

Mechanical Pressure Switch MPSE

CERTIFICATIONS



DESCRIPTION

The economical mechanical pressure switch MPSE uses a diaphragm or piston sensing element, depending on pressure adjustment range. Diaphragm sensing element is used in low-pressure adjustment range up to 30 bar, while piston sensing element is used in high-pressure adjustment range above 30 bar. Two switching outputs (NC, NO) are selectable.

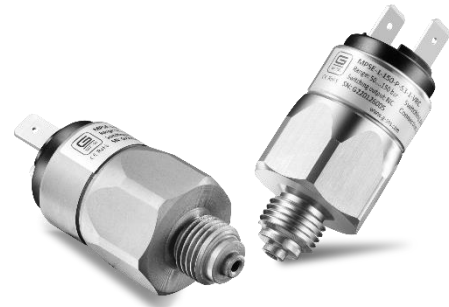
Set points can be easily adjusted with an adjustable screw. Factory preset set of switching points is optionally available.

The MPSE switch is suitable for non-aggressive liquids, compressed air or self-lubricating fluids. Economical galvanized steel or optionally stainless steel 304 is used for the housing and the process connection. The switch can be installed in any desired mounting position.

The MPSE is used to monitor and control pressure of media in diverse applications. The integrated micro switch allows switching performance up to 5 A. Contacts are silver plated, and gold-plated contacts are available on request.

The compact design with flat connectors is designed for use in limited space.

The pressure switch MPSE complies with electromagnetic compatibility requirements (EMC) as per EN 61326.



ADJUSTMENT RANGES

- Diaphragm:
 - 0.1...1 bar
 - 1..5 bar
 - 1...10 bar
 - 10...20 bar
 - 15...30 bar
- Piston:
 - 10...80 bar
 - 10...120 bar
 - 10...160 bar
 - 20...200 bar
 - 20...250 bar
 - 30...320 bar

FEATURES

- Compact design
- Economical product
- Easy and flexible installation
- CE, RoHS confirm

APPLICATIONS

- Mechanical engineering
- Hydraulics and Pneumatics
- Industrial and Automotive
- Customized Automation

SPECIFICATIONS

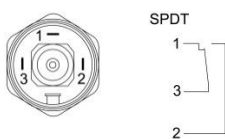
| Model | MPSE | |
|------------------------------|---|---|
| Pressure Type | Gauge Pressure | |
| Measuring principle | Spring loaded diaphragm for low pressure ≤ 30 bar | Spring loaded piston for high pressure > 30 bar |
| Adjustment Range | Diaphragm: 0.1...1 bar / 1...5 bar / 1...10 bar / 10...20 bar / 15...30 bar | Piston: 10...80 bar / 10...120 bar / 10...160 bar / 20...200 bar / 20...250 bar / 30...320 bar |
| Overpressure Limit | 160 bar | 450 bar |
| Hysteresis | Diaphragm: 5...15% of FS | Piston: 10...20% of FS |
| Materials | Diaphragm | Piston |
| Measuring element: | | |
| Standard | NBR | Galvanized steel |
| Option | EPDM, FKM, HNBR, Silicone | On request |
| Thread: | | |
| Standard | Galvanized steel | |
| Option | Stainless steel 304, Others on request | |
| Housing | | |
| Standard | Galvanized steel | |
| Option | Stainless steel 304, Others on request | |
| Pressure Connection | | |
| Standard | G $\frac{1}{4}$, G $\frac{1}{8}$, NPT $\frac{1}{4}$, NPT $\frac{1}{8}$, R $\frac{1}{4}$, R $\frac{1}{8}$ | |
| Option | On request | |
| Electrical Connection | | |
| Standard | Flat connector 2 x 6.3 x 0.8 (IP 00) | |
| Option | M12x1, 4-pin (IP 67), Cable outlet (IP 67), Deutsch DT04-4P (IP 65) | |
| Switching outputs | | |
| Number | 1 | |
| Switching Function | NC or NO | |
| Switching Element | Microswitch | |
| Standard | Silver Plated Contacts | |
| Option | Gold Plated Contacts | |
| Contacts 2 x 6.3 x 0.9 Flat | | |
| Adjustment | | |
| Standard | On-site, with Adjustable Screw | |
| Option | Factory preset | |
| Power Rating | | |
| DC up to 42V | Max. 4 A | |
| AC up to 250 V | Max. 4 A | |
| Load Cycles | ≤ 200 cycles/min | |
| Life Cycles | 1 Million acc. ISO 10771- | |

FS = Full Scale

| | | |
|---|--|---|
| Permissible Temperatures Standard Option | NBR: EPDM: FKM: Silicone: HNBR: | -40...+100 °C -30...+120 °C -50...+120 °C -40...+120 °C 30...120 °C |
| Storage Temperature | -20...80° C | |
| Conformity Pressure Equipment Directive EMC Directive Shock Resistance Vibration Resistance | CE, RoHS 97/23/EC 2004/108/EEC, EN 61326 Emission (Group 1, Class B) 30 g acc. DIN EN 60068-2-2 10 g acc. DIN EN 60068-2-8 | |
| Weight | approx. 0.10kg | |

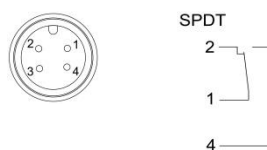
ELECTRICAL CONNECTION

Flat Connector



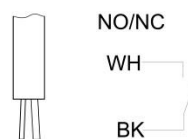
1 = NC
2 = NO
3 = COM

M12x1, 4-pin



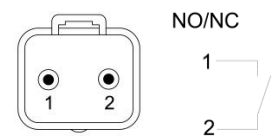
1 = COM
2 = NC
4 = NO

Cable Outlet 2 wire



BK = NO or NC
WH = COM

Deutsch Connector



1 = NO or NC
2 = COM

ORDERING CODE MPSE

MPSE-A-BBB-C-DDD-EE-F-GGG

| A | Output | |
|---|--------|----------------------|
| | 1 | NO (Normally Open) |
| | 2 | NC (Normally Closed) |

| BBB | Adjustment Range (bar) | | | |
|-----|------------------------|---------|-----|----------|
| | 001 | 0.1...1 | 080 | 10...80 |
| | 005 | 1...5 | 120 | 10...120 |
| | 010 | 1...10 | 160 | 10...160 |
| | 020 | 10...20 | 200 | 20...200 |
| | 030 | 15...30 | 250 | 20...250 |
| | | | 320 | 30...320 |

| DDD | Pressure Connection | | | |
|-----|---------------------|--------|-----|--------|
| | G4A | G1/4A | G8A | G1/8A |
| | G4B | G1/4B | G8B | G1/8B |
| | NP4 | NPT1/4 | NP8 | NPT1/8 |
| | PT4 | R1/4 | PT8 | R1/8 |
| | Others on request | | | |

| F | Diaphragm | |
|-------------------|-----------|----------|
| | 1 | NBR |
| | 2 | EPDM |
| | 3 | FKM |
| | 4 | HNBR |
| | 5 | Silicone |
| Others on request | | |

| C | Contact | |
|---|---------|---------------|
| | 1 | Silver plated |
| | 2 | Gold plated |

| EE | Electrical Outlet | |
|----|-------------------|----------------------|
| | FL | Flat connector |
| | M1 | M12x1, 4-pin |
| | C2 | Cable version 2 wire |
| | DE | Deutsch connector |
| | Others on request | |

| GGG | Customized | |
|-----|------------|-------------------|
| | 111 | Standard version |
| | XXX | Customer specific |