Reflex Sensor

with Background Suppression

YM22PCT2

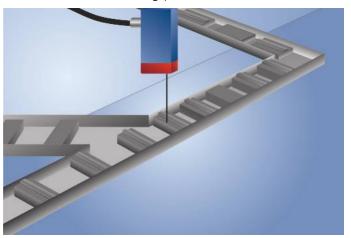
LASER

Part Number



- Good black & white characteristics
- High switching frequency
- Large detection range
- Teach-in, external teach-in

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



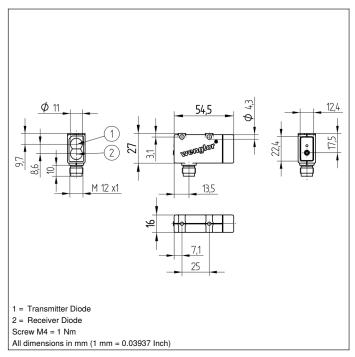
Technical Data

Range 200 mm Adjustable Range 35200 mm Switching Hysteresis < 10 % Light Source Laser (red) Wavelength 650 nm Service Life (T = +25 °C) 100000 h Laser Class (EN 60825-1) 2 Max. Ambient Light 10000 Lux Light Spot Diameter 1 mm at a Distance of 120 mm Electrical Data 1030 V DC Current Consumption (Ub = 24 V) < 30 mA Switching Frequency 1600 Hz Response Time 313 µs On-/Off-Delay (RS-232) 01 s Temperature Drift < 5 % Temperature Range -2560 °C Switching Output Voltage Drop < 2,5 V PNP Switching Output/Switching Current 200 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number<	Optical Data					
Switching Hysteresis < 10 %	Range	200 mm				
Light Source Wavelength Service Life (T = +25 °C) Laser Class (EN 60825-1) Max. Ambient Light Light Spot Diameter at a Distance of Electrical Data Supply Voltage Current Consumption (Ub = 24 V) Response Time On-/Off-Delay (RS-232) Temperature Brige Switching Output Voltage Drop PNP Switching Output Voltage Drop Reverse Polarity Protection Voerload Protection Lockable Teach Mode Protection Class FDA Accession Number Mechanical Data Setting Method PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	Adjustable Range	35200 mm				
Wavelength 650 nm Service Life (T = +25 °C) 100000 h Laser Class (EN 60825-1) 2 Max. Ambient Light 10000 Lux Light Spot Diameter 1 mm at a Distance of 120 mm Electrical Data Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA	Switching Hysteresis	< 10 %				
Service Life (T = +25 °C) 100000 h Laser Class (EN 60825-1) 2 Max. Ambient Light 10000 Lux Light Spot Diameter 1 mm at a Distance of 120 mm Electrical Data Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA	Light Source	Laser (red)				
Laser Class (EN 60825-1) 2 Max. Ambient Light 10000 Lux Light Spot Diameter 1 mm at a Distance of 120 mm Electrical Data 1030 V DC Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA	Wavelength	650 nm				
Max. Ambient Light 1 0000 Lux Light Spot Diameter 1 mm at a Distance of 120 mm Electrical Data 1030 V DC Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA	Service Life (T = +25 °C)	100000 h				
Light Spot Diameter at a Distance of 120 mm Electrical Data Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA Switching Frequency 1600 Hz Response Time 313 µs On-/Off-Delay (RS-232) 01 s Temperature Drift < 5 % Temperature Range -2560 °C Switching Output Voltage Drop < 2,5 V PNP Switching Output/Switching Current 200 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. 152 Control Panel No. M3 Suitable Connection Equipment No. 2	Laser Class (EN 60825-1)	2				
at a Distance of Electrical Data Supply Voltage	Max. Ambient Light	10000 Lux				
Electrical Data Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA Switching Frequency 1600 Hz Response Time 313 µs On-/Off-Delay (RS-232) 01 s Temperature Drift < 5 % Temperature Range -2560 °C Switching Output Voltage Drop < 2,5 V PNP Switching Output/Switching Current 200 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. 152 Control Panel No. M3 Suitable Connection Equipment No. 22	Light Spot Diameter	1 mm				
Supply Voltage 1030 V DC Current Consumption (Ub = 24 V) < 30 mA Switching Frequency 1600 Hz Response Time 313 µs On-/Off-Delay (RS-232) 01 s Temperature Drift < 5 % Temperature Range -2560 °C Switching Output Voltage Drop < 2,5 V PNP Switching Output/Switching Current 200 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. 152 Control Panel No. M3 Suitable Connection Equipment No. 2	at a Distance of	120 mm				
Current Consumption (Ub = 24 V) Switching Frequency Response Time On-/Off-Delay (RS-232) Temperature Drift Temperature Range -2560 °C Switching Output Voltage Drop PNP Switching Output/Switching Current Short Circuit Protection Quest Protection Lockable Teach Mode Teach Mode Teach Mode PTA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection PNP NO/NC switchable RS-232 with Adapterbox Connection Equipment No. 1600 Hz 230 mA 1600 °C 5% 72560 °C 24,5 V PNP Switching Output/Switching Current 200 mA 200 mA	Electrical Data					
Switching Frequency Response Time On-/Off-Delay (RS-232) On-/Off-Delay (RS-232) Temperature Drift Temperature Range -2560 °C Switching Output Voltage Drop PNP Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection yes Overload Protection Uckable Teach Mode HT, VT Protection Class III FDA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	Supply Voltage	1030 V DC				
Response Time On-/Off-Delay (RS-232) On-/Off-Delay (RS-232) Temperature Drift Conperature Range -2560 °C Switching Output Voltage Drop PNP Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection Overload Protection yes Teach Mode Teach Mode HT, VT Protection Class III PDA Accession Number Mechanical Data Setting Method Teach-In Housing Material Full Encapsulation Degree of Protection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 152	Current Consumption (Ub = 24 V)	< 30 mA				
On-/Off-Delay (RS-232) Temperature Drift Connection Diagram No. On-/Off-Delay (RS-232) O1 s O.	Switching Frequency	1600 Hz				
Temperature Drift	Response Time	313 <i>µ</i> s				
Temperature Range -2560 °C Switching Output Voltage Drop <2,5 V PNP Switching Output/Switching Current 200 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	On-/Off-Delay (RS-232)	01 s				
Switching Output Voltage Drop PNP Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection Ves Overload Protection Lockable Teach Mode Teach Mode HT, VT Protection Class III FDA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	Temperature Drift	< 5 %				
PNP Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection Overload Protection Lockable Teach Mode Teach Mode Teach Mode HT, VT Protection Class III FDA Accession Number Mechanical Data Setting Method Teach-In Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	Temperature Range	-2560 °C				
Short Circuit Protection Reverse Polarity Protection Overload Protection Lockable Teach Mode Teach Mode FDA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Control Panel No. Suitable Connection Equipment No.	Switching Output Voltage Drop	< 2,5 V				
Reverse Polarity Protection Overload Protection Lockable Teach Mode Teach Mode Protection Class III FDA Accession Number Mechanical Data Setting Method Teach-In Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	PNP Switching Output/Switching Current	200 mA				
Overload Protection Lockable Teach Mode Teach Mode Protection Class III FDA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Control Panel No. Suitable Connection Equipment No.	Short Circuit Protection	yes				
Lockable yes Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Reverse Polarity Protection	yes				
Teach Mode HT, VT Protection Class III FDA Accession Number 0820359-000 Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Overload Protection	yes				
Protection Class FDA Accession Number 0820359-000 Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 1152 2	Lockable	yes				
FDA Accession Number Mechanical Data Setting Method Housing Material Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Control Panel No. Suitable Connection Equipment No. 0820359-000 Mechanical Plastic Plastic Plastic Plastic Plastic Full Encapsulation yes IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable Solution IS2 IS3 IS3 IS3 IS3 IS3 IS3 IS3	Teach Mode	HT, VT				
Mechanical Data Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. I52 Control Panel No. M3 Suitable Connection Equipment No. 2	Protection Class	III				
Setting Method Teach-In Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	FDA Accession Number	0820359-000				
Housing Material Plastic Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No.	Mechanical Data					
Full Encapsulation Degree of Protection Connection PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Setting Method	Teach-In				
Degree of Protection IP67 Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Housing Material	Plastic				
Connection M12 × 1; 4-pin PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Full Encapsulation	yes				
PNP NO/NC switchable RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Degree of Protection	IP67				
RS-232 with Adapterbox Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Connection	M12 × 1; 4-pin				
Connection Diagram No. 152 Control Panel No. M3 Suitable Connection Equipment No. 2	PNP NO/NC switchable					
Control Panel No. M3 Suitable Connection Equipment No. 2	RS-232 with Adapterbox					
Suitable Connection Equipment No.	Connection Diagram No.	152				
	Control Panel No.	M3				
Suitable Mounting Technology No. 360	Suitable Connection Equipment No.	2				
	Suitable Mounting Technology No.	360				

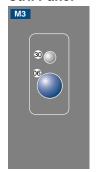
Complementary Products

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Adapterbox A232	
PNP-NPN Converter BG2V1P-N-2M	
Protective Housing ZSV-0x-01	
Set Protective Housing ZSM-NN-02	
Software	



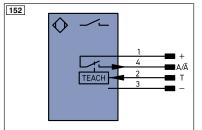


Ctrl. Panel



06 = Teach Button

30 = Switching Status/Contamination Warning



_egen	ıd		PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)	
+	Supply Voltage +		nc	not connected	ENBR5422	Encoder B/B (TTL)	
-	Supply Voltage 0 V		U	Test Input	ENA	Encoder A	
~	Supply Voltage (AC Voltage)		Ū	Test Input inverted	ENB	Encoder B	
Α	Switching Output	(NO)	W	Trigger Input	Amin	Digital output MIN	
Ā	Switching Output	(NC)	W-	Ground for the Trigger Input	Амах	Digital output MAX	
٧	Contamination/Error Output	(NO)	0	Analog Output	Аок	Digital output OK	
V	Contamination/Error Output	(NC)	0-	Ground for the Analog Output	SY In	Synchronization In	
E	Input (analog or digital)		BZ	Block Discharge	SY OUT	Synchronization OUT	
Т	Teach Input		Awv	Valve Output	OLT	Brightness output	
Z	Time Delay (activation)		а	Valve Control Output +	М	Maintenance	
S	Shielding		b	Valve Control Output 0 V	rsv	reserved	
RxD	Interface Receive Path		SY	Synchronization	Wire Co	Wire Colors according to DIN IEC 757	
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	
0	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	
BI_D+/-	Ethernet Gigabit bidirect, data	line (A-D)	RES	Input confirmation	PK	Pink	
ENOR5422	Encoder 0-pulse 0-0 (TTL)	, ,	EDM	Contactor Monitoring	GNYE	Green/Yellow	

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

