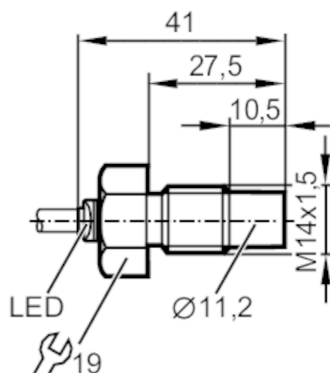


# M9H201



## Cylinder sensor

M9B3002BBPKG/B/AM/500/ZH



### Product characteristics

|                    |                    |
|--------------------|--------------------|
| Electrical design  | PNP                |
| Output function    | normally open      |
| Sensing range [mm] | 2                  |
| Housing            | threaded type      |
| Dimensions [mm]    | M14 x 1.5 / L = 41 |

### Application

|                              |                        |
|------------------------------|------------------------|
| Special feature              | Full-metal housing     |
| Application                  | hydraulic cylinders    |
| Media                        | detects ferrous metals |
| Min. bursting pressure [bar] | 2000                   |
| Pressure rating [bar]        | 500                    |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...36 DC |
| Current consumption [mA]    | < 23       |
| Protection class            | III        |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP           |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 1.6           |
| Max. leakage current [mA]                            | 0.1           |
| Permanent current rating of switching output DC [mA] | 200           |
| Switching frequency DC [Hz]                          | 1000          |
| Short-circuit proof                                  | yes           |
| Overload protection                                  | yes           |

### Detection zone

|                    |   |
|--------------------|---|
| Sensing range [mm] | 2 |
|--------------------|---|

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|                                      |                           |                                                                                                |
|--------------------------------------|---------------------------|------------------------------------------------------------------------------------------------|
| Real sensing range Sr                | [mm]                      | 2 ± 10 %                                                                                       |
| Operating distance                   | [mm]                      | 0...1.62                                                                                       |
| <b>Accuracy / deviations</b>         |                           |                                                                                                |
| Hysteresis                           | [% of Sr]                 | < 15                                                                                           |
| Switch point drift                   | [% of Sr]                 | 10                                                                                             |
| Repeatability                        | [% of Sr]                 | 10                                                                                             |
| <b>Operating conditions</b>          |                           |                                                                                                |
| Pressure peak                        | [bar]                     | 1000                                                                                           |
| Ambient temperature                  | [°C]                      | -25...85                                                                                       |
| Protection                           |                           | IP 65; IP 67                                                                                   |
| <b>Tests / approvals</b>             |                           |                                                                                                |
| EMC                                  | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD                                                                              |
|                                      | EN 61000-4-3 HF radiated  | 10 V/m                                                                                         |
|                                      | EN 61000-4-4 Burst        | 2 kV                                                                                           |
|                                      | EN 61000-4-6 HF conducted | 10 V                                                                                           |
|                                      | EN 55011                  | class B                                                                                        |
|                                      | DIN ISO 11452-5           | 100 V/m                                                                                        |
| Vibration resistance                 | EN 60068-2-6 Fc           | 20 g 50 sweep cycles, 1 octave per minute, in 3 axes / 10...3000 Hz -20...50 °C                |
| Shock resistance                     | EN 60068-2-27 Ea          | 100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes / -40...85 °C |
| Continuous shock resistance          | EN 60068-2-27 Ea          | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes / -20...50 °C          |
| MTTF                                 | [years]                   | 925                                                                                            |
| UL approval                          | UL Approval no.           | C006                                                                                           |
| <b>Mechanical data</b>               |                           |                                                                                                |
| Weight                               | [g]                       | 98.7                                                                                           |
| Housing                              |                           | threaded type                                                                                  |
| Mounting                             |                           | flush mountable                                                                                |
| Dimensions                           | [mm]                      | M14 x 1.5 / L = 41                                                                             |
| Thread designation                   |                           | M14 x 1.5                                                                                      |
| Materials                            |                           | housing: stainless steel stainless steel (1.4404 / 316L); O-ring: FKM                          |
| Tightening torque                    | [Nm]                      | < 25                                                                                           |
| Full-metal housing                   |                           | yes                                                                                            |
| <b>Displays / operating elements</b> |                           |                                                                                                |
| Display                              | switching status          | 1 x LED, yellow                                                                                |
| <b>Remarks</b>                       |                           |                                                                                                |
| Pack quantity                        |                           | 1 pcs.                                                                                         |

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### Electrical connection

Cable: 2 m, PUR; 3 x 0.34 mm<sup>2</sup>

### Connection



Core colours :  
BK = black  
BN = brown  
BU = blue

### Diagrams and graphs

