

# Contrast Sensor

## YM24PAH2ANZ

## LASER

Part Number



- High switching frequency
- Small light spot
- Time delay can be activated

### Technical Data

#### Optical Data

Range	150 mm
Adjustable Range	60...150 mm
Switching Hysteresis (Lateral Approach)	< 50 $\mu$ m
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Spot Diameter	1 mm

#### Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 30 mA
Switching Frequency	3 kHz
Response Time	166 $\mu$ s
On-Delay	5 ms
Temperature Drift	< 5 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

#### Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin

PNP NO/NC antivalent



Connection Diagram No.

101

Control Panel No.

M6

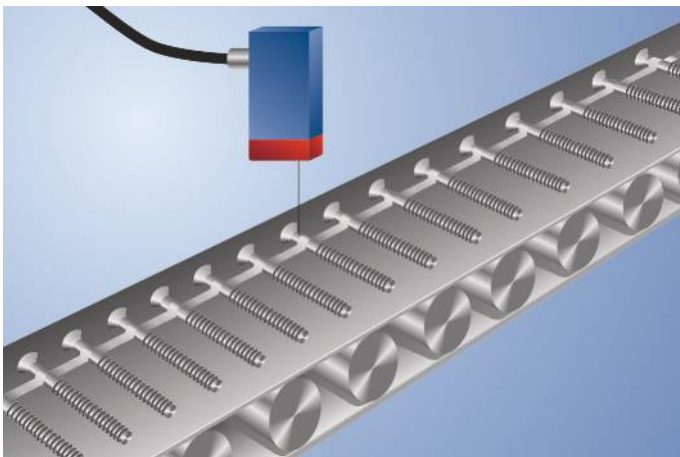
Suitable Connection Technology No.

2

Suitable Mounting Technology No.

360

These sensors are especially well suited for high speed recognition of contrast differences.

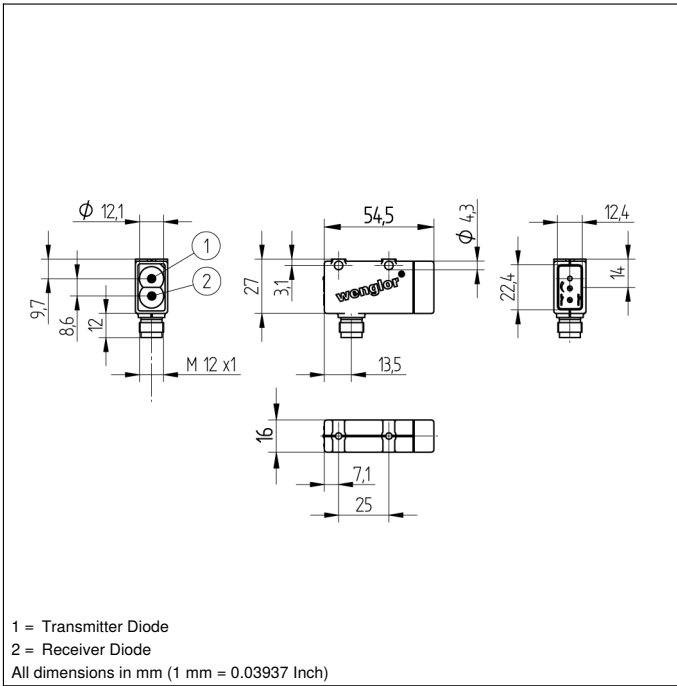


### Complementary Products

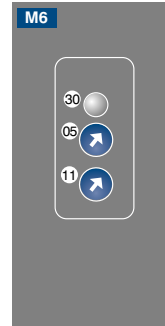
PNP-NPN Converter BG2V1P-N-2M

Protective Housing ZSV-0x-01

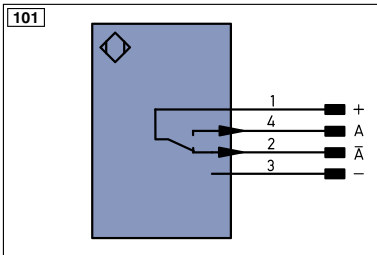
Set Protective Housing ZSM-NN-02




### Ctrl. Panel



05 = Switching Distance Adjuster  
 11 = ON-Delay/OFF-Delay Adjuster  
 30 = Switching Status/Contamination Warning



### Legend

+	Supply Voltage +	PT	Platinum measuring resistor	ENa	Encoder A
-	Supply Voltage 0 V	nc	not connected	ENb	Encoder B
~	Supply Voltage (AC Voltage)	U	Test Input	AMIN	Digital output MIN
A	Switching Output (NO)	U	Test Input inverted	AMAX	Digital output MAX
Ā	Switching Output (NC)	W	Trigger Input	AOK	Digital output OK
V	Contamination/Error Output (NO)	O	Analog Output	SY In	Synchronization In
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY OUT	Synchronization OUT
E	Input (analog or digital)	BZ	Block Discharge	Out	Brightness output
T	Teach Input	AWV	Valve Output	M	Maintenance
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	E+	Receiver-Line		
RDY	Ready	S+	Emitter-Line		
GND	Ground	≡	Grounding		
CL	Clock	SnR	Switching Distance Reduction		
E/A	Output/Input programmable	Rx +/-	Ethernet Receive Path		
	IO-Link	Tx +/-	Ethernet Send Path		
PoE	Power over Ethernet	Bus	Interfaces-Bus A(+)/B(-)		
IN	Safety Input	La	Emitted Light disengageable		
OSSD	Safety Output	Mag	Magnet activation		
Signal	Signal Output	RES	Input confirmation		
Bl..D +/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contactur Monitoring		
EN0RS42Z	Encoder 0-pulse 0-0 (TTL)	ENAR542Z	Encoder A/Ā (TTL)		
		ENBR542Z	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

