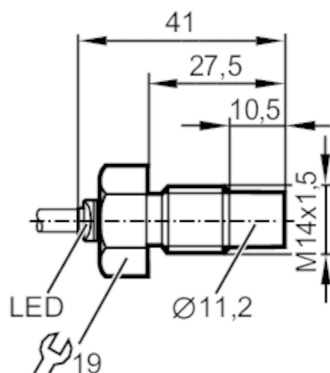


# M9H206



## Cylinder sensor

M9B3002BBPKG/B/AM/500/0,5M/US



### Product characteristics

|                    |                    |
|--------------------|--------------------|
| Electrical design  | PNP                |
| Output function    | normally open      |
| Sensing range [mm] | 1.8                |
| Housing            | threaded type      |
| Dimensions [mm]    | M14 x 1.5 / L = 41 |

### Application

|                              |                        |
|------------------------------|------------------------|
| Application                  | hydraulic cylinders    |
| Media                        | detects ferrous metals |
| Min. bursting pressure [bar] | 2000                   |
| Min. bursting pressure [MPa] | 200                    |
| Pressure rating [bar]        | 500                    |
| Pressure rating [MPa]        | 50                     |

### 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           |

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| Detection zone                |                           |                                                                                                |
|-------------------------------|---------------------------|------------------------------------------------------------------------------------------------|
| Sensing range                 | [mm]                      | 1.8                                                                                            |
| Real sensing range Sr         | [mm]                      | 1.8 ± 10 %                                                                                     |
| Operating distance            | [mm]                      | 0...1.46                                                                                       |
| Accuracy / deviations         |                           |                                                                                                |
| Hysteresis                    | [% of Sr]                 | < 15                                                                                           |
| Switch point drift            | [% of Sr]                 | 10                                                                                             |
| Repeatability                 | [% of Sr]                 | 10                                                                                             |
| Operating conditions          |                           |                                                                                                |
| Pressure peak                 | [bar]                     | 1000                                                                                           |
| Ambient temperature           | [°C]                      | -25...85                                                                                       |
| Protection                    |                           | IP 65; IP 67                                                                                   |
| Tests / approvals             |                           |                                                                                                |
| 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                                                                                            |
| Mechanical data               |                           |                                                                                                |
| Weight                        | [g]                       | 72.8                                                                                           |
| 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 (316L/1.4404); O-ring: FKM                            |
| Tightening torque             | [Nm]                      | < 25                                                                                           |
| Displays / operating elements |                           |                                                                                                |
| Display                       | switching status          | 1 x LED, yellow                                                                                |
| Remarks                       |                           |                                                                                                |
| Pack quantity                 |                           | 1 pcs.                                                                                         |

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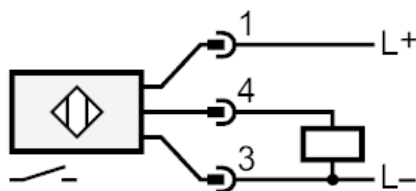
### Electrical connection - plug

Cable: 0.5 m, PUR

Connector: 1 x M12; coding: A; Locking: knurled nut, rotatable



### Connection



### Diagrams and graphs

