



Danfoss RT 19W Pressure Switch Installation Guide

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Danfoss RT 19W Pressure Switch



Specifications

- **Model Numbers:** RT 19W, RT 19B, RT 19S, RT 30AW, RT 30AB, RT 30AS, RT 31W, RT 31B, RT 31S, RT 32W, RT 32B, RT 33B, RT 35W, RT 112W
- **Certifications:** PED approved acc. to EN12953-9 and EN12952-11
- **Contact Load:** AC-3: 2A, 400V and AC-15: 1A, 400V

Data

Tested and approved by TÜV

(Technischer Überwachungs Verein)

The meaning of the type designation letters is as follows:

- **A:** Also approved for use in a refrigeration plant
- **W:** Pressure monitoring with automatic reset
- **B:** Pressure limiter with external reset
- **S:** Safety pressure limiter with internal reset

Contact load:

- **Max. ambient temperature:** -40°C – 70°C
- **Max. temperature of medium:** 150°C
- **Max. test pressure:**
 - RT 19, RT 32 (-W -B -S) : 47 bare
 - RT 30A, RT 31 (-W -B -S) : 25 bare
 - RT 33B, RT 35W, RT 112 : 8 bare
 - **Min. test pressure:** – 1 bar

Installation

A set of PG13.5 cable glands 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 Fig. 4. If this gland is not used with a cable, a metal blinding should also be assembled. Make the pressure connection so that any impurities in the line do not block the pressure inlet of the control. For example, set the pressure switch to an upright connector (with the unit vertical). Damp strong pressure pulsations. A damping loop will often be sufficient. Insert a water-filled loop as a temperature barrier; a 10 mm Cu tube, for example, if in a high-temperature plant, there is a risk of the pressure connection to the control becoming heated to more than 100°C. In a water plant, position the pressure switch so it cannot be exposed to frost (let it operate on an air cushion, for example).

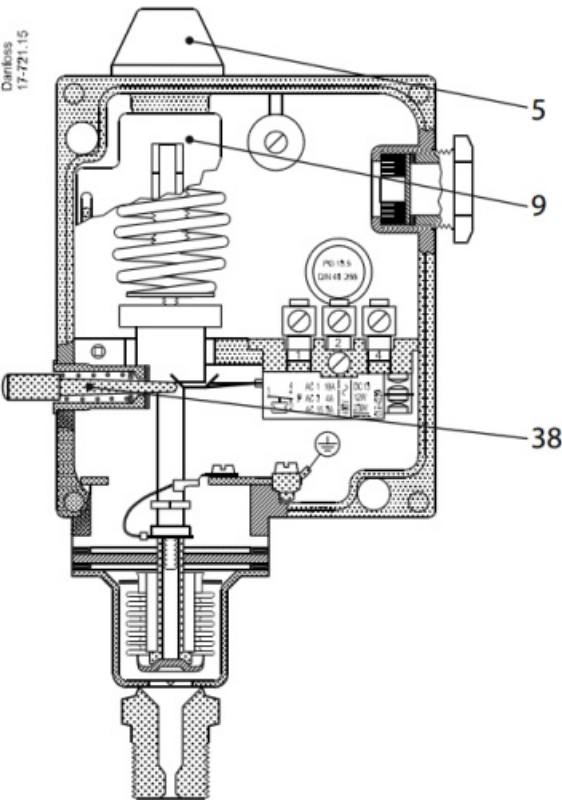
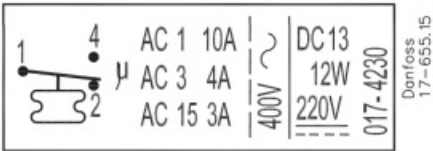


Fig. 1

	1	2	3	4	5	6	7	8	9	10	Profile (17-0015)	
RT 31W (017-5267)	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0			bar	
RT 32W (017-5247)	0.8	1.2	1.6	2.0	2.4	2.8	3.0				bar	
RT 112W (017-5184)	0.07	0.09	0.11	0.13	0.15	0.16					bar	
	min.	1	2	3	4	5	6	7	8	9	10	max.

Fig. 2



* According to EN12953-9 and EN12952-11 standards the contact load must not be higher than AC-3: 2A, 400V and AC-15: 1A, 400V

Fig. 3

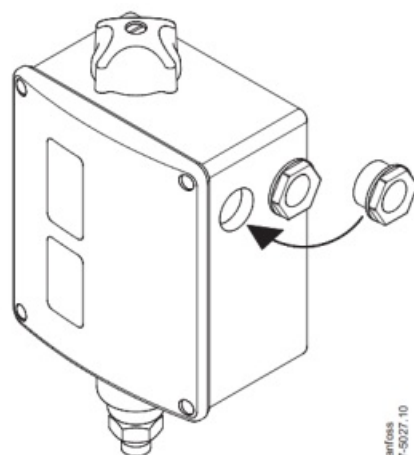


Fig. 4

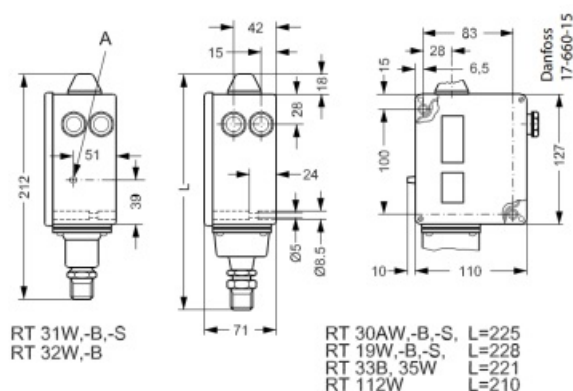


Fig. 5

Setting

The pressure switch must be set to provide the function – make or break – on rising temperatures (RT 31, RT 32, and RT 33 on falling temperatures). The setting can be made with the setting knob (5) while at the same time reading o the main scale (9). See.g 1. The differential must be set with the TDIF differential disc (19) using the nomogram Fig. 2.

Examples

RT 31W

An RT 31W must control the pressure on a steam boiler. Max. Pressure 8 bar, min. Pressure 7.5 bar, differential $8 - 7.5 = 0.5$ bar

1. Connect the oil burner to pressure control terminals 1-2
2. Using the setting knob (5), set the pressure control at 8 bar
3. Set the differential disc at approx. 3. By the nomogram in Fig. 2.

RT 19B or RT 19S

When the pressure in a boiler exceeds 20 bar, the RT 19 must shut off the burner. Automatic restart must not occur.

1. Connect the burner to the pressure switch terminals 1-4
2. Using the setting knob, set the pressure switch at 20 bar

Manual restart with the reset button (see) can only be carried out when the pressure has fallen by the range setting minus the differential; in this instance, e, 19 bar.

FAQs

Q: What is the maximum test pressure for different models?

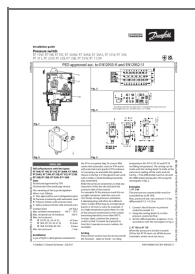
A: The maximum test pressures are as follows:

- RT 19, RT 32 (-W -B -S): 47 bar
- RT 30A, RT 31 (-W -B -S): 25 bar
- RT 33B, RT 35W, RT 112: 8 bar

Q: How should I adjust the differential setting?

A: The differential must be set with the differential setting disc (19) using the nomogram provided in Fig. 2.

Documents / Resources



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RT 19W, RT19B, RT19S, RT 30AW, RT 30AB, RT 30AS, RT 31W, RT 31B, RT 31S, RT 32W, R
T 32B, RT 33B, RT 35W, RT 112W, RT 19W Pressure Switch, RT 19W, Pressure Switch,
Switch

References

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