

Reflex Sensor with Background Suppression

HN24PBV3

Part Number

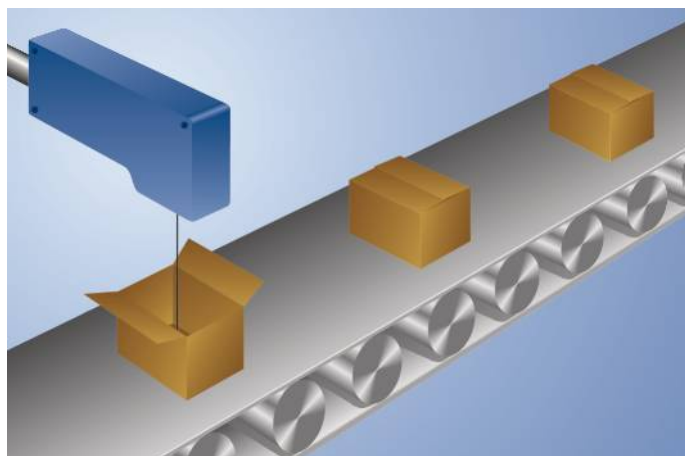


- Electronic background suppression
- Highly resistant to water and dust thanks to full encapsulation
- Red light

Technical Data

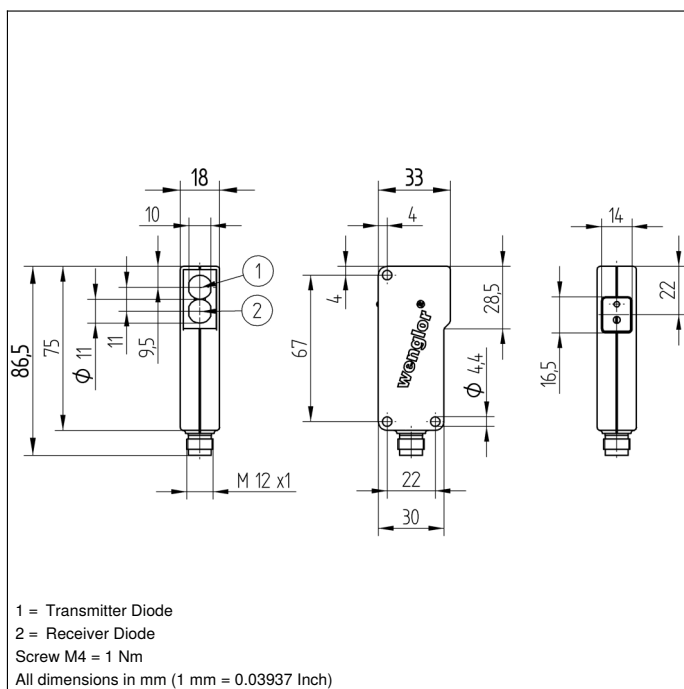
Optical Data	
Range	150 mm
Adjustable Range	50...150 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	900 Hz
Response Time	555 µs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
PNP Contamination Output/Switching Current	50 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Contamination Output	●
PNP NO	●
Connection Diagram No.	103
Control Panel No.	N1
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.

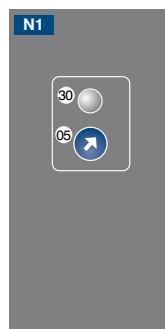


Complementary Products

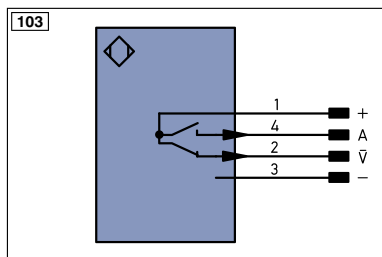
Dust extraction tube STAUBTUBUS-03
PNP-NPN Converter BG2V1P-N-2M
Protection Housing Set ZSN-NN-02



Ctrl. Panel



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



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	ENa	Encoder A
-	Supply Voltage 0 V	nc	not connected	ENb	Encoder B
~	Supply Voltage (AC Voltage)	U	Test Input	AMIN	Digital output MIN
A	Switching Output (NO)	U	Test Input inverted	AMAX	Digital output MAX
Ā	Switching Output (NC)	W	Trigger Input	AOK	Digital output OK
V	Contamination/Error Output (NO)	O	Analog Output	SY In	Synchronization In
Ṽ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY OUT	Synchronization OUT
BZ	Block Discharge	BZ	Block Discharge	LI	Brightness output
E	Input (analog or digital)	AWV	Valve Output	M	Maintenance
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	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		
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	ENAR5422	Encoder A/Ā (TTL)		
EN0 RS422	Encoder 0-pulse 0-0 (TTL)	ENBR5422	Encoder B/B̄ (TTL)		

Wire Colors according to DIN IEC 757

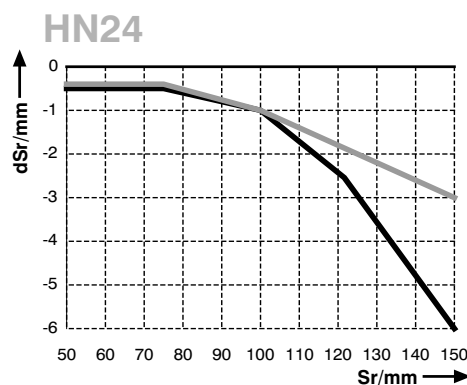
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

Table 1

Detection Range	60 mm	100 mm	150 mm
Spot Diameter	5 mm	4 mm	6 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

