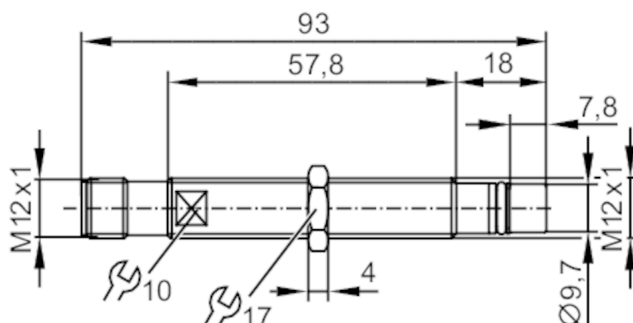


# MFH200



## Pressure-resistant position sensor for hydraulic cylinders

MFA3002BBPKG/B/AM/500/US



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP              |
| Output function    | normally open    |
| Sensing range [mm] | 1.8              |
| Housing            | threaded type    |
| Dimensions [mm]    | M12 x 1 / L = 93 |

### 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 protection                             | yes           |
| Type of short-circuit protection                     | pulsed        |
| Overload protection                                  | yes           |

### Detection zone

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

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| 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...120                                                                                      |
| Protection                  |                           | IP 65; IP 68; IP 69K                                                                           |
| 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]                   | 1701                                                                                           |
| UL approval                 | UL Approval no.           | C005                                                                                           |
| Mechanical data             |                           |                                                                                                |
| Weight                      | [g]                       | 44.1                                                                                           |
| Housing                     |                           | threaded type                                                                                  |
| Mounting                    |                           | flush mountable                                                                                |
| Dimensions                  | [mm]                      | M12 x 1 / L = 93                                                                               |
| Thread designation          |                           | M12 x 1                                                                                        |
| Materials                   |                           | housing: stainless steel; O-ring: FKM; supporting ring: PTFE                                   |
| Tightening torque           | [Nm]                      | < 15                                                                                           |
| Full-metal housing          |                           | yes                                                                                            |
| Accessories                 |                           |                                                                                                |
| Items supplied              |                           | lock nuts: 1                                                                                   |
| Remarks                     |                           |                                                                                                |
| Pack quantity               |                           | 1 pcs.                                                                                         |

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### Electrical connection - plug

Connector: 1 x M12; coding: A; Moulded body: PEI



### Connection



### Diagrams and graphs

