A focus on hydraulic cylinders

Pressure-resistant sensors for end position detection

- Reliable: magnetic operating principle with predamping
- Extremely robust: pressure-resistant up to 500 bar, bursting pressure 2,000 bar
- Resistant: withstands at least 10 million pressure cycles
- Added value: additional functions with the IO-Link versions

IP69K

ifm – close to you!

Type	Housing length [mm]	Sensing range (flush) [mm]	Output	Order no.
Connection: M12 connector, ambient temperature -25...120 °C				
M12	60	2.0	IO-Link, PNP/NPN, normally closed/normally open	**MFH218**
M12	60	1.8	PNP, normally open	**MFH202**
M12	60	1.8	NPN, normally open	**MFH203**
M12	60	1.8	PNP, normally closed	**MFH204**
M12	93	1.8	PNP, normally open	**MFH200**
M12	53	2.0	PNP, normally open	**M9H200**
Connection: Cable 2 m, PUR, ambient temperature -25...85 °C				
M12	55	2.0	IO-Link, PNP/NPN, normally closed/normally open	**MFH219**
M12	41	1.8	PNP, normally open	**MFH205**
M14	41	2.0	PNP, normally open	**MFH201**

Applications

The sensors have been specially developed for end position detection in hydraulic cylinders. They can be installed flush or quasi-flush using a thread and will precisely detect the steel target on the piston rod. With their high pressure rating and capability to detect ferromagnetic metals, these sensors are well-suited for a wide range of applications also in other hydraulic components, including valves or pumps.

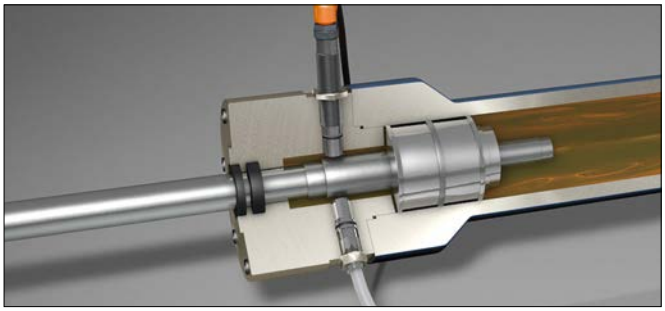
Two types for a wide range of requirements

The standardised threaded type allows the sensor to be installed and adjusted flexibly on various hydraulic cylinders, enabling a single sensor to cover various cylinder types. The special M9H type comes with an end stop. This significantly simplifies installation when always the same cylinder type is used.

Added value with IO-Link

Sensor versions with IO-Link offer additional functions such as stroke or switching cycles counters or unique sensor identification, whereas time monitoring between end positions and temperature measurement enable demand-based maintenance.

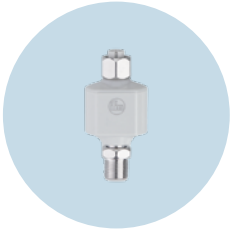
Technical data		
Operating voltage	[V]	10...36 (10...30 with IO-Link versions)
Pressure rating dynamic/static	[bar]	500/1000
Bursting strength	[bar]	2000
Switching frequency	[Hz]	1000 (200 for MFH218/MFH219)
Protection rating		IP69K



In the IO-Link versions, a conical piston rod allows continuous monitoring of the approach to the end position.

BEST FRIENDS

Inductive IGM sensor
For use in mobile machines in harsh environments



Bluetooth mesh
Connection to the IT level without complex wiring

IO-Link master
Field-compatible masters with Profinet interface

For further technical details, please visit: ifm.com/fs/MFH218