Laser Distance Sensor
Time of Flight

P1PX208
Part Number

der wintec.

- **Analog output: 4…20 mA**
- **Graphical display for easy operation**
- **Wide working range and precise detection thanks to DS technology**

The sensors function in accordance with the time-of-flight measurement principle and are equipped with a class 1 laser and a reflector/reflector foil. The wintec, equipped with Dynamic Sensitivity technology (DS), enables a previously unattainable reception sensitivity even with very weak signals. As a result, the sensors have a very large working range of up to 100 m. The wintec also operates very reliably under adverse ambient conditions, such as in the presence of ambient light or contamination. Extensive condition monitoring functions also enable predictive maintenance and trouble-free operation. Settings are entered via the easy-to-read OLED display or via Bluetooth using the weCon app.

Technical Data

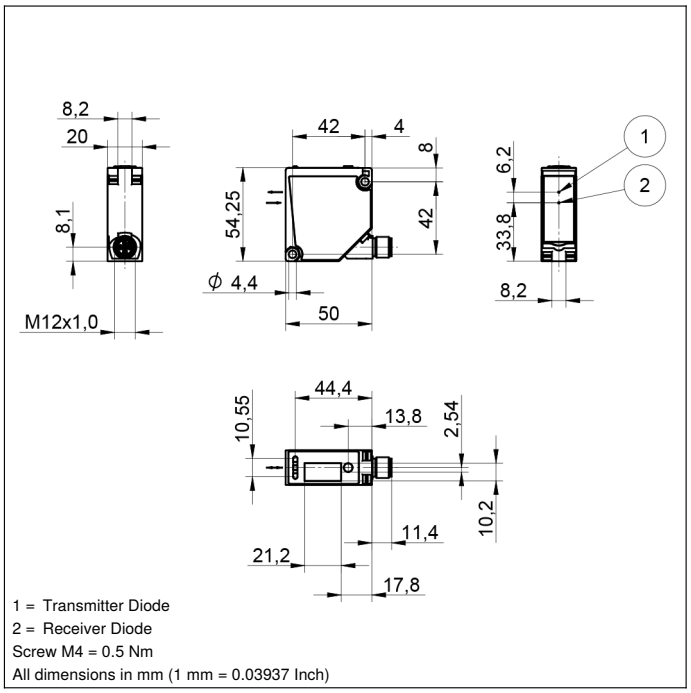
Optical Data	
Working Range	200...100000 mm
Measuring Range	200...100000 mm
Reference Reflector/Reflector Foil	ZRAF08K01
Reproducibility maximum	20 mm*
Linearity Deviation	50 mm*
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Beam Divergence	< 2 mrad
Max. Ambient Light	25000 Lux
Light Spot Diameter	see Table 1
Reflector required	yes
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 60 mA
Measuring Rate	50 /s*
Measuring Rate (max.)	100 /s*
Temperature Drift	< 0,4 mm/K
Temperature Range	-40...50 °C**
Analog Output	4...20 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	IO-Link V1.1.3
IO-Link transmission speed	COM3
Protection Class	III
FDA Accession Number	2412451-000
Mechanical Data	
Setting Method	Menu (OLED)
Housing Material	Plastic, ABS
Optic Cover	Plastic, PMMA
Degree of Protection	IP67
Degree of Protection	IP68
Connection	M12 × 1; 5-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	353,85 a
PNP NO	●
Analog Output	●
IO-Link	●
Connection Diagram No.	242
Control Panel No.	X6
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	380

* Depends on mode, see table 2

** At max. 10,000 lux ambient light and min. 500 ohm load at analog output

Complementary Products

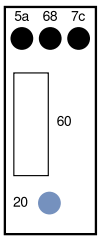
IO-Link Master
Protective Screen
Reflector, Reflector Foil
Software



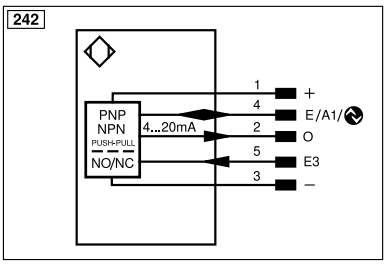
1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 0.5 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

X6



20 = Enter key
5a = Switching Status Indicator, A1
60 = display
68 = Power LED
7c = Analog Output Indicator, O



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	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
V̄	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	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower 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
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

Table 1

Working Distance	0 m	50 m	100 m
Light Spot Diameter	5 mm	< 100 mm	< 200 mm

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,2...50 m	**RF5050**	0,2...25 m
RE6151BM	0,2...20 m	**ZRAF07K01**	0,2...75 m
RF505	0,2...75 m	**ZRAF08K01**	0,2...100 m
RF508	0,2...25 m	**ZRDF03K01**	0,2...25 m
RF258	0,2...20 m	**ZRDF10K01**	0,2...50 m
RF100100	0,2...50 m		