

Laser Distance Sensor

Time of Flight

P1PX203

Part Number

der wintec.



- 2 mutually independent switching outputs
- Graphical display for easy operation
- No interactive influence
- Wide working range and precise detection thanks to DS technology
- Wireless settings via Bluetooth

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.



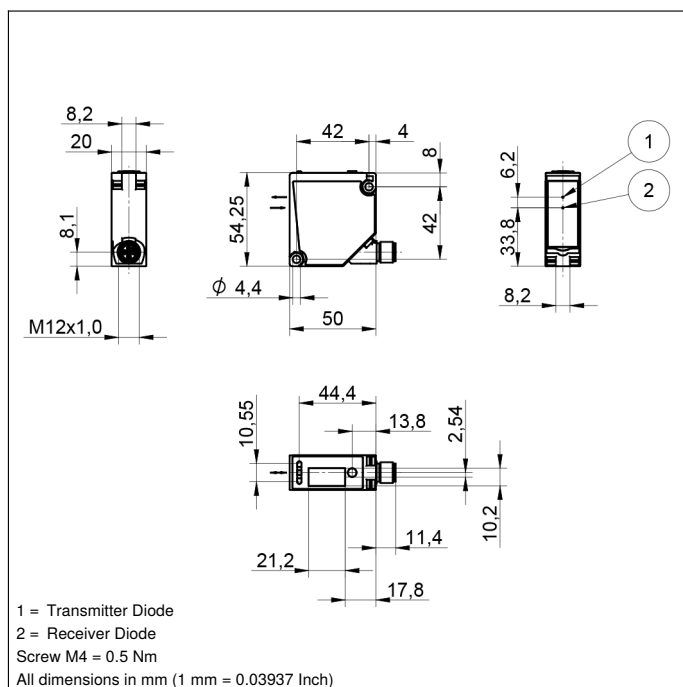
Technical Data

Optical Data	
Working Range	200...100000 mm
Setting Range	200...100000 mm
Reference Reflector/Reflector Foil	ZRAF08K01
Reproducibility maximum	20 mm*
Linearity Deviation	50 mm*
Switching Hysteresis	< 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 (U _b = 24 V)	< 60 mA
Switching Frequency	25 Hz*
Switching Frequency (max.)	50 Hz*
Response Time	30 ms *
Response Time (min.)	15 ms *
Temperature Drift	< 0,4 mm/K
Temperature Range	-40...50 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 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	(OLED)/Bluetooth menu
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)	369,13 a
NPN NO	●
IO-Link	●
Connection Diagram No.	243
Control Panel No.	X7
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	380

* Depends on mode, see table 2

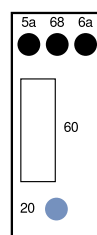
Complementary Products

IO-Link Master
Protective Screen
Reflector, Reflector Foil
Software

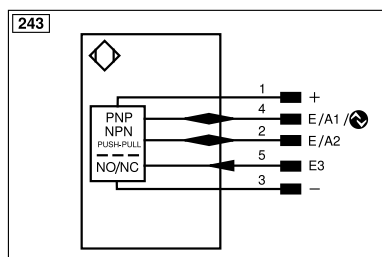


Ctrl. Panel

X7



20 = Enter key
5a = Switching Status Indicator, A1
60 = display
68 = Power LED
6a = Switching Status Indicator, A2



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ů	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	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	Contact Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/A (TTL)
		ENBrs422	Encoder B/B (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		AOK	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		OLt	Brightness output
		M	Maintenance
		rsv	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

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		

