

Reflex Sensor with Background Suppression

HT80PA3

Part Number



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

Technical Data

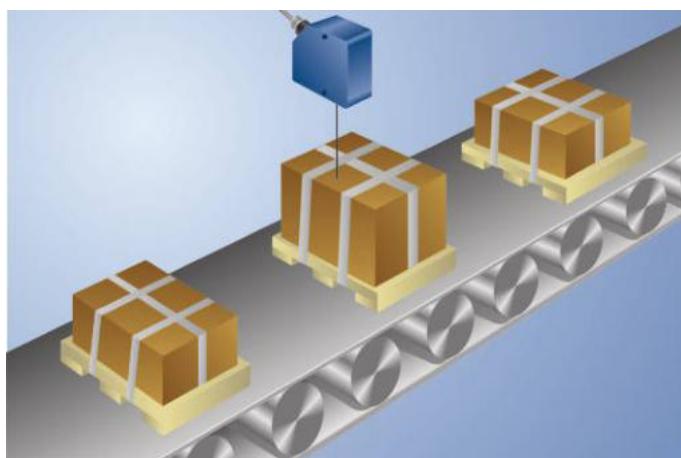
Optical Data

Range	800 mm
Adjustable Range	250...800 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

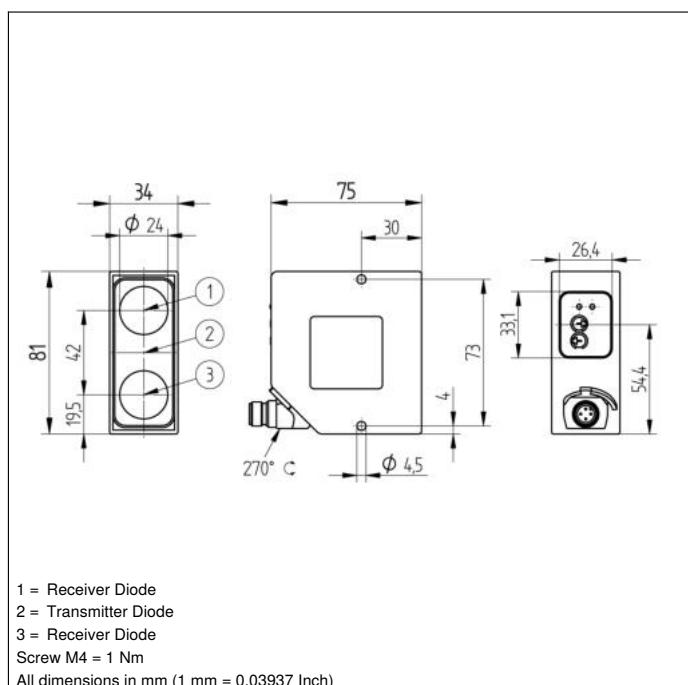
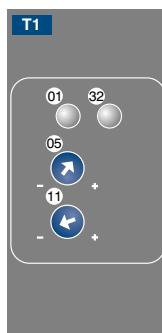
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	40 mA
Switching Frequency	300 Hz
Response Time	1700 µs
Off-Delay	0...1 s
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 x 1; 4-pin
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	T1
Suitable Connection Equipment No.	2
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.

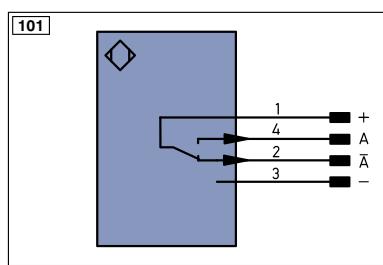


Complementary Products

PNP-NPN Converter BG2V1P-N-2M


Ctrl. Panel


01 = Switching Status Indicator
05 = Switching Distance Adjuster
11 = ON-Delay/OFF-Delay Adjuster
32 = Contamination Warning/Error 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)	Ü	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
V̄	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	Awv	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY-	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	±	Grounding
IO-Link	IO-Link	SnR	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
SSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La	Emitted Light disengageable
BLD	Ethernet Gigabit bidirec. data line (A-D)	Mag	Magnet activation
EN0RS422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contactor Monitoring

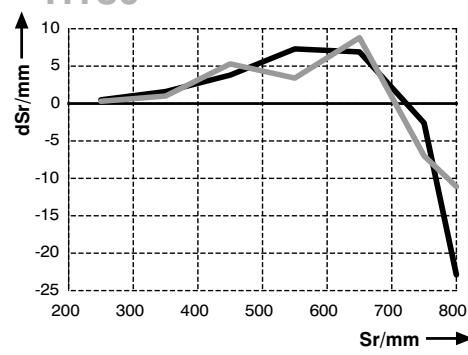
EN0RS422	Encoder A/Ā (TTL)
EN1RS422	Encoder B/Ā (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY IN	Synchronization IN
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance
rsv	reserved
Wire Colors according to DIN IEC 757	
BK	Black
BN	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	300 mm	800 mm
Light Spot Diameter	10 mm	20 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

HT80


Sr = Switching Distance

dSr = Switching Distance Change

— black 6 % remission
— grey 18 % remission
