## Reflex Sensor with Background Suppression

# HT80PBV3

Part Number

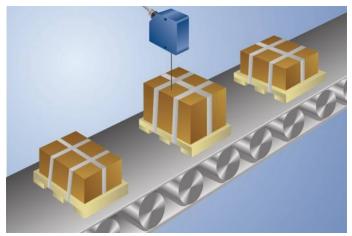


- Adjustable time delay
- Plug can be rotated
- Red light
- Triple beam correction principle

### **Technical Data**

Range800 mmAdjustable Range250800 mmSwitching Hysteresis< 5 %Light SourceRed LightService Life (T = +25 °C)100000 hMax. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %Temperature Range-2560 °CSwitching Output Voltage Drop< 2,5 VPNP Switching Output/Switching Current200 mAContamination Output/Switching Current50 mAShort Circuit ProtectionyesPeverse Polarity ProtectionyesProtection ClassIIIMechanical DataPlasticDegree of ProtectionIP67ConnectionM12 × 1; 4-pinContamination OutputIP67	Optical Data			
Switching Hysteresis< 5 %Light SourceRed LightService Life (T = +25 °C)100000 hMax. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %	Range	800 mm		
Light SourceRed LightService Life (T = +25 °C)100000 hMax. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %	Adjustable Range	250800 mm		
Service Life (T = +25 °C)10000 hMax. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift<5 %	Switching Hysteresis	< 5 %		
Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %	Light Source	Red Light		
Light Spot Diameter see Table 1 Electrical Data Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) 40 mA Switching Frequency 300 Hz Response Time 1700 µs Off-Delay 01 s Temperature Drift <\$ % Temperature Range -2560 °C Switching Output Voltage Drop <<2,5 V PNP Switching Output/Switching Current 200 mA Contamination Output Voltage Drop <<2,5 V PNP Contamination Output/Switching Current 50 mA Short Circuit Protection yes Protection Class III Mechanical Data Setting Method Potentiometer Housing Material Plastic Degree of Protection IP67 Connection MA	Service Life (T = +25 °C)	100000 h		
Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %	Max. Ambient Light	10000 Lux		
Supply Voltage1030 V DCCurrent Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift< 5 %	Light Spot Diameter	see Table 1		
Current Consumption (Ub = 24 V)40 mASwitching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift<5 %	Electrical Data			
Switching Frequency300 HzResponse Time1700 µsOff-Delay01 sTemperature Drift<5 %	Supply Voltage	1030 V DC		
Response Time1700 µsOff-Delay01 sTemperature Drift<5 %	Current Consumption (Ub = 24 V)	40 mA		
Off-Delay01 sTemperature Drift< 5 %	Switching Frequency	300 Hz		
Temperature Drift< 5 %Temperature Range-2560 °CSwitching Output Voltage Drop< 2,5 V	Response Time	1700 <i>µ</i> s		
Temperature Range-2560 °CSwitching Output Voltage Drop<2,5 V	Off-Delay	01 s		
Switching Output Voltage Drop< 2,5 VPNP Switching Output/Switching Current200 mAContamination Output Voltage Drop< 2,5 V	Temperature Drift	< 5 %		
PNP Switching Output/Switching Current200 mAContamination Output Voltage Drop< 2,5 V	Temperature Range	-2560 °C		
Contamination Output Voltage Drop< 2,5 VPNP Contamination Output/Switching Current50 mAShort Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIMechanical DataPotentiometerSetting MethodPotentiometerHousing MaterialPlasticDegree of ProtectionIP67ConnectionM12 × 1; 4-pin	Switching Output Voltage Drop	< 2,5 V		
PNP Contamination Output/Switching Current50 mAShort Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIMechanical DataPotentiometerSetting MethodPotentiometerHousing MaterialPlasticDegree of ProtectionIP67ConnectionM12 × 1; 4-pin	PNP Switching Output/Switching Current	200 mA		
Short Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIMechanical DataIIISetting MethodPotentiometerHousing MaterialPlasticDegree of ProtectionIP67ConnectionM12 × 1; 4-pin	Contamination Output Voltage Drop	< 2,5 V		
Reverse Polarity Protection     yes       Overload Protection     yes       Protection Class     III       Mechanical Data     III       Setting Method     Potentiometer       Housing Material     Plastic       Degree of Protection     IP67       Connection     M12 × 1; 4-pin	PNP Contamination Output/Switching Current	50 mA		
Overload Protection     yes       Protection Class     III       Mechanical Data       Setting Method     Potentiometer       Housing Material     Plastic       Degree of Protection     IP67       Connection     M12 × 1; 4-pin	Short Circuit Protection	yes		
Protection Class     III       Mechanical Data     Vector       Setting Method     Potentiometer       Housing Material     Plastic       Degree of Protection     IP67       Connection     M12 × 1; 4-pin	Reverse Polarity Protection	yes		
Mechanical Data       Setting Method     Potentiometer       Housing Material     Plastic       Degree of Protection     IP67       Connection     M12 × 1; 4-pin	Overload Protection	yes		
Setting MethodPotentiometerHousing MaterialPlasticDegree of ProtectionIP67ConnectionM12 × 1; 4-pin	Protection Class	111		
Housing Material     Plastic       Degree of Protection     IP67       Connection     M12 × 1; 4-pin	Mechanical Data			
Degree of Protection     IP67       Connection     M12 × 1; 4-pin	Setting Method	Potentiometer		
Connection M12 × 1; 4-pin	Housing Material			
	Degree of Protection			
Contamination Output	Connection	M12 × 1; 4-pin		
	Contamination Output			
PNP NO	PNP NO	Ū.		
Connection Diagram No. 103	Connection Diagram No.	103		
Control Panel No. T1	Control Panel No.	T1		
Suitable Connection Equipment No. 2	Suitable Connection Equipment No.	2		
Suitable Mounting Technology No. 330	Suitable Mounting Technology No.	330		

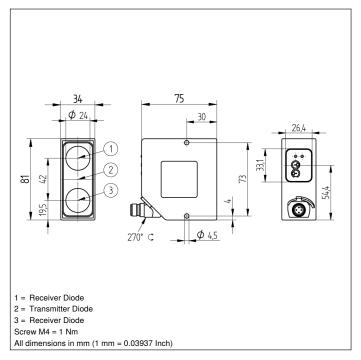
These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



Complementary Products PNP-NPN Converter BG2V1P-N-2M

**Photoelectronic Sensors** 





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 $\Diamond$ 



01 = Switching Status Indicator

05 = Switching Distance Adjuster

11 = ON-Delay/OFF-Delay Adjuster

32 = Contamination Warning/Error Warning

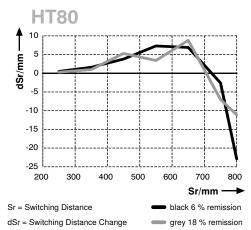
Leger	nd	PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		
+	Supply Voltage +	nc	not connected	ENBR542	Encoder B/B (TTL)		
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A		
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENв	Encoder B		
А	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN		
Ā	Switching Output (NC)	W -	Ground for the Trigger Input	Амах	Digital output MAX		
V	Contamination/Error Output (NO)	0	Analog Output	Аок	Digital output OK		
V	Contamination/Error Output (NC)	0-	Ground for the Analog Output	SY In	Synchronization In		
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT		
Т	Teach Input	Awv	Valve Output	OLT	Brightness output		
Z	Time Delay (activation)	а	Valve Control Output +	м	Maintenance		
S	Shielding	b	Valve Control Output 0 V	rsv	reserved		
RxD	Interface Receive Path	SY	Synchronization	Wire Co	blors according to DIN IEC 757		
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black		
RDY	Ready	E+	Receiver-Line	BN	Brown		
GND	Ground	S+	Emitter-Line	RD	Red		
CL	Clock	÷	Grounding	OG	Orange		
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow		
۲	IO-Link	Rx+/-	<ul> <li>Ethernet Receive Path</li> </ul>	GN	Green		
PoE	Power over Ethernet	Tx+/-	- Ethernet Send Path	BU	Blue		
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet		
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey		
Signal	Signal Output	Mag	Magnet activation	WH	White		
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink		
ENO RS42	2 Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow		

#### Table 1

Detection Range	300 mm	800 mm
Light Spot Diameter	10 mm	20 mm

#### **Switching Distance Deviation**

Typical characteristic curve based on white, 90 % remission





Specifications are subject to change without notice