Danfoss RT 113 Pressure Switch Installation Guide

RT 113 Pressure Switch
ENGINERING
TOMORROW
Installation Guide

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Pressure Switch

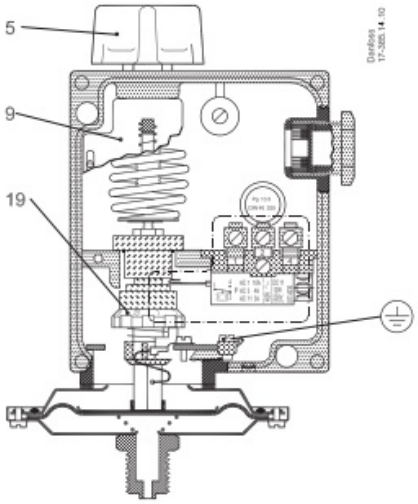


Fig. 1

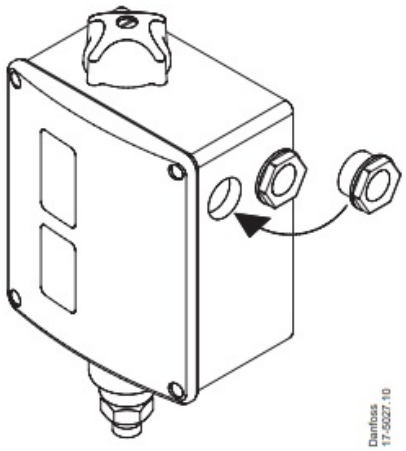


Fig. 2

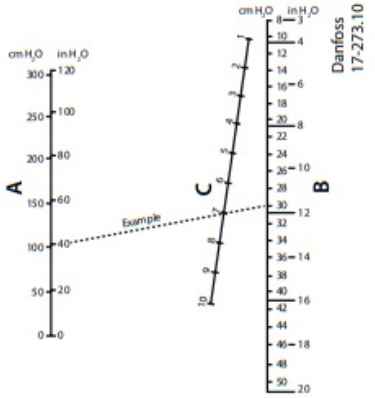


Fig. 3

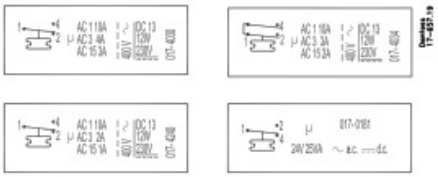


Fig. 4

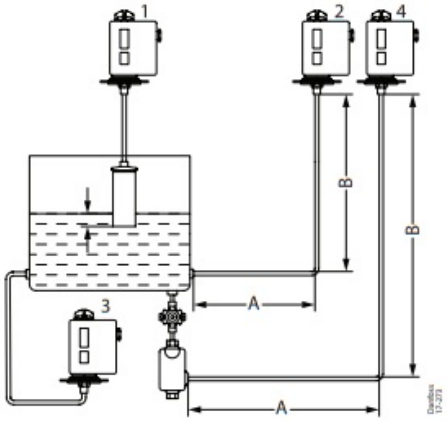


Fig. 5

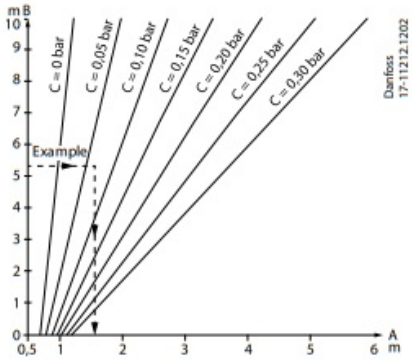


Fig. 6

Info for UK customers only: Danfoss Ltd., 22 Wycombe End, HP9 1NB, GB

Data

Pressure switch, type RT 113

Fig. 1 and 2

Max. ambient temperature: 70 °C / 158 °F

Max. test pressure: 0.5 bar / 7 psig

Min. test pressure: 76 cm / 25 in Hg vacuum

Setting
Fig. 3
A = Range setting
B = Differential obtained
C = Differential setting
RT 113 is set according to the function – make or brake – which is to take place when the pressure falls (range setting). Setting is done by rotating the knob (5), at the same time reading the main scale (9). The differential is set by rotating the differential adjusting nut (19) to the value indicated by the use of the nomogram in fig. 3.
The maximum operating pressure is thus the sum of setting pressure and the differential pressure.

Installation

A set of Pg13.5 cable gland is attached to the RT in a separate bag. To ensure IP66 (units with automatic reset) or IP54 (units with external reset) grade of RT enclosure it is necessary to assemble this gland as shown in the fig. 2. If this gland is not used ith a cable, a metal blinding should be also assembled.

Example
It is desired to control the liquid level in an open-type collecting tank by the use of a suction pump and an RT 113 controller. Max. liquid level is 130 cm H2O. Differential = 130 – 100 = 30 cm
H2O.

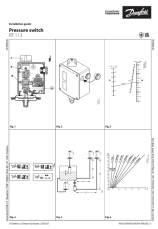
1. Connect the pump to terminals 1-4 of the pressure switch.
2. Set the pressure switch for 100 cm H2O by rotating the knob (5).
3. Set the differential adjusting nut (19) at the figure 7 which is found by reading the nomogram in fig. 3.

Liquid level control in open-type tanks Fig. 4 and 5

Example 1
RT 113 is connected to an air bell, through a copper tube, approx. 1⁄4 in. / 6,5 mm I.D. at minimum liquid level the lower edge of the air bell should be 20 – 40 mm /3⁄4 – 11
⁄2 in. below the liquide surface.
Maximum liquid temperature: 40 °C / 104 °F
Example 2
RT 113 is connected to the tank side immediately over the buttom through a copper tube, approx.
1⁄4 in. I.D., and fittings code no. 993N3572.
The minimum horizontal tube length A can be read in fig. 6. B is the hight from the tank connection to pressure switch tube connection.
C is maximum liquid level at any time. The tube section A should be run with a slight upward gradient towards the pressure switch. In a narrow space, A can be coiled. Maximum liquid temperature in the copper tube 40 °C / 104 °F.

Example 3
RT 113 is located below the tank. Permissible liquids are raw water, boiler water, sewage with traces of ammonia, oil, etc. Maximum liquid temperature 90 °C / 194 °F. After installation, bleed out at the pressure switch union.
Example 4
It is desired to locate RT 113 above the tank, and if the liquid is air-absorbent, such as oil, arragement 4 is recommended. By interposing the water tank shown, direct connection between oil and air in the connecting tube is avoided. The tube length “A” is taken from fig. 6.
“C” is the difference in hight between the bottom and the water tank and maximum oil level converted into H2O (m W.G.). Maximum liquid temperature in the copper tube 40 °C / 104 °F.

Documents / Resources

	Danfoss RT 113 Pressure Switch [pdf] Installation Guide RT 113 Pressure Switch, RT 113, Pressure Switch, Switch