

Pressure switch FF 4

0.11 up to 250 bar, ample wiring room, easy to adjust
high repeatability of set switchpoints, easily read scale



Applications

Air compressors, water pumps, booster pumps, firefighting equipment, oil supply equipment.

Description

TIVAL pressure switches of the FF 4 series are suitable for a wide range of applications. They can be utilized for:

- Monitoring and controlling the pressure of liquid or gaseous media in pipelines, tanks, vats, pressure vessels and apparatus.
- Applications in process control, cooling, pneumatics and hydraulics.
- Pressure monitoring of cooling circuits and lubrication systems on various types of machinery.
- Automatic switching of pump and compressor motors for supplying water to dwellings, booster pumps, firefighting equipment and on compressed air systems.

Mode of operation

The pressure of the monitored medium operates against a flat diaphragm, bellows or plunger (depending on pressure range). A system of levers and springs work on a snapaction cascade switch of high vibration resistance, ensuring flutterfree switching. With no pressure on the diaphragm contact 1-2 is closed. This can be used as an „ON“ signal for a pump or compressor motor. If pressure exceeds the upper switchingpoint, contact 1-2 opens and contact 1-4 closes. The connected motor will be switched off. Contact 1-4 is often used to indicate the „off“ condition.

Contact 1-2 will close again, when the pressure on the diaphragm has dropped below the set lower switchpoint. Upper and lower switch points can be adjusted independently of each other using a screwdriver. The two switch points are indicated on the scale inside the unit.

Change-over contact with manual reset min.:

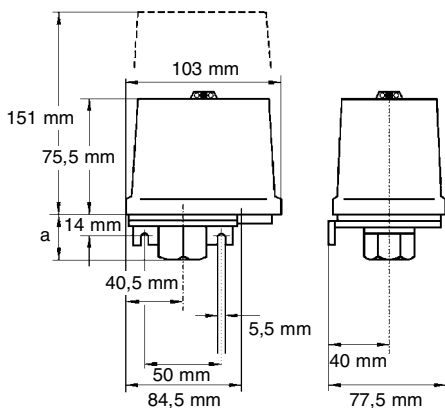
If the pressure drops below the set value, contact 1-4 opens and contact 1-2 closes and locks. When the pressure has risen above the set value, the contact can be unlocked with the manual reset button.

Change-over contact with manual reset max.:

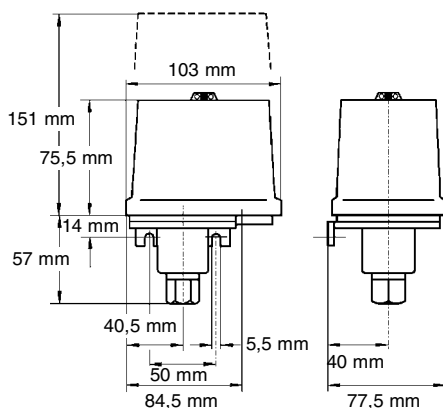
If the pressure rises above the set value, contact 1-2 opens and contact 1-4 closes and locks. When the pressure has dropped below the set value, the contact can be unlocked with the manual reset button.

Pressure connection, pressure sensing element, switch mechanism and electrical terminals are fitted on a die-cast aluminum-alloy base. The scale and switch are protected against environmental effects by an impact-resistant, transparent polycarbonate cover, (CTI 200-225) and can be lead-sealed.

Included in standard units: Rubber grommet with orifice for cable entry, pressure connector „Y“, made out of plastic for demineralised water applications.



FF 4-2, FF 4-4, FF 4-8,
FF 4-16, FF 4-32



FF 4-12, FF 4-30, FF 4-60,
FF 4-120, FF 4-250

Options upon request:

- Gold flashed contacts
- Cable gland M 20 for protection IP 65
- Viton diaphragm for aggressive media
- Manual reset

- GL - approved version
- UL/CSA - approved version
- ATEX - approved version
- VdS - approved version

Pressure switch FF 4

Types

Pressure switch with perbunan diaphragm for mineral oils, water and air. Additional type **G = gold flashed contacts**

Pressure connector: H (G 3/8" Female thread, DIN ISO 228/I), silumin. VDE 0660, IEC 337-1, IEC 553-1

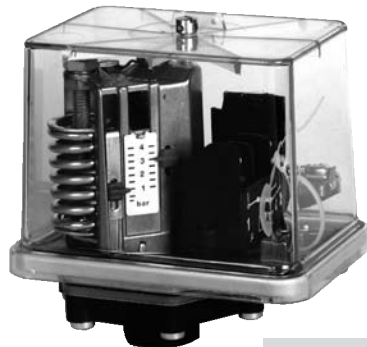
Order reference	Upper switch pt. adjustable (bar)	Lower switch pt. adjustable (bar)	Smallest diff.* (bar)	Max. operating pressure (bar)	Max. test pressure (bar)	Standard setting (bar)	Part No.
FF 4-2 DAH	0,11 ... 2	0,04 ... 1,89	0,07 0,11	20	40	0,5 / 1,5	1010061
FF 4-2 DAH G	0,11 ... 2	0,04 ... 1,89	0,07 0,11	20	40	0,5 / 1,5	1010109
FF 4-4 DAH	0,22 ... 4	0,07 ... 3,75	0,15 0,25	24	40	1 / 3	1010062
FF 4-4 DAH G	0,22 ... 4	0,07 ... 3,75	0,15 0,25	24	40	1 / 3	1010012
FF 4-8 DAH	0,5 ... 8	0,2 ... 7,5	0,3 0,5	30	40	2 / 6	1010078
FF 4-8 DAH G	0,5 ... 8	0,2 ... 7,5	0,3 0,5	30	40	2 / 6	1010096
FF 4-16 DAH	1 ... 16	0,4 ... 15	0,6 1	36	48	4 / 12	1010081
FF 4-16 DAH G	1 ... 16	0,4 ... 15	0,6 1	36	48	4 / 12	1010102
FF 4-32 DAH	2 ... 32	0,8 ... 30	1,2 2	52	64	10 / 20	1010076
FF 4-32 DAH G	2 ... 32	0,8 ... 30	1,2 2	52	64	10 / 20	1010003

* at lower ... higher end of range

Types

Pressure switch with perbunan diaphragm and plastic pressure connector suitable i.e. for demineralised water.

Pressure connector: Y (G 3/8" Female thread, DIN ISO 228/I), polyamid. VDE 0660, IEC 337-1, IEC 553-1



Control pressure switch FF 4-... DAY

Order reference	Upper switch pt. adjustable (bar)	Lower switch pt. adjustable (bar)	Smallest diff.* (bar)	Max. operating pressure (bar)	Max. test pressure (bar)	Standard setting (bar)	Part No.
FF 4-2 DAY	0,11 ... 2	0,04 ... 1,89	0,07 0,11	6	12	0,5 / 1,5	1010077
FF 4-4 DAY	0,22 ... 4	0,07 ... 3,75	0,15 0,25	8	12	1 / 3	1010063
FF 4-8 DAY	0,5 ... 8	0,2 ... 7,5	0,3 0,5	12	16	2 / 6	1010084
FF 4-10 DAY	0,7 ... 10	0,3 ... 9,2	0,4 0,8	12	16	4 / 5	1010073
FF 4-16 DAY	1 ... 16	0,4 ... 15	0,6 1	20	24	4 / 12	1010082

* at lower ... higher end of range