting Technology No.	350

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.

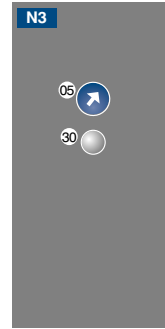


Complementary Products

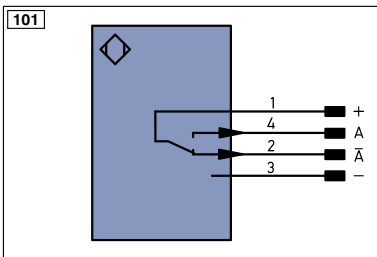
Dust extraction tube STAUBTUBUS-03
PNP-NPN Converter BG2V1P-N-2M
Protection Housing Set ZSN-NN-02



Ctrl. Panel



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



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	U	Test Input inverted
Ā	Switching Output (NC)	W	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	AWV	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	E+	Receiver-Line
RDY	Ready	S+	Emitter-Line
GND	Ground	≡	Grounding
CL	Clock	SnR	Switching Distance Reduction
E/A	Output/Input programmable	Rx+/-	Ethernet Receive Path
IO-Link	IO-Link	Tx+/-	Ethernet Send Path
PoE	Power over Ethernet	Bus	Interfaces-Bus A(+)/B(-)
IN	Safety Input	La	Emitted Light disengageable
OSSD	Safety Output	Mag	Magnet activation
Signal	Signal Output	RES	Input confirmation
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contactor Monitoring
EN0RS42Z	Encoder 0-pulse 0-0 (TTL)	EN0RS42Z	Encoder A/Ā (TTL)
		EN0RS42Z	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
		Out	Brightness output
		M	Maintenance

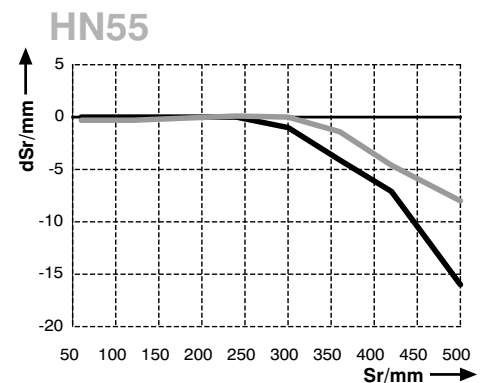
Wire Colors according to DIN IEC 757	
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

Table 1

Detection Range	60 mm	200 mm	500 mm
Spot Diameter	9 mm	11 mm	20 mm

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

