

Installation guide

Pressure switch

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



060R9753

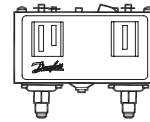
Refrigerants:

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

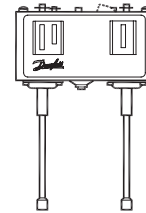
For complete list of approved refrigerants, go to <http://products.danfoss.com/all-products/>

*) only for KP 15A

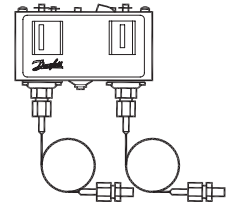
KP 15, KP 17, KP 47



KP 15, KP 17, KP 47



KP 15A



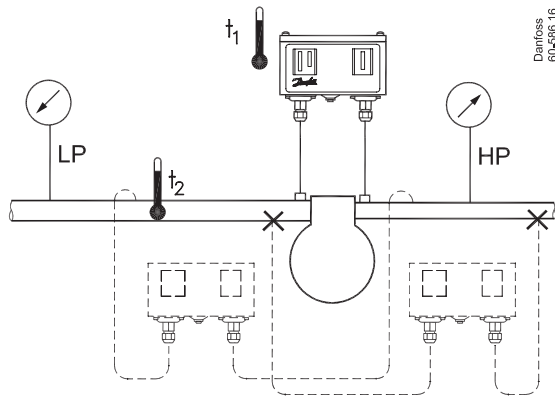
060R9753

Ambient temperatures / Mounting requirements

t₁ min. KP 15: -40 °C (-40 °F)

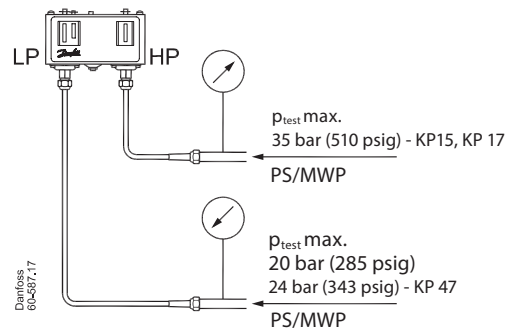
t₁ min. KP 17, KP 47: -25 °C (-13 °F)

t₁ max. : 65 °C (149 °F)



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Test pressure (P_{test})



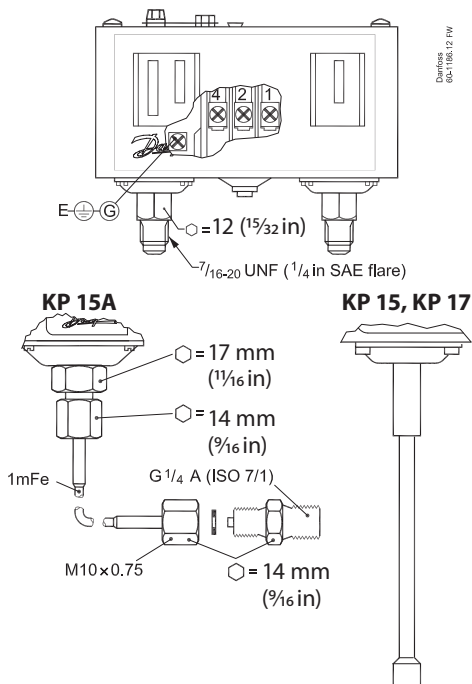
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Type	Regulation range	Max. working pressure PS/MWP
KP 15	LP: -0.2 – 7.5 bar HP: 8 – 32 bar	17 bar/245 psig 35 bar/510 psig
KP 15 LP man. reset	LP: -0.9 – 7 bar HP: 8 – 32 bar	17 bar/245 psig 35 bar/510 psig
KP 17	LP: -0.2 – 7.5 bar HP: 8 – 32 bar	17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

Relative humidity RH: 30 – 98%

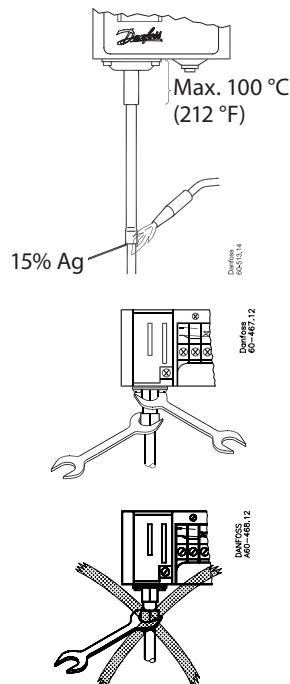
Vibrations resistance: 4 g (10 – 1000 Hz)

Connections



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Mounting



Max. 100 °C
(212 °F)

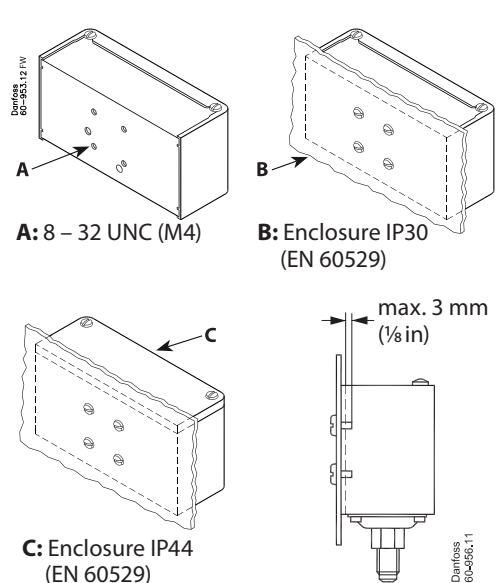
15% Ag

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60-513,14

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60-488,12

Enclosure



A: 8 – 32 UNC (M4)

B: Enclosure IP30
(EN 60529)

C: Enclosure IP44
(EN 60529)

max. 3 mm
(1/8 in)

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60-486,11

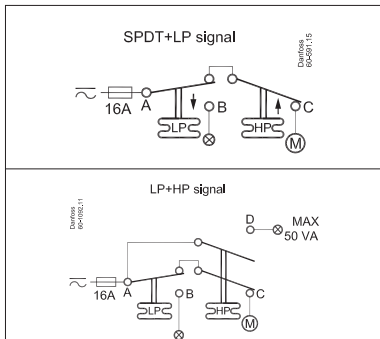
Info for UK customers only: Danfoss Ltd., 22 Wycombe End, HP9 1NB, GB



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

LR 112A	AC 1: 16 A	400 V AC	DC 13
	AC 3: 16 A		12 W
	AC 15: 10 A		220 V

Short circuit protection:

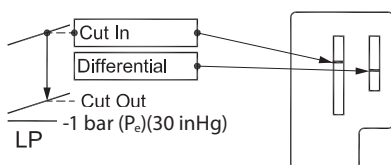
Fuse 16 Amp

When used acc. to UL regulations

C UL US LISTED		Listed refrigeration controller 61B5				
Contacts	Voltage	FL	LR	Resist.	Pilot	
A - B A - C	240	-	8	48	8 A	3 A
	120	-	16	96	16 A	12 W
A - D	240	-	-	-	-	50 VA

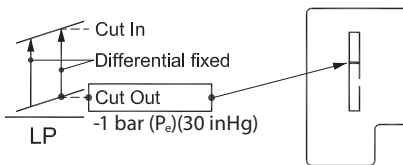
Use copper wire only
Tightening torque 20 lb. in

LP = Low Pressure



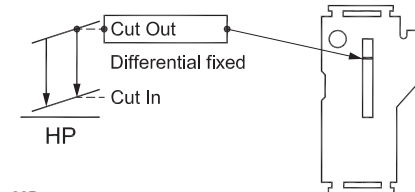
LP, aut. reset

LP = Low Pressure



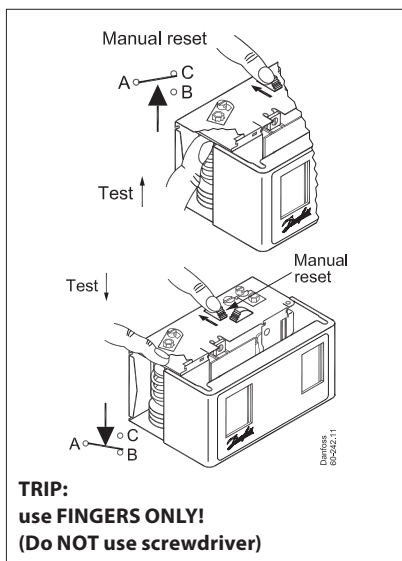
LP, man. reset

HP = High Pressure

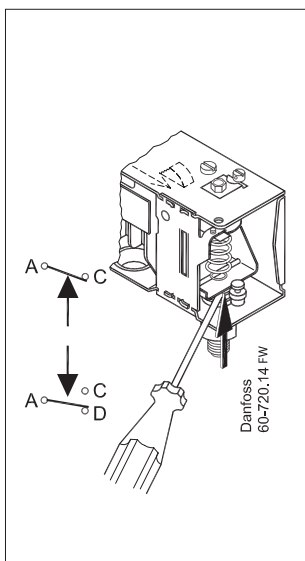


HP

Manual trip function

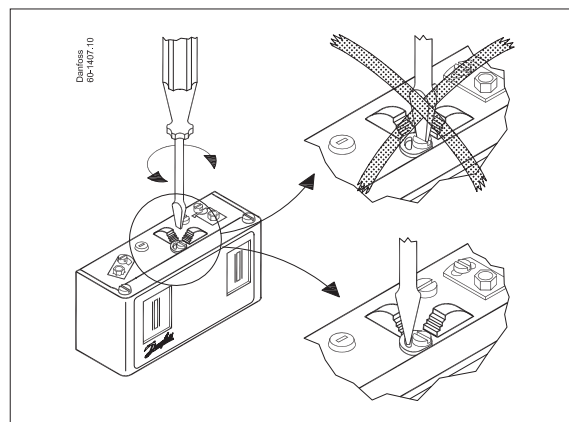


TRIP:
use FINGERS ONLY!
(Do NOT use screwdriver)



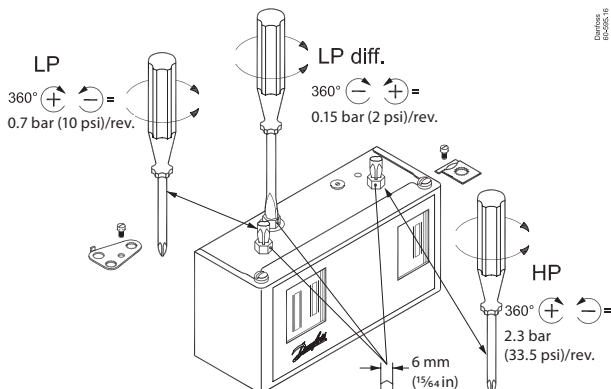
Convertible reset

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

LP → RESET	↑ RESET	↑ RESET	↓ RESET
HP → RESET	↑ RESET	↑ RESET	↓ RESET
LP man.	LP auto.	LP auto.	LP man.
HP man.	HP man.	HP auto.	HP auto.

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.

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues descriptions, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the product.

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