

Installation guide

Pressure switch

KP 15, KP 17W, KP 17B, KP 25

060R9747

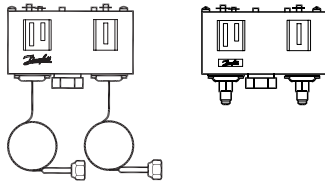
060R9747

Refrigerants:

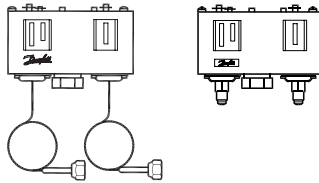
R22, R134a, R404A, R407A, R407C, R407F, R422B, R422D,
R448A, R449A, R450A, R452A, R507A, R513A

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

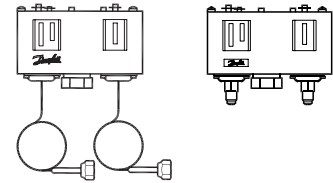
KP 15
man. (LP) / man. (HP) reset



KP 15, KP 17B
auto. (LP) / man. (HP) reset



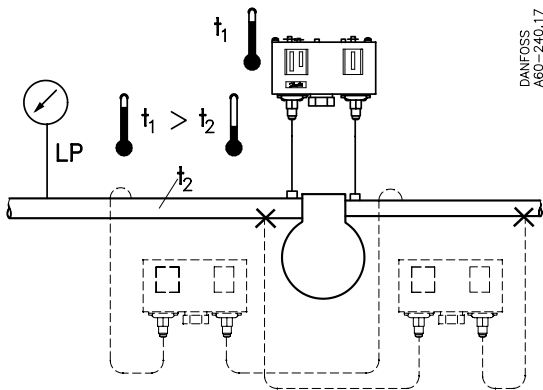
KP 15, KP 17W, KP 25
auto. (LP) / auto. (HP) reset



CAUTION:
Do not install these controls on ammonia systems.

Ambient temperatures / Mounting requirements

t_1 min.: -40 °F (-40 °C)
-13 °F (-25 °C) (PED approved products)
 t_1 max.: 149 °F (65 °C)

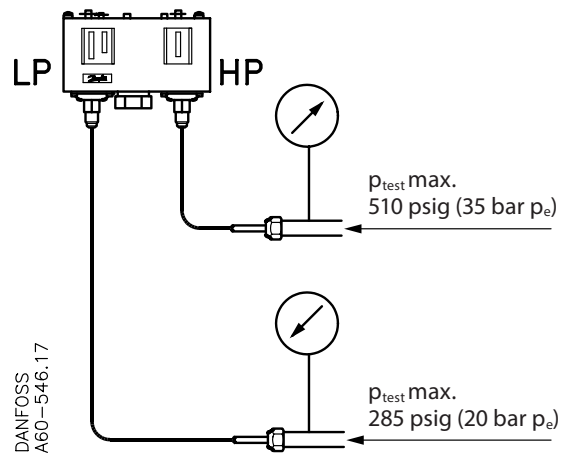


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A60-240.17



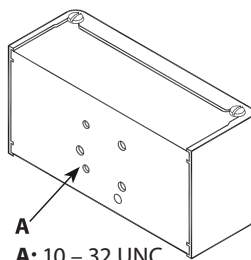
CAUTION:
Do not mount the control in a position where dirt, sediment, or oil will affect the operation of the control.

Test pressure (P_{test})

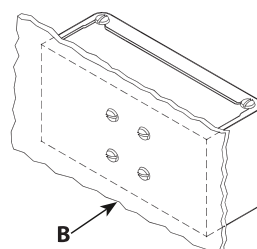


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A60-546.17

Enclosure

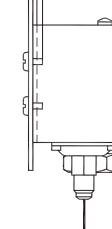


A: 10 - 32 UNC
Threads (4 holes)



B: Enclosure ~NEMA1

max 1/8 in
(3 mm)

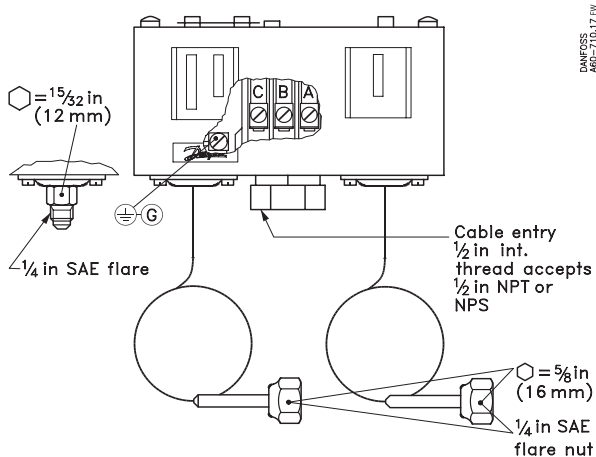


Danfoss
60-714.14.FW

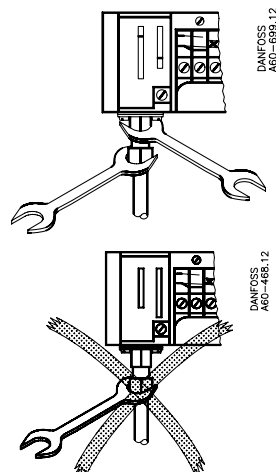


CAUTION:
The mounting panel must be plane to avoid damage of control.

Connections



Assembly



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.

Wiring

All wiring should conform to the National Electrical Code and local regulations.

SPDT

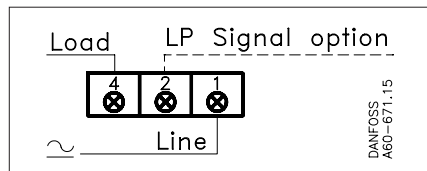
Controls with low pressure (LP) signal

Controls with low pressure (LP) and high pressure (HP) signal

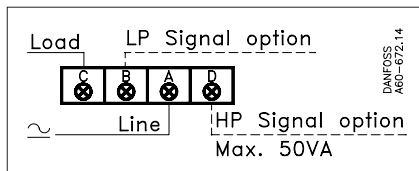
Contact load ratings

120 V AC	16 FLA, 96 LRA
240 V AC	8 FLA, 48 LRA
240 V DC	12 W pilot duty

Terminal block

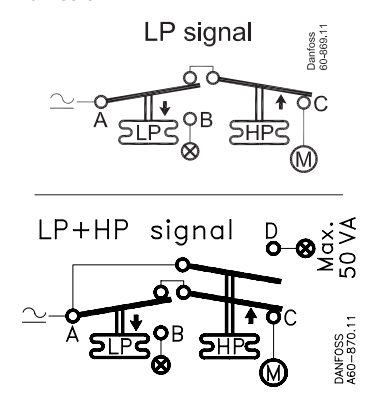


Terminal block



See label inside cover

Function



CAUTION:

Use terminal screws furnished in the contact block.
Use tightening torque 20 lb. in (2.3 Nm).
Use copper wire only.

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Use copper wire only.

Low pressure (LP) side:

A-C close on LP rise
A-C open on LP drop

Low pressure (LP) side:

A-C close on LP rise
A-C open on LP drop

High pressure (HP) side:

A-C open on HP rise
A-C close on HP drop

High pressure (HP) side:

A-C open on HP rise
A-C close on HP drop

LP signal option:

A-B close on LP drop

LP signal option:

A-B close on LP drop

HP signal option:

A-D close on HP rise

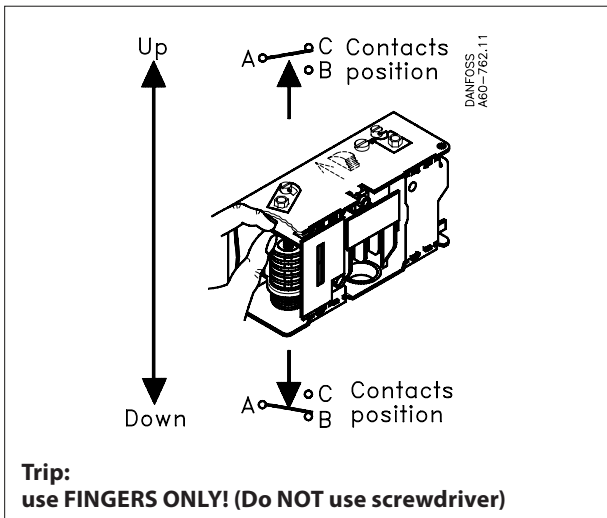
See label for current wiring inside cover.

Note!

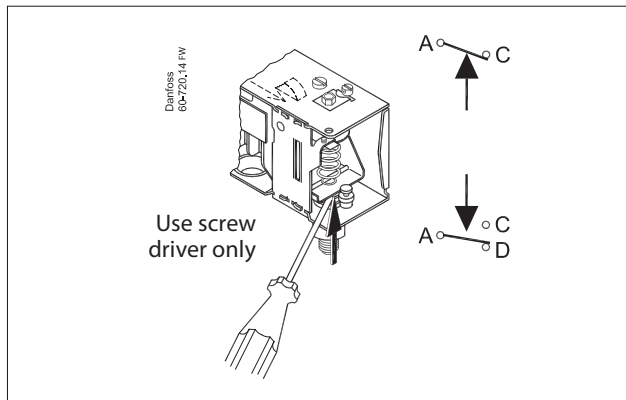
- = Load
- = Signal option
- = Bellows movement on pressure rise
- = Bellows movement on pressure drop

Manual tripping (Electrical contacts/wiring test)

LP side

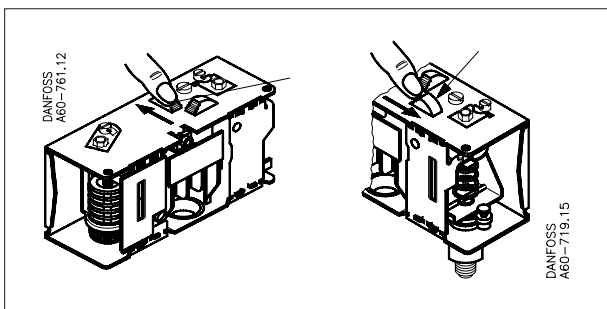


HP side



Note:
On controls with LP and/or HP man. reset, push corresponding LP and/or HP man. reset knob during tripping.

Manual reset

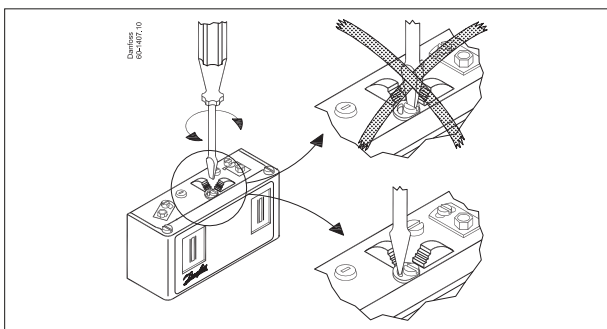


To resume control operation after safety cut-out, push man. reset knob as indicated.

Note:
LP man. reset is possible only after system pressure has risen above cut-in value.
HP man. reset is possible only after system pressure has dropped below cut-out value.

Convertible reset

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.



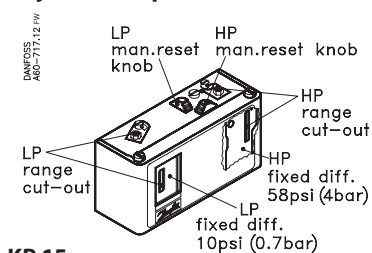
Reset options

LP man.	LP auto.	LP auto.	LP man.
HP man.	HP man.	HP auto.	HP auto.

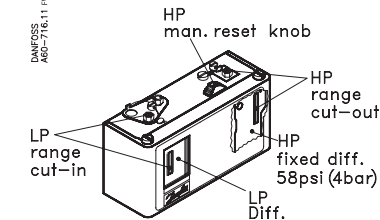
Note:
Do not select automatic reset if safety of the system requires manual reset.

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

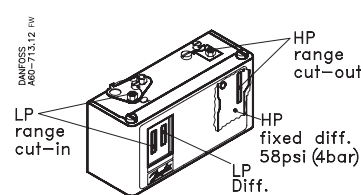
Adjustment spindle(s) location



KP 15
A. MAN./MAN. RESET



KP 15, KP 17B
B. AUTO/MAN. RESET

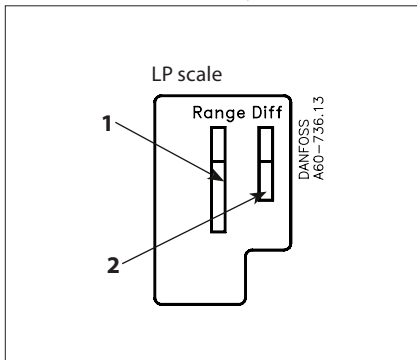


KP 15, KP 17W, KP 25
C. AUTO./AUTO. RESET

Setting

Low pressure (LP) side setting

KP 15, KP 17W, KP 17B and KP 25 with LP auto. reset only



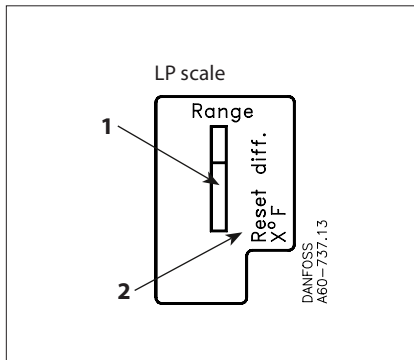
1. Adjust range spindle to desired CUT-IN value.
2. Adjust differential spindle to desired DIFFERENTIAL (DIFF.) value.

CUT-IN minus DIFFERENTIAL equals CUT-OUT

Example:

$$\begin{array}{rcl} \text{CUT-IN} & - & \text{DIFF.} & = & \text{CUT-OUT} \\ 30 \text{ psig} & - & 10 \text{ psi} & = & 20 \text{ psig} \\ (2.1 \text{ bar}) & & (0.7 \text{ bar}) & & (1.4 \text{ bar}) \end{array}$$

**KP 15A with LP man. reset only
KP 15A with convertible LP auto. man. reset**



1. Adjust range spindle to desired CUT-IN value.
2. DIFFERENTIAL (DIFF.) is fixed. Value printed on scale plate.

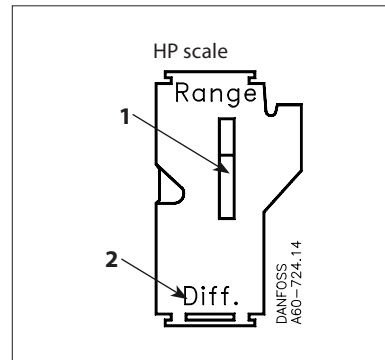
CUT-IN equals CUT-OUT plus DIFFERENTIAL

Example:

$$\begin{array}{rcl} \text{CUT-OUT} + \text{DIFF.} & = & \text{CUT-IN} \\ 12 \text{ psig} + 10 \text{ psi} & = & 22 \text{ psig} \\ (0.8 \text{ bar}) (0.7 \text{ bar}) & & (1.5 \text{ bar}) \end{array}$$

High pressure (HP) side setting

KP 15, KP 17W, KP 17B and KP 25 with HP auto. or man. reset



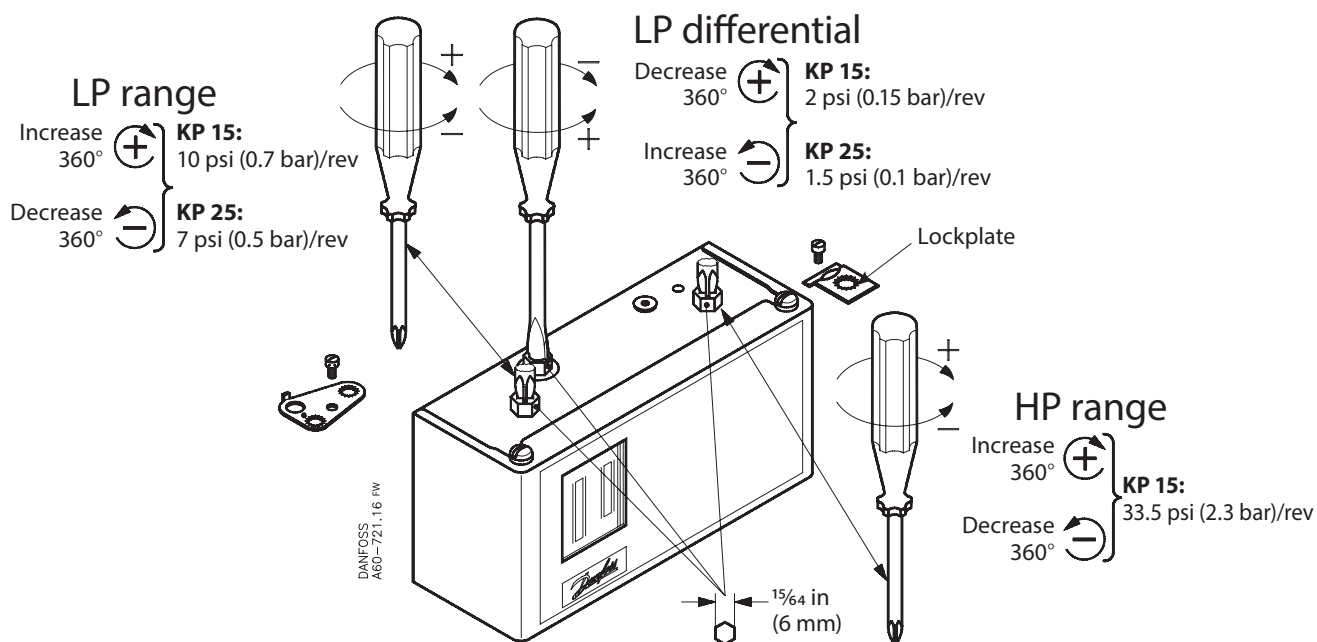
1. Adjust range spindle to desired CUT-OUT value.
2. DIFFERENTIAL (DIFF.) is fixed. Value printed on scale plate.

CUT-OUT minus DIFFERENTIAL equals CUT-IN

Example:

$$\begin{array}{rcl} \text{CUT-OUT} - \text{DIFF.} & = & \text{CUT-IN} \\ 203 \text{ psig} - 58 \text{ psi} & = & 145 \text{ psig} \\ (14 \text{ bar}) & & (4 \text{ bar}) & & (10 \text{ bar}) \end{array}$$

Adjustment



Note:

Remove lockplate before adjustment.
Replace lockplate after adjustment (if desired).