

Through-Beam Sensor

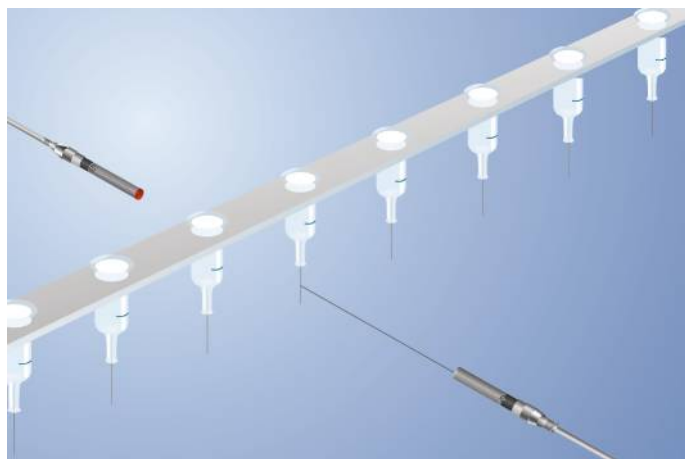
YO99VD3 LASER

Part Number



- Smallest recognizable part: 0,05 mm
- Switching frequency: 5 kHz

These through-beam sensors are best suited for use in industrial environments. Thanks to their large working range, the devices demonstrate excellent functional reliability in highly contaminated environments. The sensors can be checked for correct functioning via the test input.



Technical Data

Optical Data	
Range	20000 mm
Smallest Recognizable Part	50 μ m
Switching Hysteresis	< 15 %
Light Source	Laser (red)
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Opening Angle	8 °

Electrical Data	
Sensor Type	Receiver
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Switching Frequency	5 kHz
Response Time	100 μ s
Temperature Drift	< 10 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Short Circuit and Overload Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

Mechanical Data	
Setting Method	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	4259,66 a
PNP NC	●
Connection Diagram No.	113
Control Panel No.	01
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	170

Suitable Emitter

YO993

Complementary Products

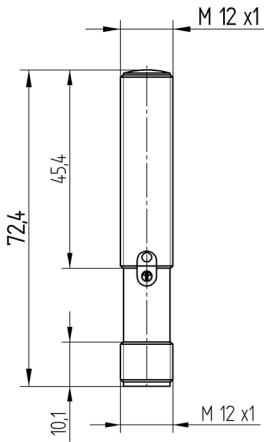
Path-Folding Mirror LA9
PNP-NPN Converter BG2V1P-N-2M

Ctrl. Panel

O1



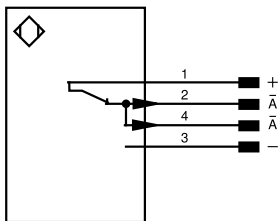
O1 = Switching Status Indicator
O5 = Switching Distance Adjuster



All dimensions in mm (1 mm = 0.03937 Inch)



113

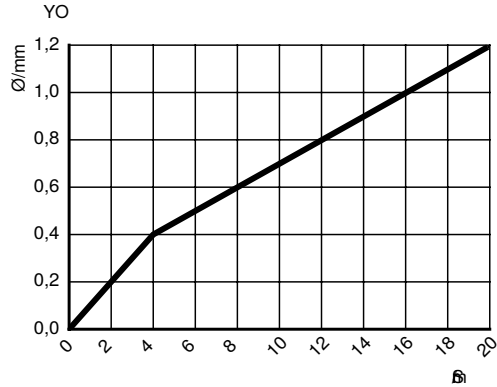


Legend

+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Y	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
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
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	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
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/Ä (TTL)		

Smallest Recognizable Part

Based on the Distance between Emitter and Receiver



Sr = Switching Distance
Ø = Diameter, Smallest Recognizable Part

