

# Reflex Sensors

with Background Suppression

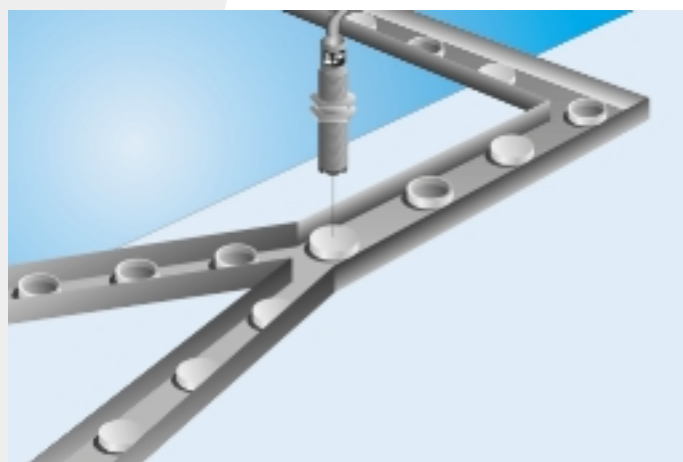
## HB03PBT7

Part Number



- Adjustable Switching Distance
- Electronic Background Suppression
- Enclosed in M8 housing
- Red Light

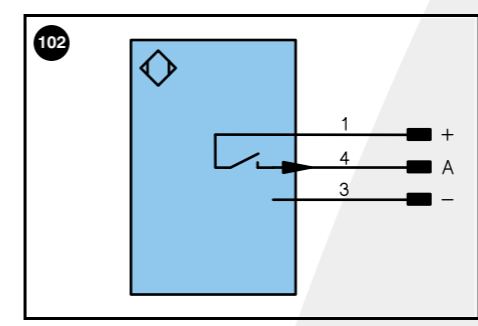
These sensors are particularly well suited for recognizing objects in front of any type of background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



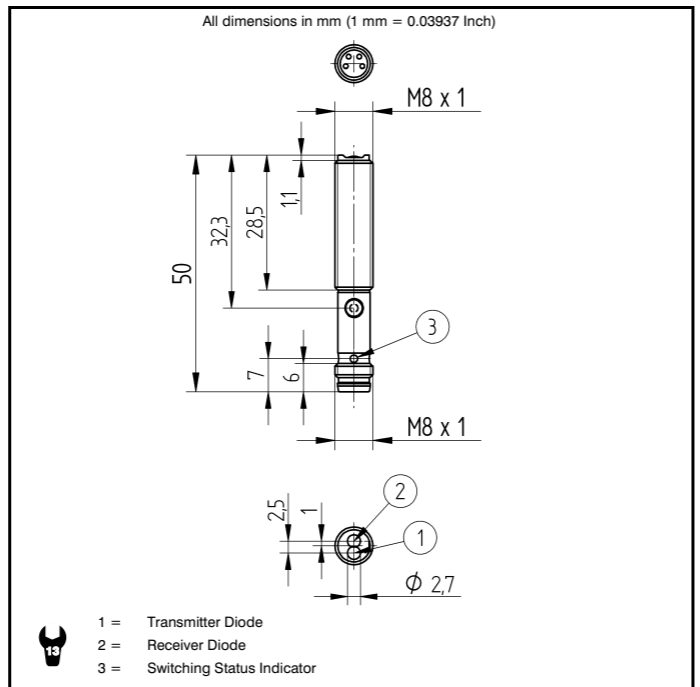
### Technical Data

Optical Data	
Range	30 mm
Adjustable Range	10...30 mm
Switching Hysteresis	< 10 %
Light Source	Red Light
Service Life (T = +25°C)	100000 h
max. Ambient Light	10000 Lux
Light Spot Diameter	2 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24V)	< 25 mA
Switching Frequency	600 Hz
Response Time	833 μs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2.5 V
PNP Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Mechanical Data	
Adjustment	Teach-In
Housing	Stainless Steel
Full Encapsulation	yes
Protection Mode	IP 67
Connection	M8 x 1

Plug Version	
Part Number	HB03PBT7
PNP NO	●
Connection Diagram No.	102
Control Panel No.	B 1
Suitable Plug No.	7



Legend		Wire colors according to DIN IEC 757
+	Power supply "+"	BK black
-	Power supply "0V"	BN brown
-	Power supply (AC Voltage)	RD red
A	Switching output (1,2,3...) / NO	OG orange
A	Switching output (1,2,3...) / NC	YE yellow
V	Contamination / Error output (NC)	GN green
V	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	RS-232 receive path	GNVE green yellow
TxD	RS-232 send path	
RDY	Ready	
GND	Ground	
CL	Clock	
U	Test input	
W	Trigger input	
O	Analog output (1,2,3...)	
O-	Ground for the analog output	
BZ	Block discharge	
AW	Valve output	
a	Valve control output "+"	
b	Valve control output "0V"	
SY	Synchronization	
E+	Receiver-Line	
S+	Emitter-Line	
⊕	Grounding	
S-R	Switching Distance Reduction	
USBD+	USB data +	
USBD-	USB data -	
Ba	Interfaces-Bus A(+)/B(-)	
La	Emitted light disengageable	



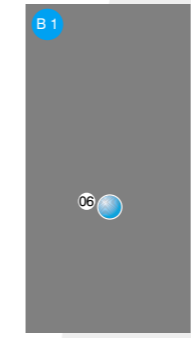
- 1 = Transmitter Diode
- 2 = Receiver Diode
- 3 = Switching Status Indicator

Specifications are subject to change without notice  
44/06

### Accessories

- Mounting Clamp BSM8NB
- Fixation System W8S12

### Ctrl.Panel



06 = Teach Button