

Reflex Sensor
with Analog Output

HD09MG-P24

Part Number

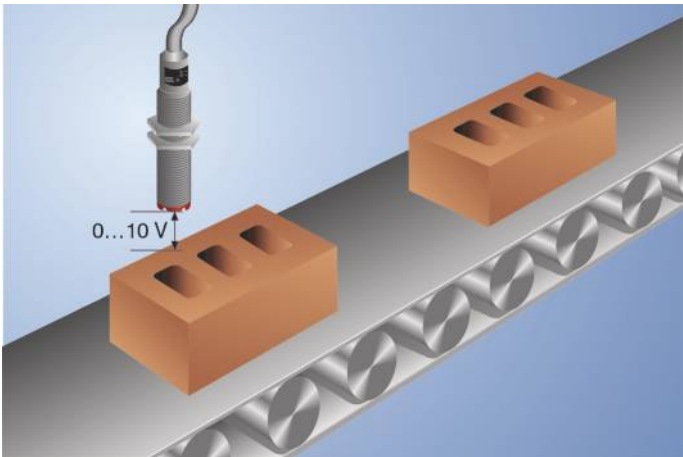


- Analog output
- Error message
- Red light

Technical Data

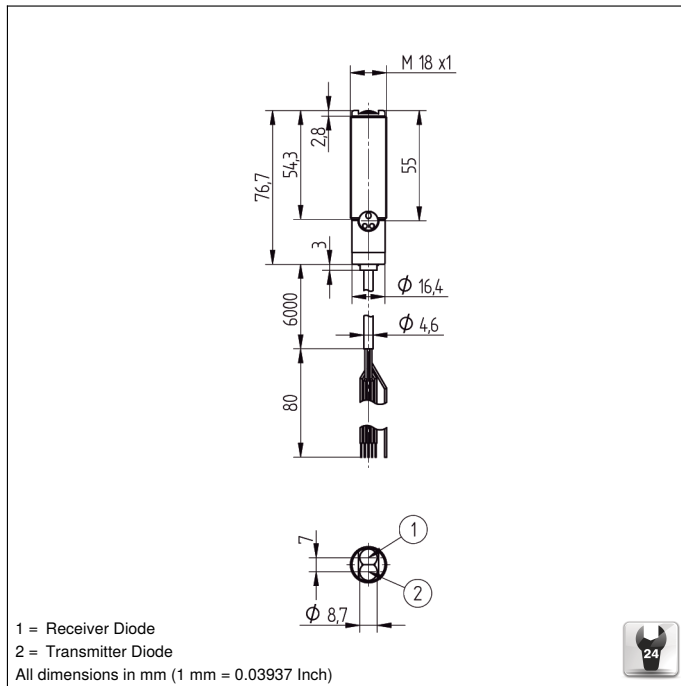
Optical Data	
Working Range	35...85 mm
Measuring Distance	60 mm
Measuring Range	50 mm
Resolution	500 µm
Linearity	< 2 %
Light Source	Red Light
Wave Length	660 nm
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Spot Diameter	2 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 40 mA
Cut-Off Frequency	100 Hz
Response Time	5 ms
Temperature Drift	35 µm/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	Prewired
Cable Length	6,1 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.

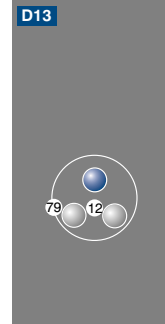


Complementary Products

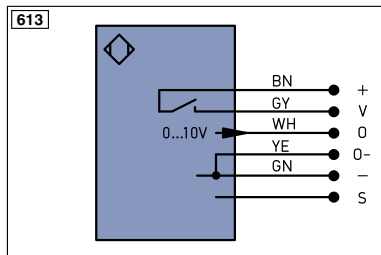
Analog Evaluation Unit AW02
Dust extraction tube STAUBTUBUS-01



Ctrl. Panel



12 = Analog Output Indicator
79 = Run/Error Indicator



Legend

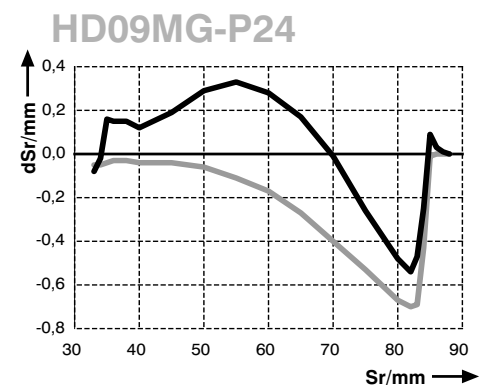
+	Supply Voltage +	PT	Platinum measuring resistor	ENa	Encoder A
-	Supply Voltage 0 V	nc	not connected	ENb	Encoder B
~	Supply Voltage (AC Voltage)	U	Test Input	AMIN	Digital output MIN
A	Switching Output (NO)	U	Test Input inverted	AMAX	Digital output MAX
Ä	Switching Output (NC)	W	Trigger Input	AOK	Digital output OK
V	Contamination/Error Output (NO)	O	Analog Output	SY In	Synchronization In
V	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY OUT	Synchronization OUT
E	Input (analog or digital)	BZ	Block Discharge	LI	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		
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contact Monitoring		
EN0 RS422	Encoder 0-pulse 0-0 (TTL)	ENAR5422	Encoder A/A (TTL)		
		ENBR5422	Encoder B/B (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

Error of Measurement

Typical characteristic curve based on Kodak white (90 % remission)



Sr = Switching Distance

dSr = Switching Distance Change

black 6 % remission

grey 18 % remission

