



Danfoss CS Pressure Switch Installation Guide

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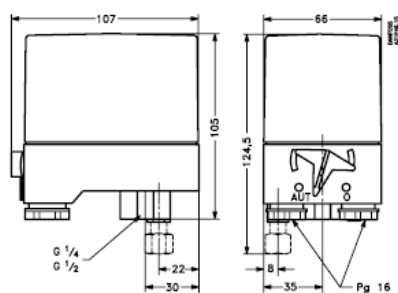
Danfoss CS Pressure Switch



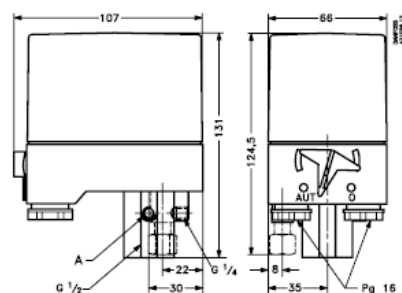
Mounting orientation (Fig. 1-3)



Flg. 1



Flg. 2



Flg. 3

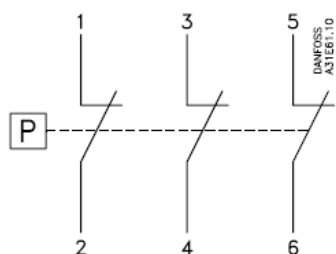


Fig. 4

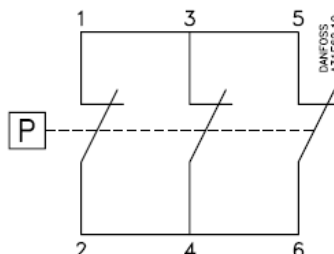


Fig. 5

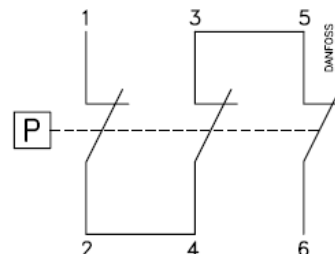


Fig. 6

The pressure switch is connected to the pressure vessel. The pressure switches will operate regardless of their orientation, but to meet the enclosure requirements of IP43 and IP55, they must be mounted vertically with a connection downwards. The connection is self-supporting.

Main connection (Fig. 4)

Three-pole load

Main connection (Fig. 5)

Single-pole AC load

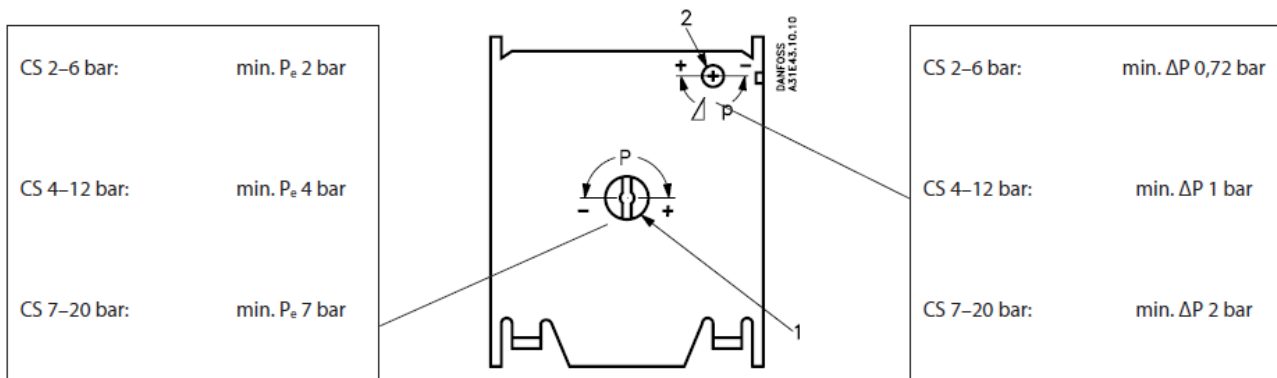
Main connection (Fig. 6)

Single-pole DC load

Contact load (Fig. 7)

AC-3	I_e	U_e
	12 A	220 V – 415 V
	9 A	600 V
DC-13	2 A	220 V

Fig. 7



3 contacts connected in series

Setting (Fig. 8)

1. Cut-off pressure screw (P)
2. Differential pressure screw (ΔP)

Example

A compressor is to be controlled by a CS pressure switch. The cut-in pressure is 3.5 bar and the cut-off pressure is 5 bar. The choice should be a CS with a range of 2–6 bars.

1. Turn the cut-off pressure screw (1) about 12 times, see cut-off pressure graphs.
2. Turn the differential screw (2) about 4.5 times, see CS 2–6 nomogram. Take a straight line from 5 bar cut-out pressure on the nomogram to the differential, 1.5 bar, and read off the number of turns, i.e. 4.5.

Differential pressure nomograms (Fig. 10)

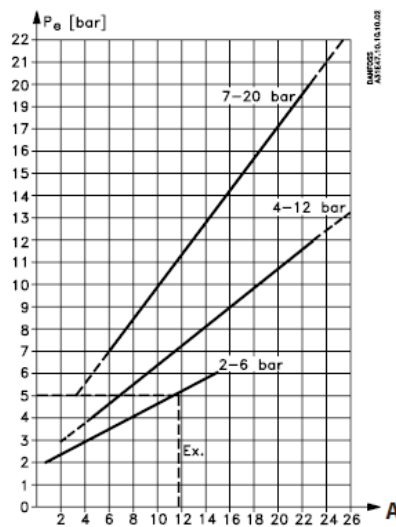


Fig. 9

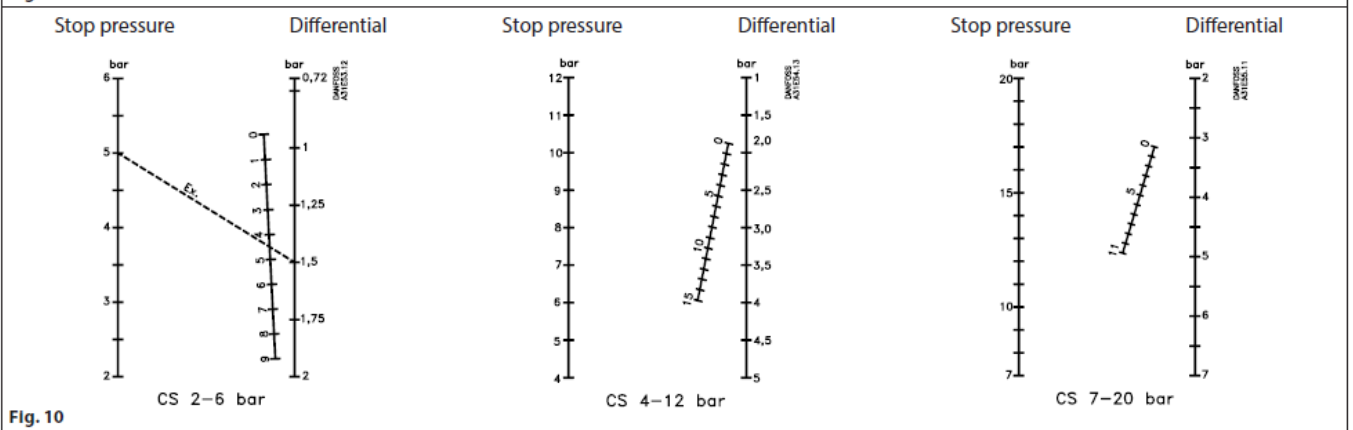


Fig. 10

A – No. of turns of Δp screw

NOTE! The system cannot be started if the differential setting is greater than the cut-off pressure. Check and if necessary set the differential at a smaller value (turn the Δp screw counterclockwise).

Drain hole (Fig. 11)

If because of large temperature variations there is a risk of condensate forming in the pressure switch, a screwdriver can be used to make a drain hole in the enclosure.

Fig. 12

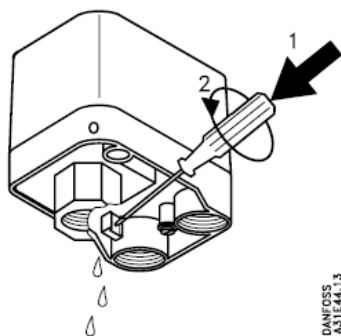


Fig. 11

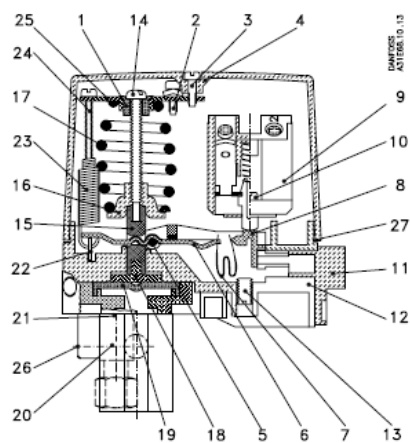
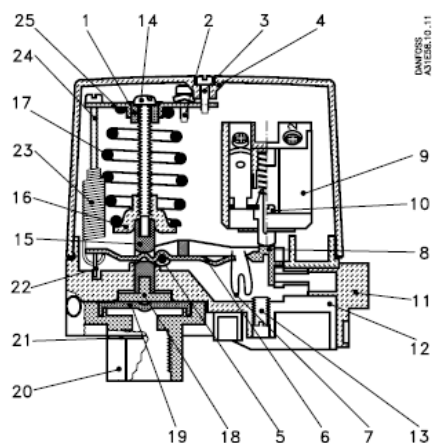
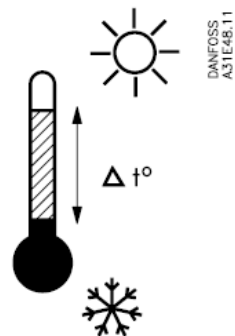
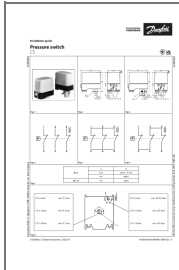


Fig. 12

1. Slide ring
2. Combi-screw
3. Screw
4. Cover
5. Spindle
6. Toggle arm
7. Snap spring
8. Snap arm
9. Switch housing assy
10. Self-tapping screw
11. Manual switch
12. Base
13. Grubscrew
14. Screw
15. Pressure pad
16. Spring retainer
17. Compression spring
18. Pressure shoe
19. Diaphragm
20. Flange, G 1/4, G 1/2, 1/4-18 NPT
21. Cap
22. Differential arm
23. Tension spring

- 24. Tension screw
- 25. Bracket
- 26. Pressure gauge connection G 1/4 (Tightening torque: max. 16 Nm)

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