

# Laser Distance Sensor

## Triangulation

# CP25QXVT80

# LASER

Part Number

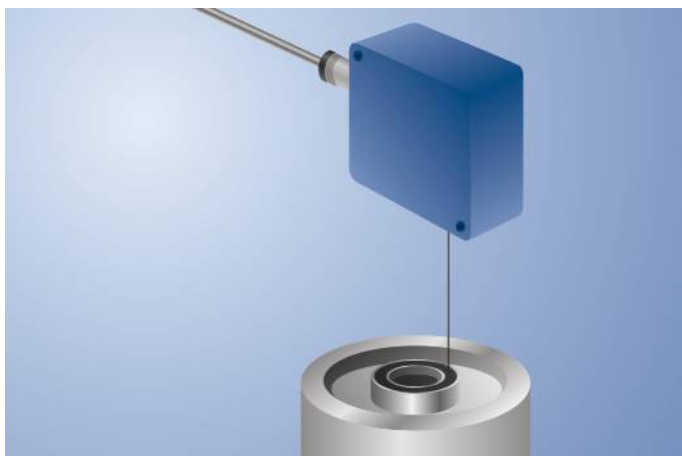


- CMOS line array
- Highly accurate switching distance
- Minimal switching hysteresis
- Switching point independent of material, color and brightness

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)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

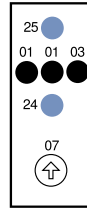
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 50 mA
Switching Frequency	500 Hz
Response Time	< 1 ms
On-/Off-Delay (RS-232)	0...1 s
Temperature Drift	< 15 µm/K
Temperature Range	-25...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 1,5 V
Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Teach Mode	HT, VT, TP
Baud Rate	38400 Bd
Protection Class	III
FDA Accession Number	0820586-000

Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 8-pin
Error Output	●
PNP NO	●
RS-232 Interface	●
Connection Diagram No.	<b>737</b>
Control Panel No.	<b>P8</b>
Suitable Connection Equipment No.	<b>80</b>
Suitable Mounting Technology No.	<b>380</b>

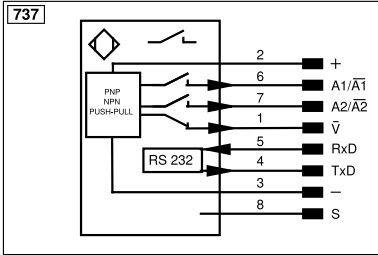
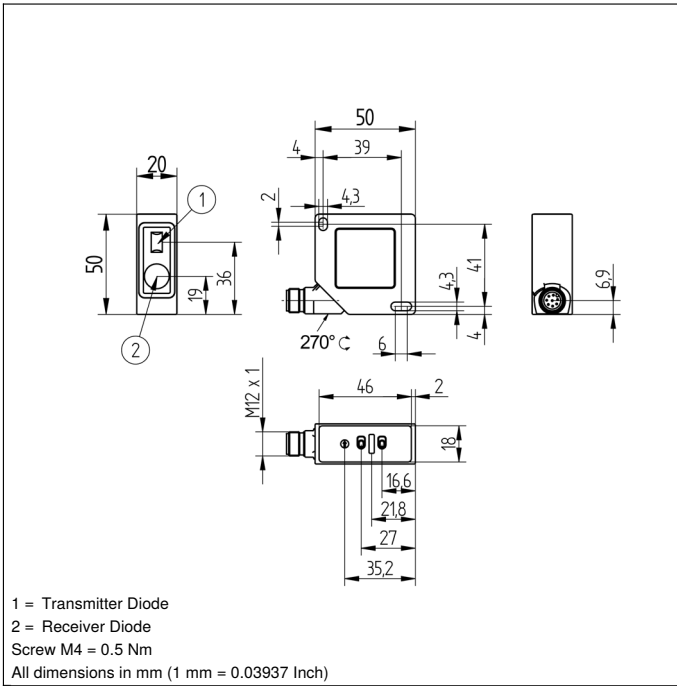
## Complementary Products

Interface Cable S232W3	
Protective Housing ZSV-0x-01	
Set Protective Housing ZSP-NN-02	
Software	

### 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
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	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	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contactor Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
			Encoder B/B̄ (TTL)
			Encoder A
			Encoder B
			Digital output MIN
			Digital output MAX
			Digital output OK
			Synchronization In
			Synchronization OUT
			Brightness output
			Maintenance
			Reserved
			Wire Colors according to DIN IEC 60757
			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	40 mm	240 mm
Spot Size	0,6 × 2,5 mm	1 × 4 mm

