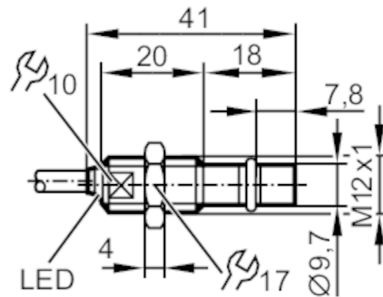


# MFH205



## Cylinder sensor

MFH3002BBPKG/B/AM/500/ZH



### Application

|                              |                        |
|------------------------------|------------------------|
| 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 protection                             | yes           |
| Overload protection                                  | yes           |

### Detection zone

|                    |     |
|--------------------|-----|
| Sensing range [mm] | 1.8 |
|--------------------|-----|

### 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 68; IP 69K |

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| 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 per frequency; 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 |
|                               | 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]                   | 2114                                                                                           |
| UL approval                   | UL Approval no.           | C006                                                                                           |
| Mechanical data               |                           |                                                                                                |
| Weight                        | [g]                       | 85                                                                                             |
| Housing                       |                           | threaded type                                                                                  |
| Mounting                      |                           | flush mountable                                                                                |
| Dimensions                    | [mm]                      | M12 x 1 / L = 41                                                                               |
| Thread designation            |                           | M12 x 1                                                                                        |
| Materials                     |                           | housing: stainless steel; O-ring: FKM; supporting ring: PTFE                                   |
| Tightening torque             | [Nm]                      | < 25                                                                                           |
| Full-metal housing            |                           | yes                                                                                            |
| Displays / operating elements |                           |                                                                                                |
| Display                       | switching status          | 1 x LED, yellow                                                                                |
| Accessories                   |                           |                                                                                                |
| Accessories (supplied)        |                           | lock nuts: 1                                                                                   |
| Remarks                       |                           |                                                                                                |
| Pack quantity                 |                           | 1 pcs.                                                                                         |

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### Electrical connection

Cable: 2 m, PUR, Ø 4.9 mm; 3 x 0.34 mm<sup>2</sup>

### Connection



Core colours :

BK = black  
BN = brown  
BU = blue

### Diagrams and graphs

#### Installation

