

Through-Beam Sensor

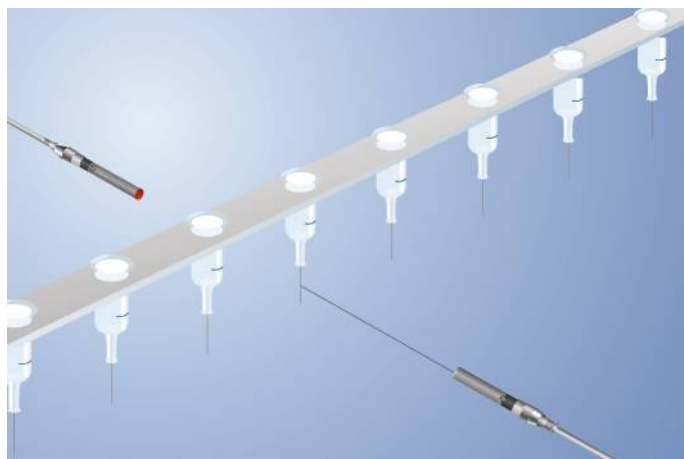
YO99VD3 LASER

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	<input checked="" type="checkbox"/>
Connection Diagram No.	113
Control Panel No.	01
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	170

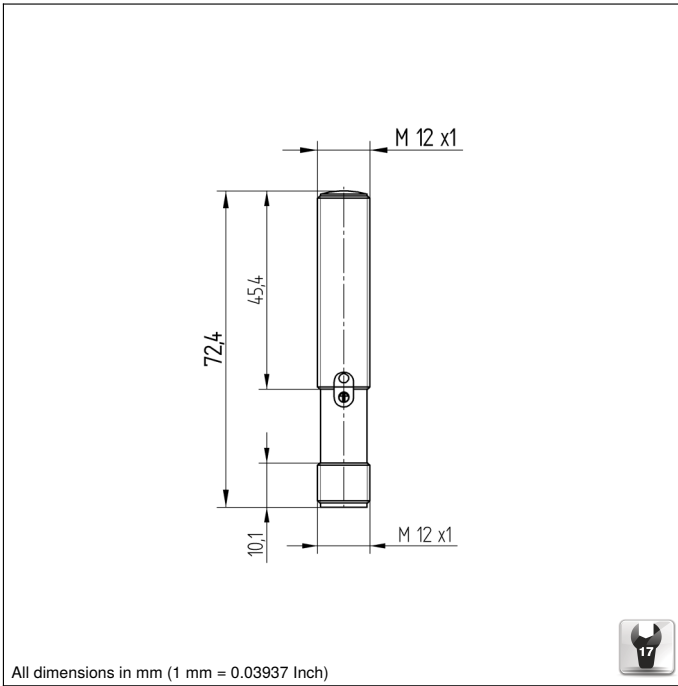
Suitable Emitter

YO993

Complementary Products

Path-Folding Mirror LA9

PNP-NPN Converter BG2V1P-N-2M

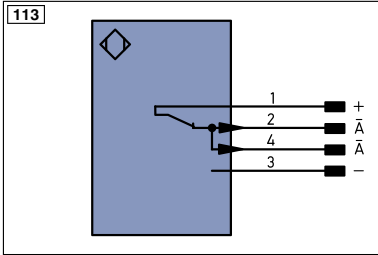


Ctrl. Panel



01 = Switching Status Indicator
 05 = Switching Distance Adjuster

113

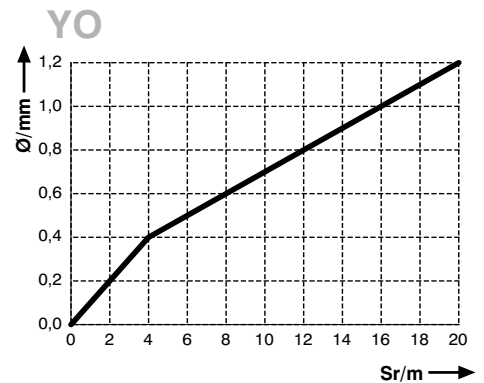


Legend

+	Supply Voltage +	nc	not connected	EN ^{A/RS422}	Encoder A/ \bar{A} (TTL)
-	Supply Voltage 0 V	U	Test Input	EN ^{B/RS422}	Encoder B/ \bar{B} (TTL)
~	Supply Voltage (AC Voltage)	\bar{U}	Test Input inverted	EN ^A	Encoder A
A	Switching Output (NO)	W	Trigger Input	EN ^B	Encoder B
\bar{A}	Switching Output (NC)	W-	Ground for the Trigger Input	A ^{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	O	Analog Output	A ^{MAX}	Digital output MAX
\bar{V}	Contamination/Error Output (NC)	O-	Ground for the Analog Output	A ^{OK}	Digital output OK
E	Input (analog or digital)	BZ	Block Discharge	SY ^{In}	Synchronization In
T	Teach Input	AWV	Valve Output	SY ^{OUT}	Synchronization OUT
Z	Time Delay (activation)	a	Valve Control Output +	OL ^T	Brightness output
S	Shielding	b	Valve Control Output 0 V	M	Maintenance
RxD	Interface Receive Path	SY	Synchronization	rsv	reserved
TxD	Interface Send Path	SY-	Ground for the Synchronization	Wire Colors according to DIN IEC 757	
RDY	Ready	E+	Receiver-Line	BK	Black
GND	Ground	S+	Emitter-Line	BN	Brown
CL	Clock	\pm	Grounding	RD	Red
E/A	Output/Input programmable	S ⁿ R	Switching Distance Reduction	OG	Orange
	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
OSSD	Safety Output	L ^a	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
EN ^{0/RS422}	Encoder 0-pulse 0-0 (TTL)	EDM	Contactur Monitoring	PK	Pink
				GNVE	Green/Yellow

Smallest Recognizable Part

Based on the Distance between Emitter and Receiver



Sr = Switching Distance

Ø = Diameter, Smallest Recognizable Part

