

Reflex Sensor with Background Suppression

HD09MG-P24

Part Number

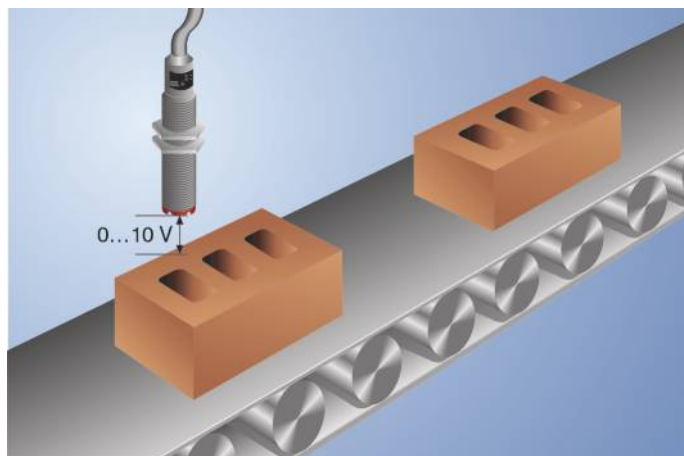


- Analog output
- Error message
- Red light

Technical Data

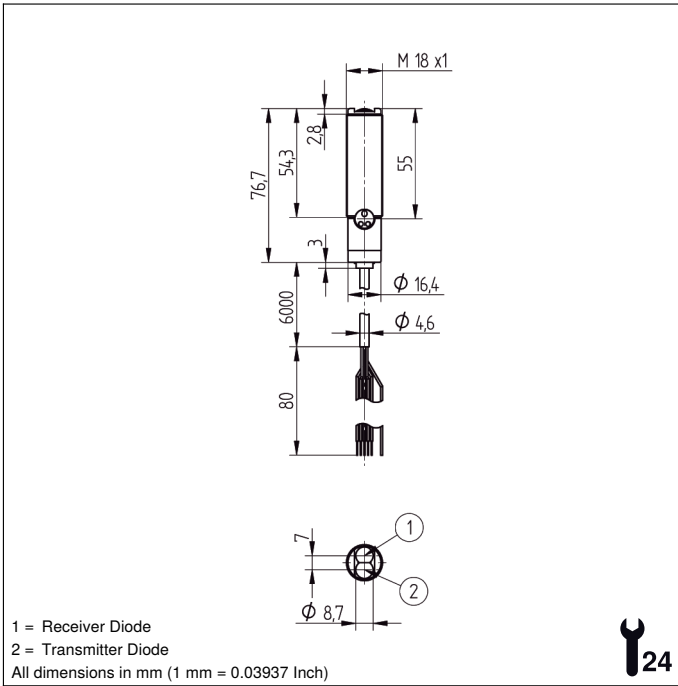
Optical Data	
Working Range	35...85 mm
Measuring Distance	60 mm
Measuring Range	50 mm
Resolution	500 μm
Linearity	< 2 %
Light Source	Red Light
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	2 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Cut-Off Frequency	100 Hz
Response Time	5 ms
Temperature Drift	35 $\mu\text{m}/\text{K}$
Temperature Range	-10...60 °C
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
Protection Class	III
Mechanical Data	
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	Cable, 6-wire, 6 m
Analog Output	●
Connection Diagram No.	613
Control Panel No.	D13
Suitable Mounting Technology No.	150

These sensors can measure distances and display analog output. Their high resolution and wide variety of measuring ranges allow them to be used in innumerable applications. The output signal is practically independent of the object's color.



Complementary Products

Analog Evaluation Unit AW02
Dust Extraction Tube STAUBTUBUS-01

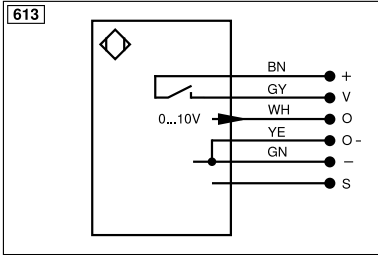


Ctrl. Panel

D



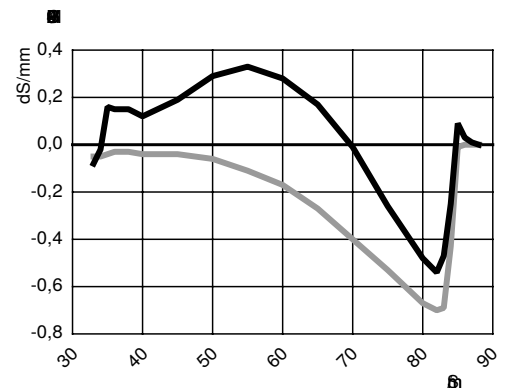
12 = Analog Output Indicator
 79 = Run/Error Indicator



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	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
ȳ	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	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	ENARs422	Encoder A/A (TTL)
			Encoder B/B (TTL)
			ENA Encoder A
			ENb Encoder B
			AMIN Digital output MIN
			AMAX Digital output MAX
			Aok 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

Error of Measurement

Typical characteristic curve based on white, 90 % remission



S = Measuring Distance

dS = Deviation

— black 6 % remission

— grey 18 % remission

