

Installation guide

# Pressure switch

KP 15, KP 15A, KP 17W, KP 17B, KP 17WB, KP 47WB



060R9753

060R9753

**Refrigerants:**

R22, R134a, R404A, R407A, R407C, R407F, R422B, R422D, R448A, R449A, R450A, R452A, R507A, R513A, R717\*)

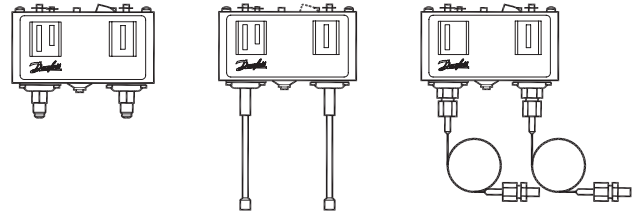
For complete list of approved refrigerants, go to <http://products.danfoss.com/all-products/>

\*) only for KP 15A

KP 15, KP 17, KP 47

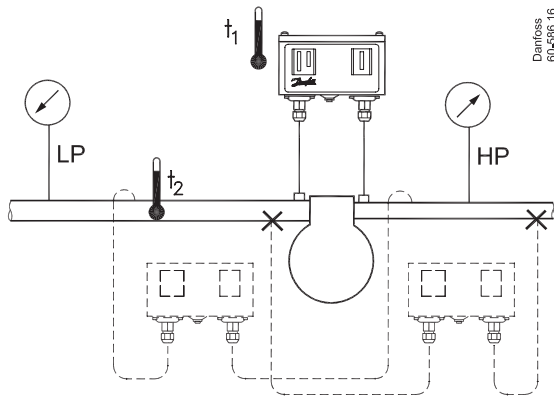
KP 15, KP 17, KP 47

KP 15A



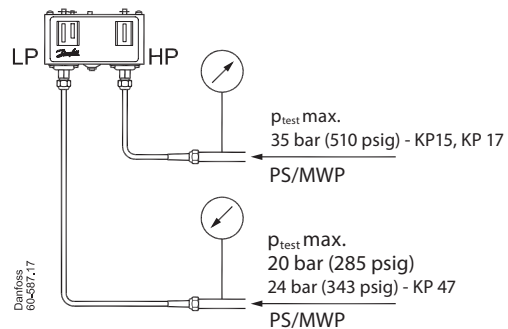
**Ambient temperatures / Mounting requirements**

t<sub>1</sub> min. KP 15: -40 °C (-40 °F)  
t<sub>1</sub> min. KP 17, KP 47: -25 °C (-13 °F)  
t<sub>1</sub> max. : 65 °C (149 °F)



Danfoss 60-586,16

**Test pressure (P<sub>test</sub>)**



Danfoss 60-487,17

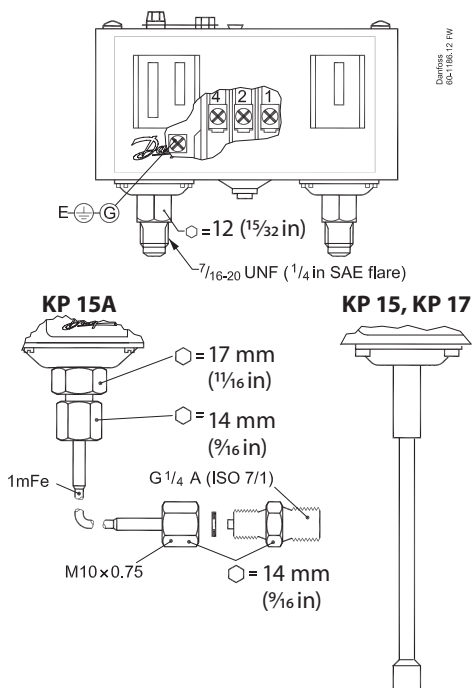
| Type                       | Regulation range                     | Max. working pressure PS/MWP         |
|----------------------------|--------------------------------------|--------------------------------------|
| <b>KP 15</b>               | LP: -0.2 – 7.5 bar<br>HP: 8 – 32 bar | 17 bar/245 psig<br>35 bar/510 psig   |
| <b>KP 15 LP man. reset</b> | LP: -0.9 – 7 bar<br>HP: 8 – 32 bar   | 17 bar/245 psig<br>35 bar/510 psig   |
| <b>KP 17</b>               | LP: -0.2 – 7.5 bar<br>HP: 8 – 32 bar | 17 bar/245 psig<br>32 bar/464 psig   |
| <b>KP 47</b>               | LP: -0.2 – 7.5 bar<br>HP: 8 – 32 bar | 21,5 bar/312 psig<br>32 bar/464 psig |

Relative humidity RH: 30 – 98%  
Vibrations resistance: 4 g (10 – 1000 Hz)

Імпортер:ТОВ з іі "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

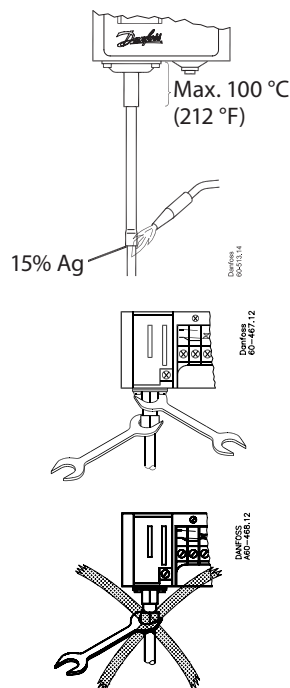
Info for UK customers only: Danfoss Ltd., 22 Wycombe End, HP9 1NB, GB

**Connections**



Danfoss 60-1188,12 HV

**Mounting**



Max. 100 °C (212 °F)

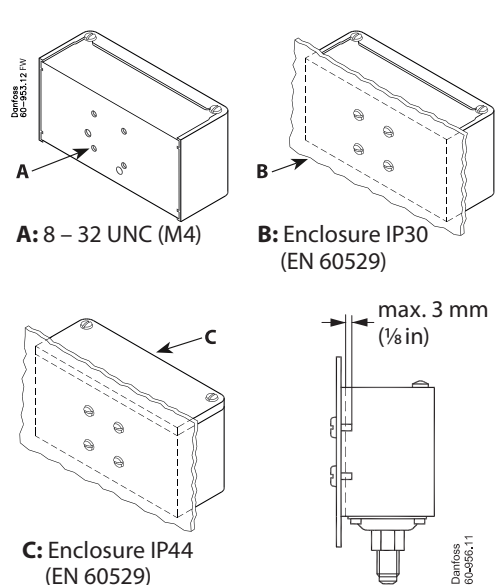
15% Ag

Danfoss 60-515,14

Danfoss 60-447,12

Danfoss 60-436,12

**Enclosure**



Danfoss 60-953,12 HV

A: 8 – 32 UNC (M4)

B: Enclosure IP30 (EN 60529)

C: Enclosure IP44 (EN 60529)

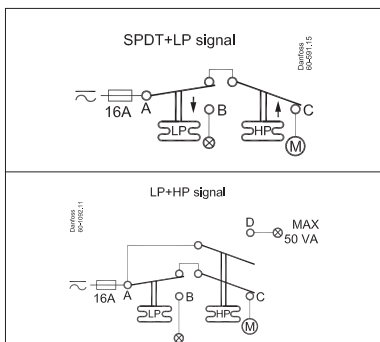
Danfoss 60-356,11



**CAUTION:**

Disconnect power supply before wiring connections are made or service to avoid possible electrical shock or damage to equipment. Do never touch live parts with your fingers or with any tool.

**LP side: A-C opens on pressure drop**  
**HP side: A-C opens on pressure rise**



**Electrical rating - General**

|                |             |             |       |
|----------------|-------------|-------------|-------|
| <b>LR 112A</b> | AC 1: 16 A  | 400 V<br>AC | DC 13 |
|                | AC 3: 16 A  |             | 12 W  |
|                | AC 15: 10 A |             | 220 V |

**Short circuit protection:**

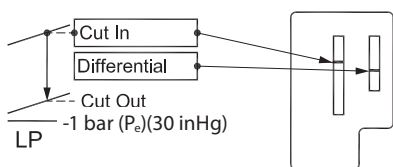
Fuse 16 Amp

**When used acc. to UL regulations**

|                           |   |                |           |           |                     |                   |
|---------------------------|---|----------------|-----------|-----------|---------------------|-------------------|
| <b>C</b> <b>US LISTED</b> | <b>Listed refrigeration controller 61B5</b> |                |           |           |                     |                   |
|                           | <b>Contacts</b>                             | <b>Voltage</b> | <b>FL</b> | <b>LR</b> | <b>Resist. load</b> | <b>Pilot duty</b> |
| A - B<br>A - C            | 240   | -              | 8         | 48        | 8 A                 | 3 A               |
|                           | 120   | -              | 16        | 96        | 16 A                |                   |
| A - D                     | 240   | -              | -         | -         | -                   | 12 W<br>50 VA     |

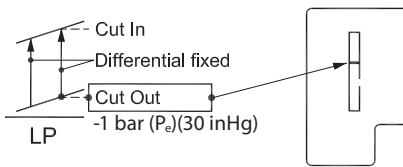
Use copper wire only  
Tightening torque 20 lb. in

**LP = Low Pressure**



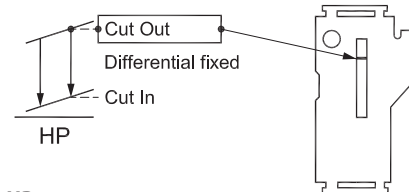
**LP, aut. reset**

**LP = Low Pressure**



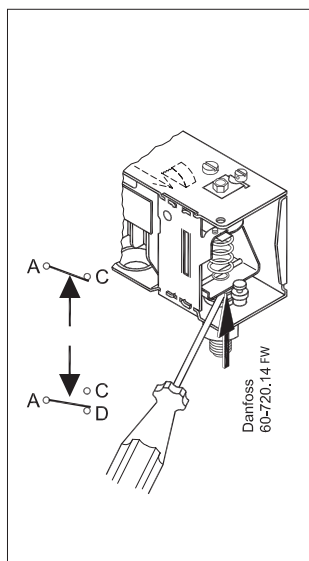
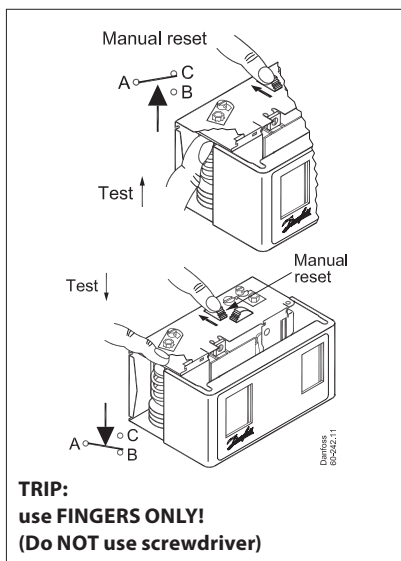
**LP, man. reset**

**HP = High Pressure**



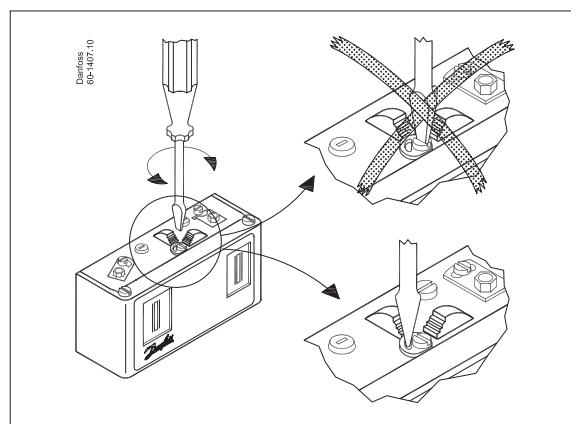
**HP**

**Manual trip function**



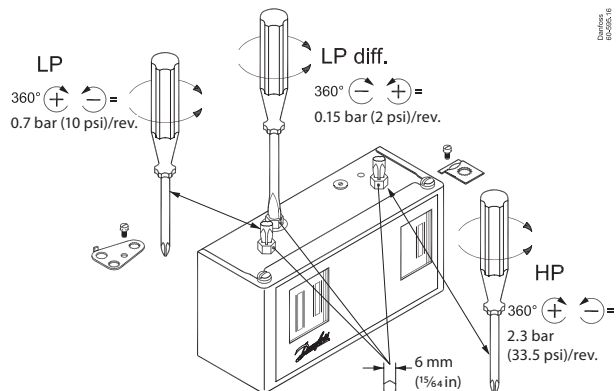
**Convertible reset**

KP 15: LP/HP convertible, KP 17WB, KP 47WB: HP convertible



Insert a screwdriver into the slot on the lock disc and turn it to desired reset configuration. Do not turn the screw on the lock disc as it may damage the convertible reset mechanism.

**Adjustment**



**Reset options**

|                |                 |                 |                 |
|----------------|-----------------|-----------------|-----------------|
|                |                 |                 |                 |
| <b>LP man.</b> | <b>LP auto.</b> | <b>LP auto.</b> | <b>LP man.</b>  |
| <b>HP man.</b> | <b>HP man.</b>  | <b>HP auto.</b> | <b>HP auto.</b> |

**Note:** Do not select automatic reset if safety of the system requires manual reset.

**Note:** Selected reset configuration may be protected against unauthorized actions applying a seal.



**CAUTION:**

Only for selected A2L refrigerants: R455A, R454C, R1234yf, R1234yz, R1234ze  
 For complete list of approved A2L refrigerants, go to <http://products.danfoss.com/all-products/>

**Electrical rating**

AC-3: 16 A / 250 V AC

AC-15: 10 A / 250 V AC

| Voltage | Current range   | Power factor (cos phi) | Frequency |
|---------|-----------------|------------------------|-----------|
| 250V AC | ≤ 4.0 A         | PF ≥ 0,400             | 50Hz/60Hz |
| 250V AC | > 4.0 to 6.0 A  | PF ≥ 0,594             | 50Hz/60Hz |
| 250V AC | > 6.0 to 16,0 A | PF ≥ 0,780             | 50Hz/60Hz |

**IMPORTANT NOTICE**



**Safety requirements**

1. KP pressure switches shall only be employed in the units/systems which comply with the requirements for charge limits and requirements for avoiding ignition sources of IEC 60335-2-24, IEC 60335-2-40, IEC 60335-2-89, ISO 5149, EN378-1 or equivalent.
2. Applying the overload on the KPs must be prevented. If by any chance it was damaged, the system / unit shall be stopped and KP shall be replaced as necessary.
3. Electrostatic discharge protection and Electrical leakage protection shall be surely implemented by grounding or other measures.
4. Only trained personnel are authorized to handle flammable refrigerants systems and may do the installation, maintenance and exchange of the switch by using appropriate tools.
5. It is recommended to regularly check the function of KP switch.
6. KP pressure switches must be installed in an area with a low risk of mechanical damage.
7. Corrosion protection of KP pressure switches must be taken into account when used in a corrosive environment.
8. Cables shall not be in contact with sharp edges. The cables shall be connected with adequate stress relieve in order to prevent that pulling forces can be carried thorough the cable to the terminal.
9. In the event of pressure pulsation in the system, where switch is connected, these must be effectively dumped to prevent failure of the bellows. The cycle frequency of KP switch shall be kept as low as possible.
10. The KP switches shall not be installed in places where high level of vibration is present.

**Disclaimer**

The user is responsible for ensuring that third parties also comply with this Notice, e.g. in case that the KP switches are supplied to third parties, and e.g. that all installation guides are available with the KP switches during installation. It is required that all conditions of this guide are being met and secured when using KP pressure switches.

Danfoss shall not be responsible for any kind of direct and indirect or consequential damage or loss, including, but not limited to, loss of property, production, loss of profit, human injury arising out of the explosion or fire caused by the flammable nature of refrigerant.

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