

Reflex Sensor with Background Suppression

YN44PA3/B LASER

Part Number

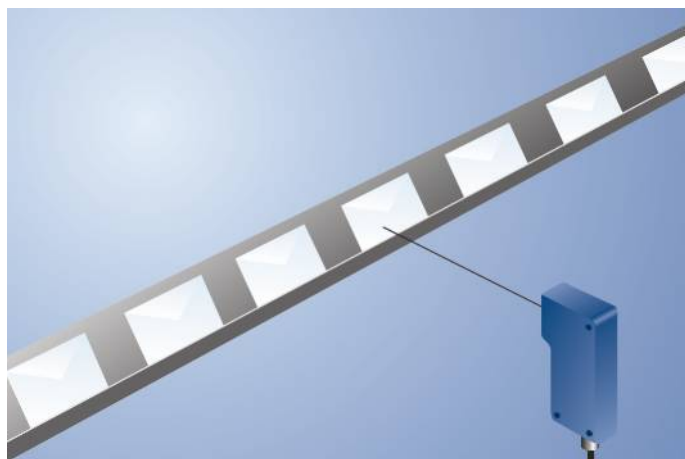


- High precision background suppression up to 400 mm
- Special coated optics
- Stainless steel plug (V2A)
- Switching frequency: 600 Hz

Technical Data

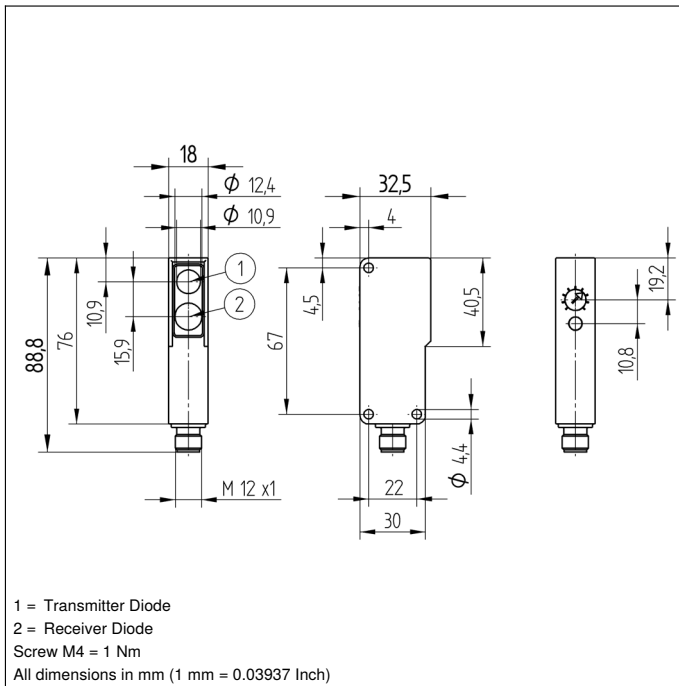
Optical Data	
Range	400 mm
Adjustable Range	65...400 mm
Switching Hysteresis	< 1 %
Light Source	Laser (red)
Wave Length	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Switching Frequency	600 Hz
Response Time	833 µs
Temperature Drift	< 2 %
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 × 1; 4-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1930,46 a
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	N3
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

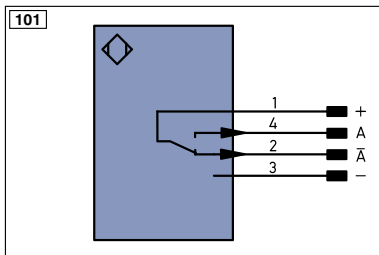
Dust extraction tube STAUBTUBUS-03
PNP-NPN Converter BG2V1P-N-2M



Ctrl. Panel



05 = Switching Distance Adjuster
30 = Switching Status/Contamination 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)	U	Test Input inverted
A̅	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V̅	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	AWV	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	E+	Receiver-Line
RDY	Ready	S+	Emitter-Line
GND	Ground	±	Grounding
CL	Clock	SnR	Switching Distance Reduction
E/A	Output/Input programmable	Rx+/-	Ethernet Receive Path
IO-Link		Tx+/-	Ethernet Send Path
PoE	Power over Ethernet	Bus	Interfaces-Bus A(+)/B(-)
IN	Safety Input	La	Emitted Light disengageable
OSSD	Safety Output	Mag	Magnet activation
Signal	Signal Output	RES	Input confirmation
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contactor Monitoring
EN0 RS422	Encoder 0-pulse 0-0 (TTL)	ENAR5422	Encoder A/A̅ (TTL)
		ENBR5422	Encoder B/B̅ (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
LI	Brightness output
M	Maintenance

Wire Colors according to DIN IEC 757

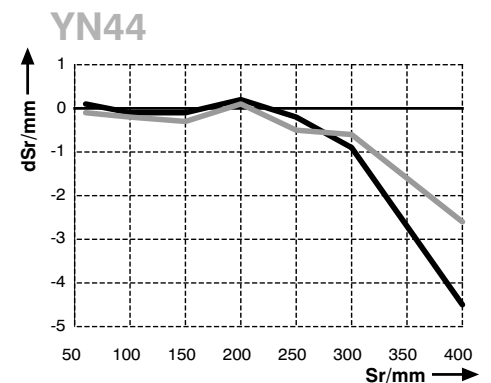
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

Table 1

Detection Range	60 mm	200 mm	400 mm
Spot Diameter	3 mm	2 mm	5 mm

Switching Distance Deviation

Typical characteristic curve based on Kodak white (90 % remission)



Sr = Switching Distance

dSr = Switching Distance Change

