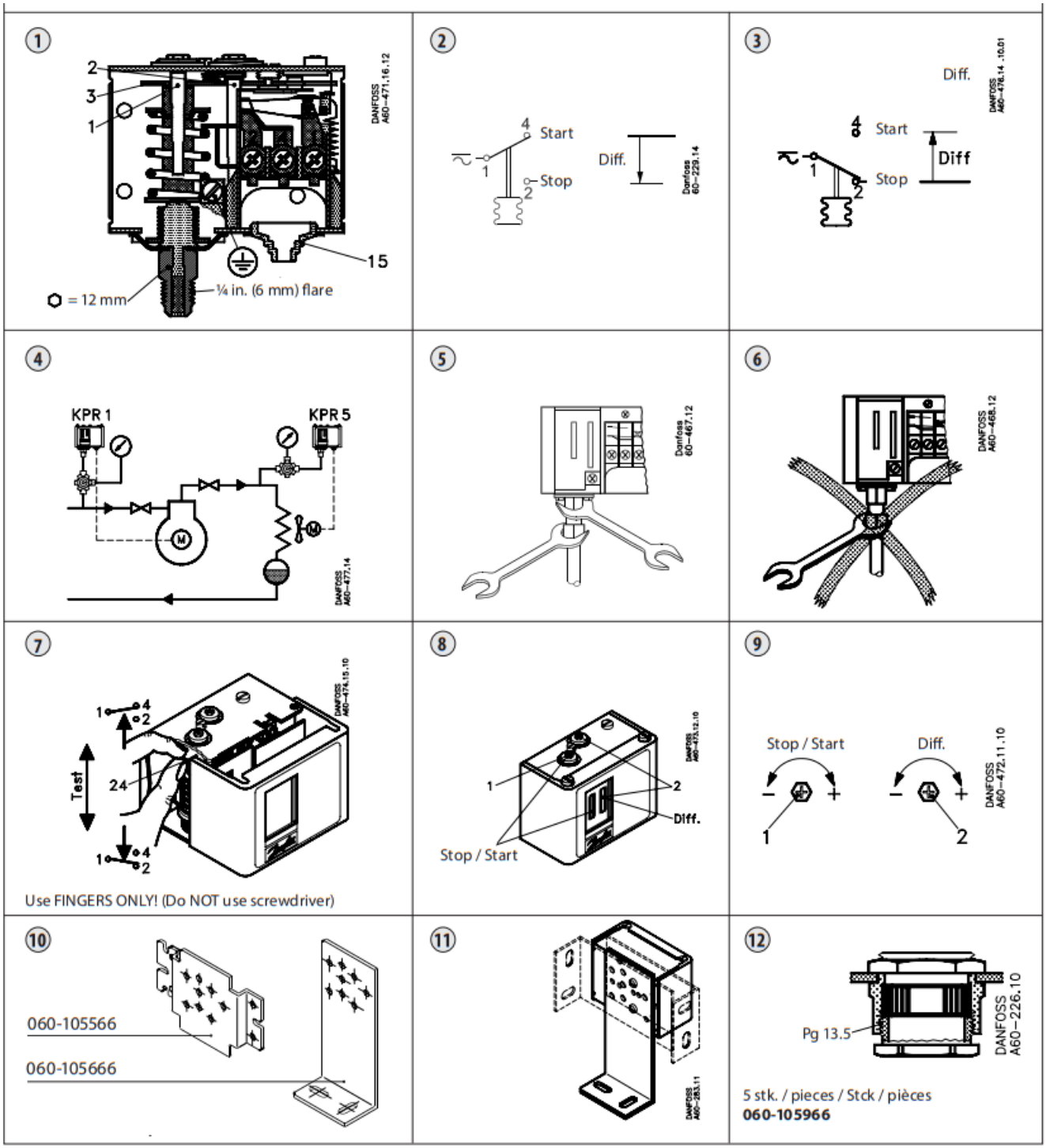
Danfoss KPR 1 Pressure Switch Installation Guide

ENGINEERING TOMORROW
Installation guide
Pressure switch
KPR 1, KPR 5

Contents

KPR 1 Pressure Switch

Refrigerants:
R22, R134a, R404A, R407A, R407C, R407F, R422B, R422D, R448A, R449A, R450A, R452A, R507A, R513A
For the complete list of approved refrigerants, go to http://products.danfoss.com/all-products/



LOW-PRESSURE PRESSURE CONTROL, type KPR 1, code no. 060-110766

Fig. 2
Contacts 1 – 4 break and 1 – 2 make at falling pressure.

HIGH-PRESSURE PRESSURE CONTROL, type KPR 5, code no. 060-117466

Fig. 3
Contacts 1 – 2 break and 1 – 4 make at rising pressure.

“START” = starting pressure
“STOP” = stop pressure
“DIFF” = differential

TECHNICAL DATA

Type	Regulation range pe [bar]	Differential Δp [bar]	Max. working pressure PB [bar]
KPR 1	-0.2 – 8	0.5 – 1.5	15
KPR 5	6 – 18	1.25 – 2.5	20

Ambient temperatures
-40 – 65 °C (80 °C for max. 2 hours).
Enclosure and tightness
IP30 in accordance with EN 60529 /IEC 60529.
Contact system
Single-pole switch SPDT.
Contact load
Alternating current, a.c.
Ohmic load: 10 A, 440 V
Inductive load: 6 A, 440 V
Max. starting current: 50 A
(“L.R.” = locked rotor)
Direct current, d.c. 12 W, 220 V

FITTING

Fig. 4
KPR is connected with ¼ in. copper tube or with capillary tube.
Normally it is not necessary to use a dampening loop to damper pulsation’s from the plant.
Mounting bracket can be supplied.
See fig. 10.
Avoid mounting in or close to liquid pockets.

Figs. 5 and 6
Hold in counter position when flare nut is tightened or loosened.

⚠ CAUTION!
Disconnect the power supply before wiring connections is made or serviced to avoid possible electrical shock or damage to equipment. Do never touch live parts with your fingers or with any tool.

ELECTRICAL CONNECTIONS

Figs. 2 and 3
The unit is provided with a cable entry for 6 – 14 mm cable (15, fig. 1).
Pg 13.5 screwed cable entry available as accessory (fig.12).

TESTING
Fig. 7
Under arm 24 to be rocked.
NB! Use only the method shown for testing.

The contact system must never be activated direct by means of a screwdriver or the like.

SETTING

Figs. 8 and 9
Loosen the locking screw between the setting spindles. Stop or start pressure is set with the range spindle 1 and read off on the “STOP/START” scale. The differential is set with the differential spindle 2 and read off on the “DIFF” scale. After each set, tighten the locking screw again.
A. Low pressure with KPR 1 See figs. 2 and 4. The compressor motor is to be stopped at falling pressure and started at rising pressure. Set the starting pressure with the range spindle 1. One turn ~ 0.7 bar. Differential = starting pressure minus stop pressure. Set the differential with the differential spindle 2. One turn ~ 0.15 bar. NB. The stop pressure must be above the absolute vacuum (pe = -1 bar). If the refrigeration compressor will not stop at low stop pressure, check whether the differential is set to too high a value. Check start and stop pressures with a gauge.
B. High pressure control (condenser pressure control) with KPR 5 See figs. 3 and 4.
The condenser fan is to be started at rising pressure and stopped at falling pressure. Set the starting pressure with the range spindle 1. One turn ~ 2.3 bar.
Differential = starting pressure minus stop pressure.
Set the differential with the differential spindle 2. One turn ~ 0.28 bar.
Check starting and stop pressures with a gauge.

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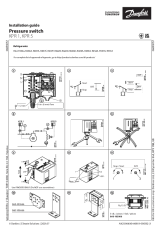
Documents / Resources

	Danfoss KPR 1 Pressure Switch [pdf] Installation Guide KPR 1, KPR 5, KPR 1 Pressure Switch, KPR 1, Pressure Switch, Switch