Reflex Sensor
with Background Suppression

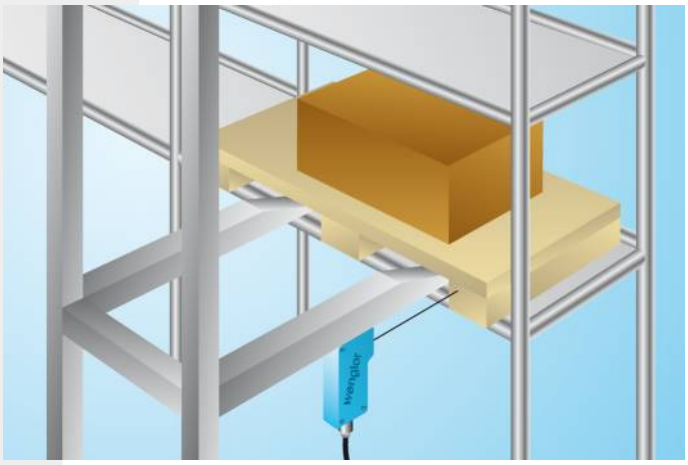
HN55PBV3
Part Number

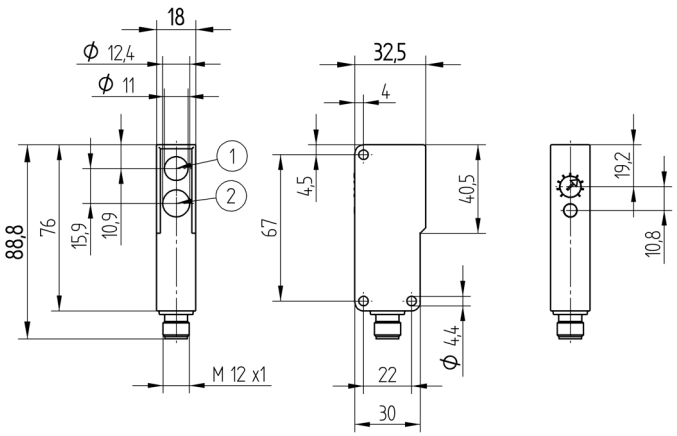
- **Precision Background Suppression**
- **Red Light**
- **Stainless Steel Plug (V2A)**

Technical Data

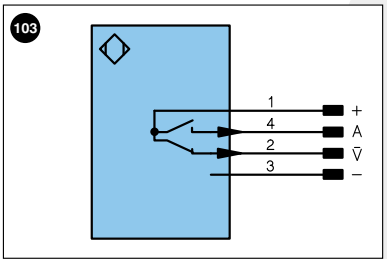
Optical Data	
Range	500 mm
Adjustable Range	70...500 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	30 mA
Switching Frequency	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
PNP Contamination Output/Switching Current	50 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Contamination Output	●
PNP NO	●
Connection Diagram No.	103
Control Panel No.	N 3
Suiting Connection Technology No.	2
Suiting Mounting Technology No.	350

These sensors are particularly well suited for recognizing objects in front of any type of background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.





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

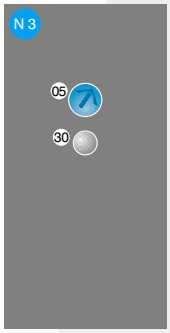
Table 1

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

Complementary Products

Dust extraction tube STAUBTUBUS-03
Protection Housing Set ZSN-NN-02

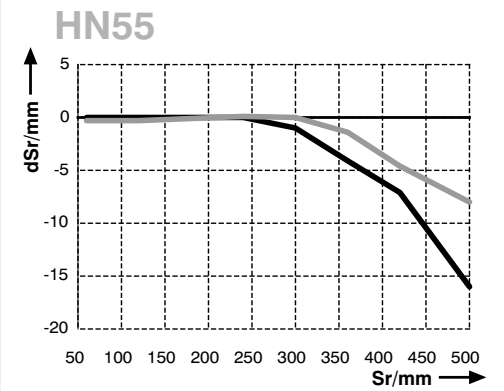
Ctrl.Panel



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

Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90 %



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

Specifications are subject to change without notice