Print Mark Sensor

wenglor®
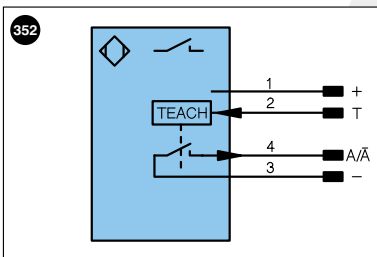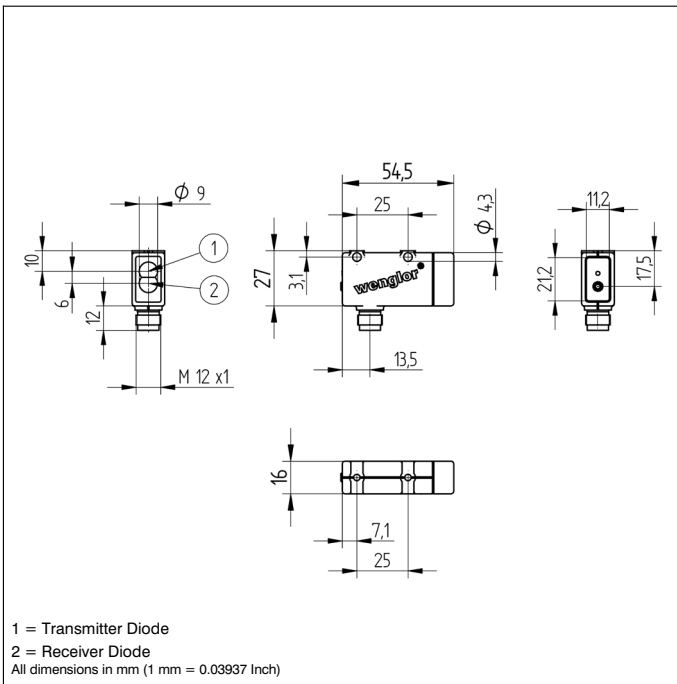
WM03NCT2
Part Number

- ● **Compact Housing**
- ● **Small Light Spot**
- ● **Teach-In, external Teach-In, RS-232 Interface**
- ● **White Light for recognition of any print mark combinations**

These sensors have been specially designed to recognize print marks. They have a very small spot and use a white light LED with long service life. Only one sensor is required for the recognition of all color combinations, as well as the difference in brightness between print marks and the background.
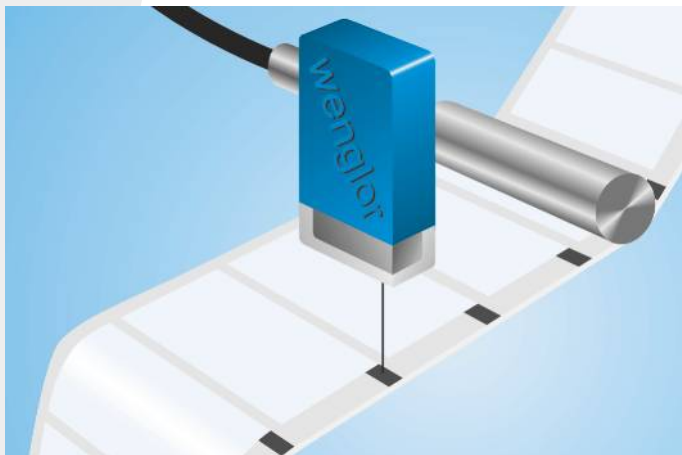
Technical Data

Optical Data	
Working Range	12...18 mm
Working Distance	15 mm
Resolution	20 Gray Scale
Switching Hysteresis	< 2 %
Light Source	White Light
Wave Length	400...700 nm
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	1,5 × 2,5 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	5 kHz
Response Time	100 µs
On-/Off-Delay	20 ms
On-/Off-Delay (RS-232)	0...2 s
Temperature Drift	< 2 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
NPN Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	ZT,FT
Protection Class	III
Mechanical Data	
Adjustment	Teach-In
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
NPN NO/NC switchable	●
RS-232 with Adapterbox	●
Connection Diagram No.	352
Control Panel No.	M 7
Suiting Connection Technology No.	2
Suiting Mounting Technology No.	360

CE   PGT ME 61   RoHS   /III/   c UL us LISTED IND. CONT. EQ. 72ML For use in class 2 circuits

1 = Transmitter Diode
2 = Receiver Diode
All dimensions in mm (1 mm = 0.03937 Inch)

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Legend					
+	Supply Voltage +	U	Test Input	PoE	Power over Ethernet
−	Supply Voltage 0 V	Ū	Test Input inverted		
~	Supply Voltage (AC Voltage)	W	Trigger Input		
A	Switching Output (NO)	O	Analog Output		Wire Colors according to DIN IEC 757
Ā	Switching Output (NC)	O−	Ground for the Analog Output		
V	Contamination/Error Output (NO)	BZ	Block Discharge	BK	Black
V̄	Contamination/Error Output (NC)	AMW	Valve Output	BN	Brown
E	Input (analog or digital)	a	Valve Control Output +	RD	Red
T	Teach Input	b	Valve Control Output 0 V	OG	Orange
Z	Time Delay (activation)	SY	Synchronization	YE	Yellow
S	Shielding	E+	Receiver-Line	GN	Green
RxD	Interface Receive Path	S+	Emitter-Line	BU	Blue
TxD	Interface Send Path	⏚	Grounding	VT	Violet
RDY	Ready	SnR	Switching Distance Reduction	GY	Grey
GND	Ground	Rx+/−	Ethernet Receive Path	WH	White
CL	Clock	Tx+/−	Ethernet Send Path	PK	Pink
E/A	Output/Input programmable	Bus	Interfaces-Bus A(+)/B(−)	GNYE	Green Yellow
⬡	**IO**-Link	La	Emitted Light disengageable		

Complementary Products

Adapterbox A232
Protection Housing Set ZSM-NN-02
Protection Housing ZSV-0x-01

Ctrl.Panel

M 7
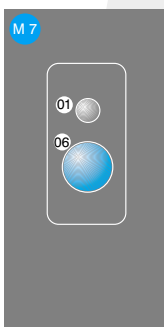
01 = Switching Status Indicator
06 = Teach Button

Ideal Working Distance

a = Working Distance
b = Working Range