

Reflex Sensor with Background Suppression

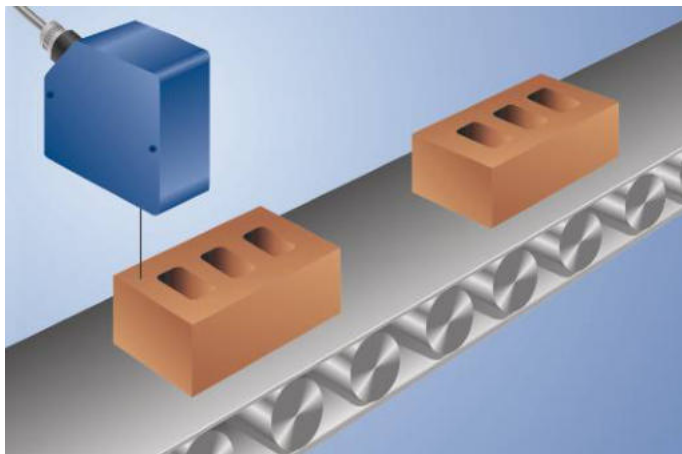
HT77MGV80

Part Number



- Digital, analog and error output
- Go/no-go testing possible
- Infrared light
- Triple beam correction principle

These sensors are equipped with an analog output, as well as a digital output. The upper and lower switching points of the digital output can be adjusted with two potentiometers. The digital output is activated when an object is located within the window defined in this way.

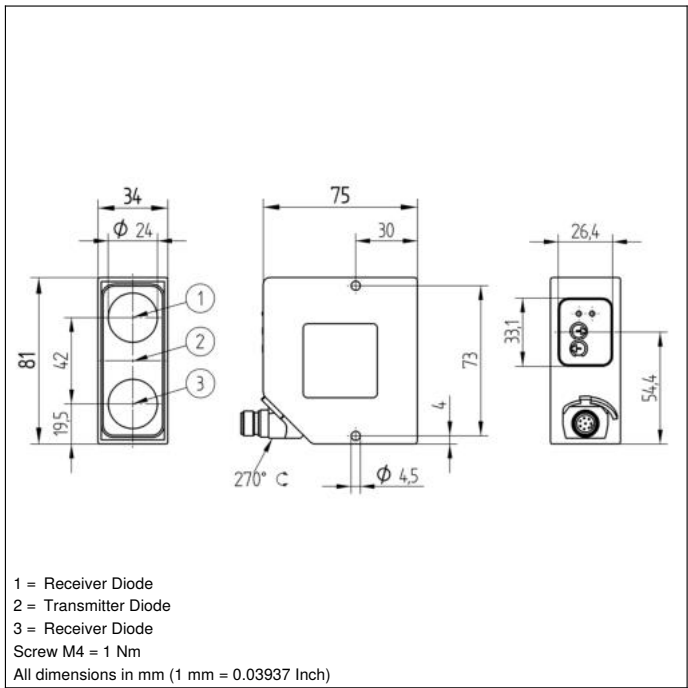


Technical Data

Optical Data	
Working Range	300...1300 mm
Measuring Distance	800 mm
Measuring Range	1000 mm
Resolution	see Table 1
Linearity	5 %
Switching Hysteresis	50 mm
Light Source	Infrared Light
Wavelength	880 nm
Service Life (T = +25 °C)	100000 h
Risk Group (EN 62471)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 50 mA
Cut-Off Frequency	50 Hz
Response Time	10 ms
Temperature Drift	500 µm/K
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Error Output Voltage Drop	< 2,5 V
PNP Error Output/Switching Current	200 mA
Analog Output	0...10 V
Output Current Analog Output	500 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 8-pin
Error Output	●
PNP NO	●
Analog Output	●
Connection Diagram No.	506
Control Panel No.	T5
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	330

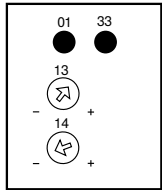
Complementary Products

Analog Evaluation Unit AW02

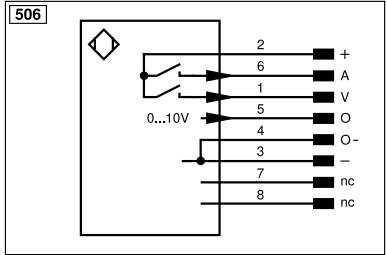


Ctrl. Panel

T5



01 = Switching Status Indicator
13 = Upper Potentiometer
14 = Lower Potentiometer
33 = Analog Voltage Output/Error Warning



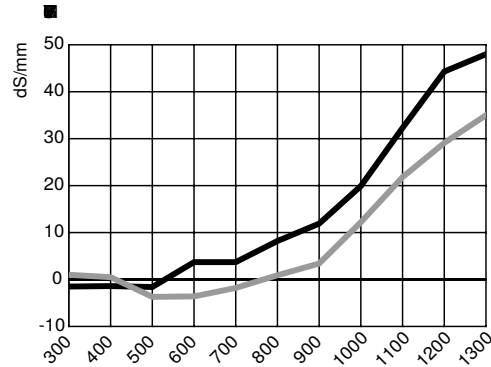
Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
Ū	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
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	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARIS422	Encoder A/Ā (TTL)
		ENBRIS422	Encoder B/B̄ (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		ACK	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		OLT	Brightness output
		M	Maintenance
		rsv	Reserved
		Wire Colors according to DIN IEC 60757	
		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

Table 1

Working Distance	300 mm	800 mm	1300 mm
Light Spot Diameter	6 mm	18 mm	30 mm
Resolution	0,2 mm	8 mm	30 mm

Error of Measurement

Typical characteristic curve based on white, 90 % remission



S = Measuring Distance
dS = Deviation

— black 6 % remission
— grey 18 % remission

