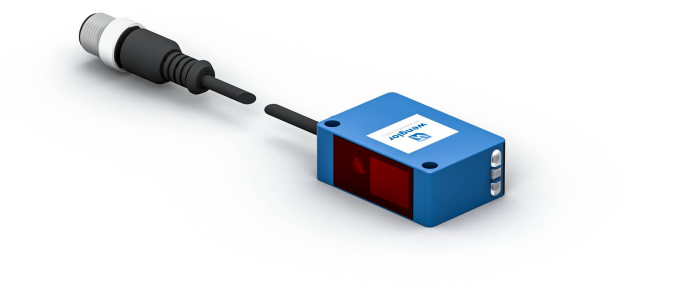
Laser Distance Sensor
Time of Flight

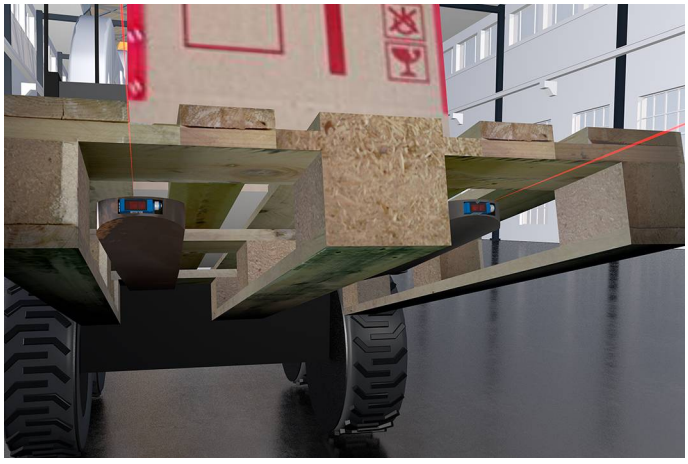
P1KY016
Part Number

der wintec.



- **2 mutually independent switching outputs**
- **Interference-free towards gloss in the background with wintec**
- **Miniature design**
- **No mutual interference with wintec**
- **Reliable in case of glossy objects with wintec**
- **Secure detection of black objects also in extremely inclined positions with wintec**

These miniature sensors determine distance between the sensor and the object by means of transit time measurement.
wenglor's interference-free technology (wintec) is revolutionizing sensor technology: it prevents numerous sensors arranged directly opposite or next to each other from interfering with one another. The sensors reach a very high switching frequency and use laser class 1, which is safe for the human eye.



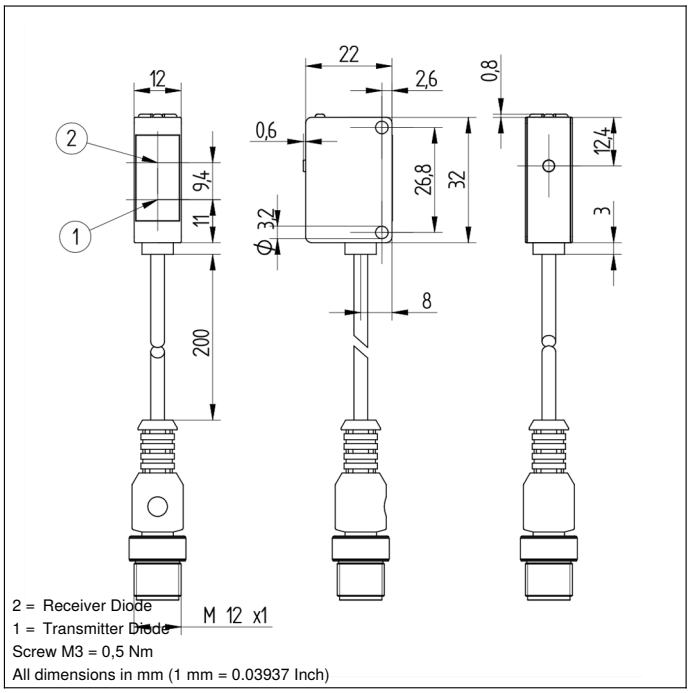
Technical Data

Optical Data	
Working Range	0...1000 mm
Setting Range	100...1000 mm
Switching Hysteresis	< 20 mm
Light Source	Laser, red
Wavelength	680 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Beam Divergence	< 16 mrad
Max. Ambient Light	10000 Lux
Light Spot Diameter	see table 1
Triple Dot Laser	yes
Reflector required	no
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	500 Hz
Response Time	1 ms
Temperature Drift (-10 °C < Tu ≤ 50 °C)	< 2 %
Temperature Drift (-40 °C < Tu ≤ 50 °C)	< 3 %
Temperature Range	-40...60 °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
Protection Class	III
FDA Accession Number	1620293-001
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic, ABS/PC
Housing Material	Plastic, PC
Cable Jacket Material	Plastic, PUR
Optic Cover	Plastic, PMMA
Degree of Protection	IP67
Connection Type	1 plug with cable
Connection	M12 × 1; 4-pin
Cable length (L)	200 mm
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1021,76 a
Scope of delivery	1 × initial start-up instructions
	1 × sensor
PNP NC	●
IO-Link	●
Connection Diagram No.	374
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	400

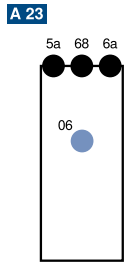
* Temperature range with permanently installed cable, bending radius: > 20 mm

Complementary Products

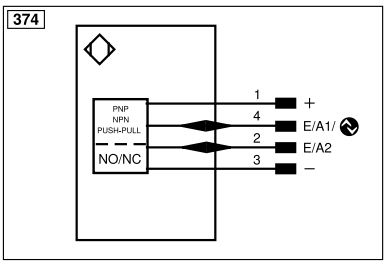
IO-Link Master
Software



Ctrl. Panel



06 = Teach Button
5a = Switching Status Indicator, O1
68 = Power LED
6a = Switching Status Indicator, O2



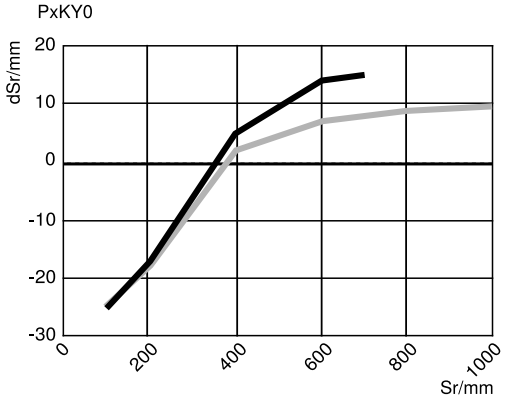
Legend					
+	Supply Voltage +	PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)
–	Supply Voltage 0 V	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENA	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	ENB	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	AOK	Digital output OK
E	Input (analog or digital)	O–	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
R	Reset 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/Ō (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow

Table 1

Working Distance	100 mm	500 mm	1000 mm
Light Spot Diameter	4 mm	7 mm	15 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



dSr = Switching Distance Change
Sr = Switching Distance
grey 18 % remission
black 6 % remission

Specifications are subject to change without notice V0-09.09.2026