

Laser Distance Sensor

Triangulation

OCP242X0135

LASER

Part Number

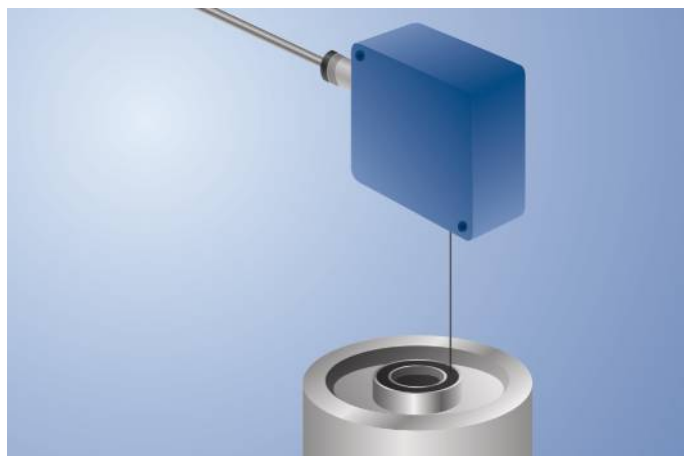


- CMOS line array
- Highly accurate switching distance
- Minimal switching hysteresis
- Switching point independent of material, color and brightness

These sensors work with a high resolution CMOS line and DSP technology and calculate the distance via an angle measurement. This virtually eliminates switching point differences caused by material, color and brightness.

Two independent switching outputs are available, at which two switching thresholds and one on-delay or off-delay time can be set in 10 ms increments.

Sensor functions can be activated and values can be output via the RS-232 interface.



Technical Data

Optical Data

Range	240 mm
Setting Range	40...240 mm
Switching Hysteresis	< 0,5 %
Light Source	Laser (red)
Wavelength	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 50 mA
Switching Frequency	300 Hz
Response Time	< 1,7 ms
On-/Off-Delay (RS-232)	0...1 s
Temperature Drift	< 15 µm/K
Temperature Range	-25...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 1,5 V
Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Teach Mode	HT, VT, FT, TP
Baud Rate	9600 Bd
Protection Class	III
FDA Accession Number	1120718-000

Mechanical Data

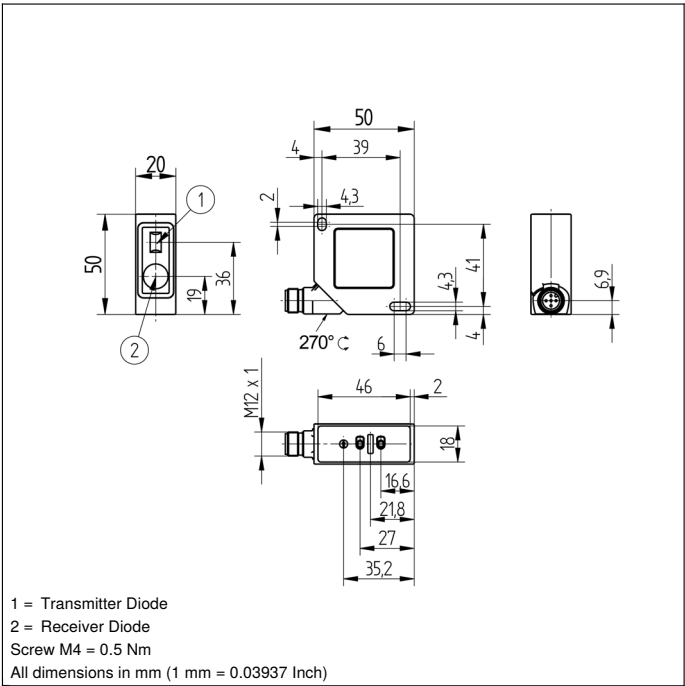
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin

Error Output	●
PNP NO	●
RS-232 with Adapterbox	●
External teach-in input	●

Connection Diagram No.	779
Control Panel No.	P8
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	380

Complementary Products

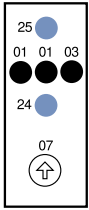
Adapterbox A232
Protective Housing ZSV-0x-01
Set Protective Housing ZSP-NN-02
Software



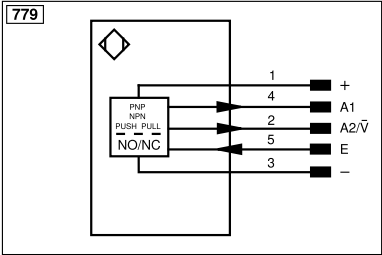
1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 0.5 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

P8



01 = Switching Status Indicator
03 = Error Indicator
07 = Selector Switch
24 = Plus Button
25 = Minus Button



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	Ack	Digital output OK
Ÿ	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	ENARs422	Encoder A/A (TTL)		

Table 1

Detection Range	40 mm	240 mm
Spot Size	0,4 × 0,9 mm	1,1 × 2,3 mm

