

# Reflex Sensors

for Measuring Tasks

## HD09MG-P24

Part Number

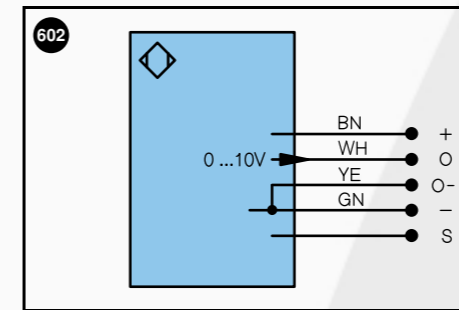


- Analog Output
- Error Message
- Red Light

### Technical Data

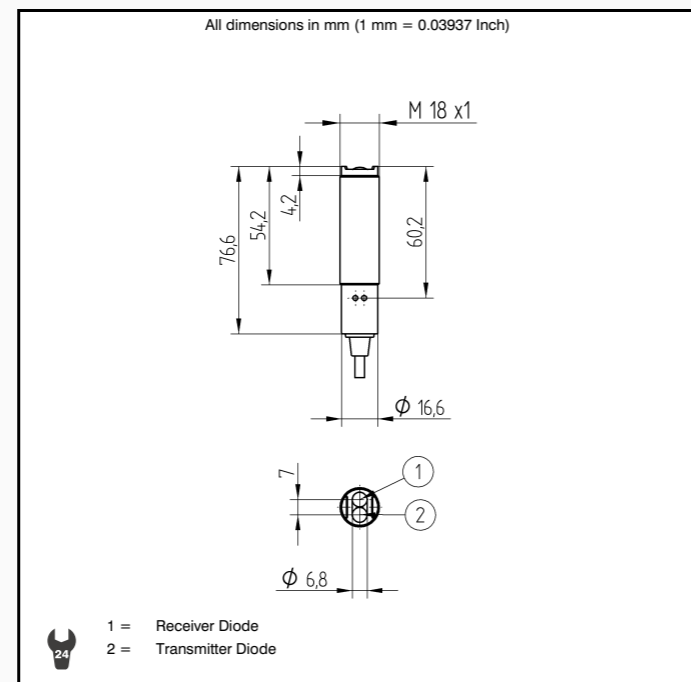
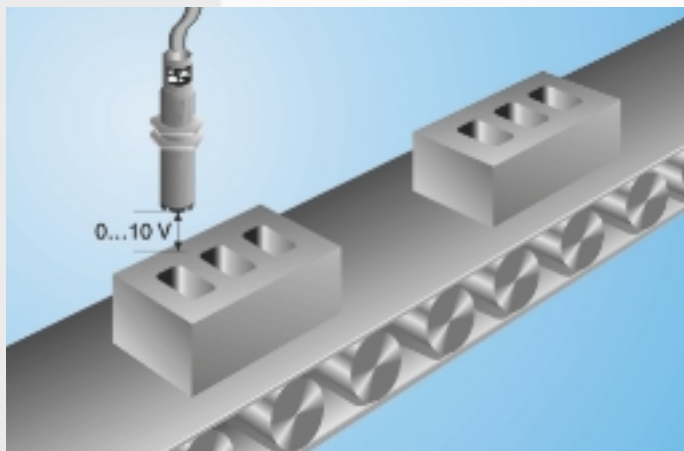
| Optical Data                               |               |
|--|---------------|
| Working Range                              | 35...85 mm    |
| Measuring Distance                         | 60 mm         |
| Measuring Range                            | 50 mm         |
| Resolution                                 | 500 $\mu$ m   |
| Linearity                                  | 2 %           |
| Light Source                               | Red Light     |
| Wave Length                                | 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 <sub>b</sub> = 24V) | < 40 mA       |
| Cut-Off Frequency                          | 100 Hz        |
| Response Time                              | 5 ms          |
| Temperature Drift                          | 20 $\mu$ m/°C |
| Temperature Range                          | -10...60 °C   |
| Analog Output                              | 0...10 V      |
| Output Current Analog Output               | 500 $\mu$ A   |
| Short Circuit Protection                   | yes           |
| Reverse Polarity Protection                | yes           |
| Mechanical Data                            |               |
| Housing                                    | BrasNicPlated |
| Full Encapsulation                         | yes           |
| Protection Mode                            | IP 67         |
| Connection                                 | Prewired      |
| Cabel Length                               | 6 m           |

| Prewired Version       |            |
|------------------------|------------|
| Part Number            | HD09MG-P24 |
| Analog Output          | ●          |
| Connection Diagram No. | 602        |
| Control Panel No.      | D 4        |



| Legend |                                   |     |                              |                                      |
|--------|-----------------------------------|-----|------------------------------|--------------------------------------|
| +      | Power supply "+"                  | U   | Test input                   | Wire colors according to DIN IEC 757 |
| -      | Power supply "0V"                 | W   | Trigger input                | BK black                             |
| -      | Power supply (AC Voltage)         | O   | Analog output (1,2,3,...)    | BN brown                             |
| A      | Switching output (1,2,3...) / NO  | O-  | Ground for the analog output | RD red                               |
| A      | Switching output (1,2,3...) / NC  | Aw  | Valve output                 | OG orange                            |
| V      | Contamination / Error output (NO) | b   | Valve control output "+"     | YE yellow                            |
| V      | Contamination / Error output (NC) | a   | Valve control output "0V"    | GN green                             |
| E      | Input (analog or digital)         | SY  | Synchronization              | BU blue                              |
| T      | Teach input                       | Z   | Time delay (activation)      | VT violet                            |
| Z      | Time delay (activation)           | S   | Shielding                    | GY grey                              |
| S      | Shielding                         | RxD | RS-232 receive path          | WH white                             |
| RxD    | RS-232 receive path               | TxD | RS-232 send path             | PK pink                              |
| TxD    | RS-232 send path                  | ⊕   | Grounding                    | GNYE green yellow                    |

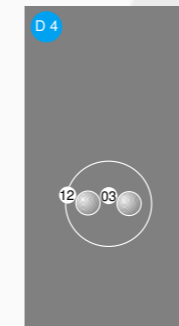
These sensors are equipped with an analog output and can thus be utilized for measuring tasks. The output signal is practically independent of the object's color. High resolution and a wide variety of measuring ranges allow for use in innumerable applications.



### Accessories

- Analog Evaluation Unit AW01
- Mounting Clamp BSM18B
- Mounting Bracket W18

### Ctrl. Panel



- 03 = Error Indicator
- 12 = Analog Output Indicator



### Error of Measurement

Typical characteristic curve based on Kodak white, 90%

