

Print Mark Reader

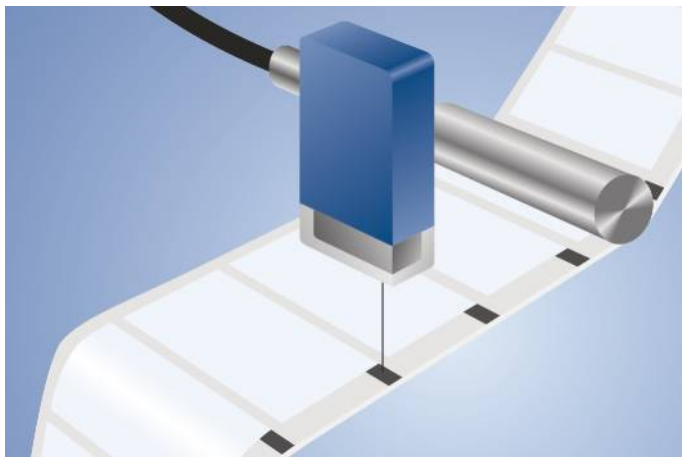
WM03PCT2

Part Number



- Compact housing
- Small light spot
- Teach-in, external teach-in
- 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
Spot Diameter	1,5 × 2,5 mm

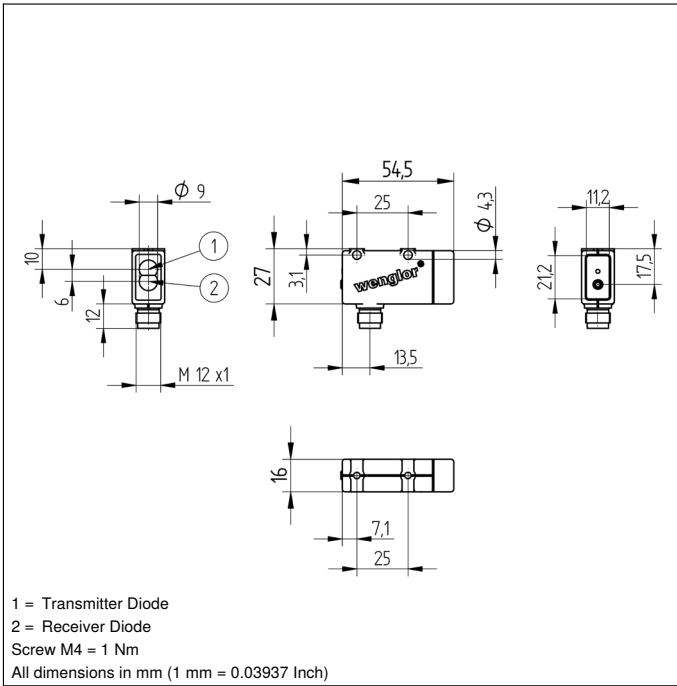
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	5 kHz
Response Time	100 μs
Off-Delay	20 ms
Off-Delay (RS-232)	0...2 s
Temperature Drift	< 2 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	ZT, FT
Protection Class	III

Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

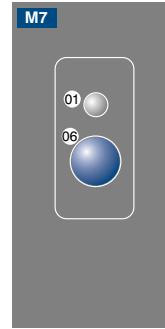
PNP NO/NC switchable	●
RS-232 with Adapterbox	●
Connection Diagram No.	152
Control Panel No.	M7
Suitable Connection Technology No.	2
Suitable Mounting Technology No.	360

Complementary Products

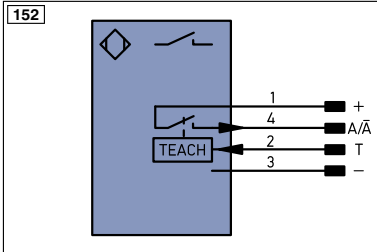
Adapterbox A232
PNP-NPN Converter BG2V1P-N-2M
Protection Housing Set ZSM-NN-02
Protection Housing ZSV-0x-01
wTeach2 software DNNF005



Ctrl. Panel



01 = Switching Status Indicator
 06 = Teach Button



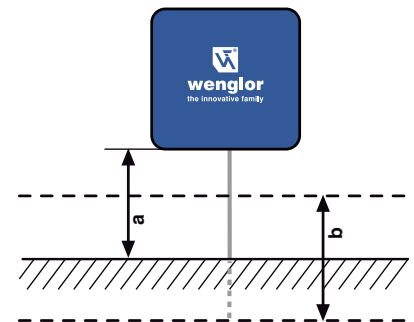
Legend

+	Supply Voltage +	nc	not connected	ENa	Encoder A
-	Supply Voltage 0 V	U	Test Input	ENb	Encoder B
~	Supply Voltage (AC Voltage)	U	Test Input inverted	AMIN	Digital output MIN
A	Switching Output (NO)	W	Trigger Input	AMAX	Digital output MAX
Ā	Switching Output (NC)	O	Analog Output	AOK	Digital output OK
V	Contamination/Error Output (NO)	O-	Ground for the Analog Output	SY In	Synchronization In
ṽ	Contamination/Error Output (NC)	BZ	Block Discharge	SY OUT	Synchronization OUT
E	Input (analog or digital)	Aw	Valve Output	Out	Brightness output
T	Teach Input	a	Valve Control Output +	M	Maintenance
Z	Time Delay (activation)	b	Valve Control Output 0 V		
S	Shielding	SY	Synchronization		
RxD	Interface Receive Path	E+	Receiver-Line		
TxD	Interface Send Path	S+	Emitter-Line		
RDY	Ready	≡	Grounding		
GND	Ground	SnR	Switching Distance Reduction		
CL	Clock	Rx+/-	Ethernet Receive Path		
E/A	Output/Input programmable	Tx+/-	Ethernet Send Path		
	IO-Link	Bus	Interfaces-Bus A(+)/B(-)		
PoE	Power over Ethernet	La	Emitted Light disengageable		
IN	Safety Input	Mag	Magnet activation		
OSSD	Safety Output	RES	Input confirmation		
Signal	Signal Output	EDM	Contacting Monitoring		
Bl..D+/-	Ethernet Gigabit bidirect. data line (A-D)	ENaRS42	Encoder A/Ā (TTL)		
EN0RS42	Encoder 0-pulse 0-0 (TTL)	ENbRS42	Encoder B/B̄ (TTL)		

Wire Colors according to DIN IEC 757

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

Ideal Working Distance



a = Working Distance
 b = Working Range

