

Alco Controls

Pressure Controls 0.11 to 250 bar

Series FF 4

Features

- Large space for cable mounting
- Easy to adjust
- Separate screw for upper and lower switching-point setting
- Accurate scale
- Transparent, UV-resistant cover
- Protection class: IP54 (IP65 with cable gland)
- Worldwide approvals
- High repeatability of set switch-points
- Cover can be lead-sealed

Applications

- Air compressors
- Water pumps
- Booster pumps
- Fire-fighting equipment
- Oil supply equipment
- High-pressure cleaning apparatus

ALCO FF 4 series of pressostats are suitable for a wide range of industrial and commercial applications. Their functions, as pressure switches, limiters or cut-outs can be utilized for:

- Monitoring and controlling the pressure of liquid or gaseous media in pipelines, tanks, vats, pressure vessels and apparatus.
- Duties 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, fire-fighting equipment and on compressed air systems.

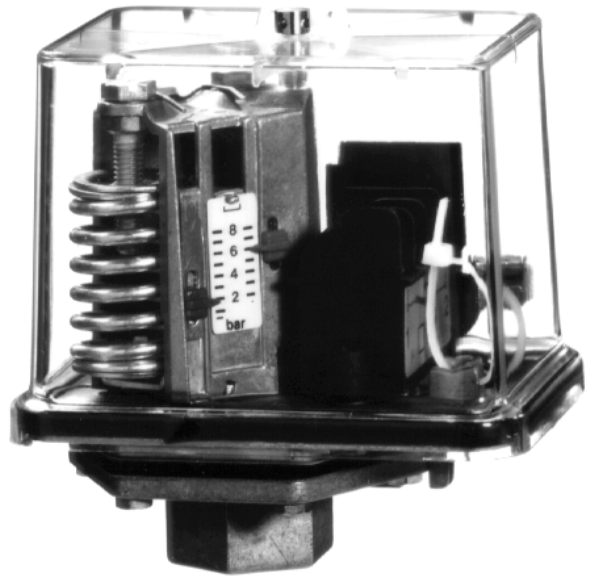
Mode of operation

The pressure of the monitored medium operates against a flat diaphragm, bellows or a plunger (depending on pressure range). A system of levers and springs works on a snap-action cascade switch of high resistance to vibration, ensuring flutter-free switching.

Low pressure on the diaphragm closes contact 1-2. This can be used as a "RUN" signal for a pump or compressor motor.

If pressure exceeds the upper switching-point, contact 1-2 opens and contact 1-4 closes. The applied 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 decreased below the set lower switch-point.



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.

Construction

Pressure connection, pressure sensing element, switch mechanism and electrical terminals are fitted on a die-cast aluminium-alloy base. The scale and switch are protected against environmental effects by an impact-resistant, transparent polycarbonate cover, which is creepage resistant (CTI 200/100M) and can be lead-sealed.

Pressure connector "Y", made out of plastic for demineralised water applications.

Options upon request

- Gold plated contacts
- Cable gland Pg 13,5 for higher protection IP 65
- Indicator lamp for switching condition
- Viton diaphragm for aggressive media
- Manual reset
- GL -approved versions
- UL-/CSA-approved versions
- Throttle section H138-043 for FF 4-2 to FF 4-32
- Other pressure connectors. Contact your local ALCO CONTROLS wholesaler for availability
- Special screw for lead seal cover

Pressure Controls 0.11 to 250 bar

Series FF 4

Included in standard units:

- Rubber grommet with hole for cable entry
- Nylon strap to secure cable
- Installation and operating instructions

Type	PCN	Upper switch point adjustable from ... to bar	Lower switch point adjustable from ... to bar	Smallest differential at lower ... higher end of range	max. operating pressure bar	max. test pressure bar	Standard settings bar
------	-----	---	---	--	-----------------------------	------------------------	-----------------------

Pressure controls with perbunan diaphragm

VDE 0660, EN 60947-5-1

for mineral oils, water and air.

Pressure connector: H (G $\frac{3}{8}$ female, DIN ISO 228/l).

FF 4-2 DAH	0 182 129	0.11 ... 2	0.04 ... 1.89	0.07 0.11	20	40	0.5 / 1.5
FF 4-4 DAH	0 182 131	0.22 ... 4	0.07 ... 3.75	0.15 0.25	24	40	1 / 3
FF 4-8 DAH	0 182 143	0.5 ... 8	0.2 ... 7.5	0.3 0.5	30	40	2 / 6
FF 4-16 DAH	0 182 156	1 ... 16	0.4 ... 15	0.6 1	36	48	4 / 12
FF 4-32 DAH	0 182 168	2 ... 32	0.8 ... 30	1.2 2	52	64	10 / 20

Pressure controls with perbunan diaphragm

VDE 0660, EN 60947-5-1

and plastic pressure connector for demineralised water.

Pressure connector: Y (G $\frac{3}{8}$ female, DIN ISO 228/l).

FF 4-2 DAY	0 714 440	0.11 ... 2	0.04 ... 1.89	0.07 0.11	6	12	0.5 / 1.5
FF 4-8 DAY	0 714 442	0.5 ... 8	0.2 ... 7.5	0.3 0.5	12	16	2 / 6
FF 4-16 DAY	0 714 443	1 ... 16	0.4 ... 15	0.6 1	20	24	4 / 12

High pressure controls with plastic plunger

VDE 0660, EN 60947-5-1

These pressure switches operate with a plastic plunger, which is resistant to detergents, de-greasing and polish-removal agents. The **FF 4-60 PAH ... FF 4-250 PAH** pressostats are thus **particularly suitable for use on**

high-pressure cleaning apparatus. Throttle screw H 115-115.001 is fitted as standard inside the pressure connection on these units. This must be removed for use with viscous media.

Pressure connector: H (G $\frac{3}{8}$ female, DIN ISO 228/l)

FF 4-60 PAH	0 183 412	8 ... 60	4 ... 52	4 8	100	120	20 / 40
FF 4-120 PAH	0 183 424	16 ... 120	8 ... 104	8 16	200	240	20 / 80
FF 4-250 PAH	0 083 594	30 ... 250	14 ... 226	12 24	400	500	100 / 200

Alco Controls

Pressure Controls 1½ to 3625 psig with UL-approval

Series FF 4

Pressure controls with perbunan diaphragm

VDE 0170/0171/0660, EN 60947-5-1

Flat diaphragm, resistant to mineral oils. UL-file: E 85 974

Pressure connector: F (¼"-18 NPTF per ANSI B 1.20.3 - 1976)

Type	Order Nr.	Upper switch	Lower switch	Smallest		max.	max. test	Standard
		point adjustable from ... to P.S.I.G	point adjustable from ... to P.S.I.G	differential at lower ... higher	end of range	operating pressure P.S.I.G	pressure P.S.I.G	settings P.S.I.G
FF 444-V2 DAF	0 097 309	3 ... 58	1 ... 54	2	4	348	580	14 / 44
FF 444-V3 DAF	0 097 310	7 ... 116	3 ... 109	4	7	435	580	29 / 87
FF 444-V4 DAF	0 097 311	15 ... 232	6 ... 217	9	14	522	696	58 / 174
FF 444-V5 DAF	0 097 312	29 ... 464	12 ... 435	17	29	754	928	145 / 290

Pressure controls with perbunan diaphragm and manual reset.

Manual reset is possible, when pressure decreased below lower switch point. Pressure connector: F (¼"-18 NPTF per ANSI B 1.20.3 - 1976)

FF 444-V3 DRF	0 097 058	7 ... 116		4	7	435	580	87
FF 444-V4 DRF	3 332 400	15 ... 232		9	14	522	696	174