



**KP 15 Pressure  
Switch and  
Combustion  
Controls**



# Danfoss KP 15 Pressure Switch and Combustion Controls Installation Guide

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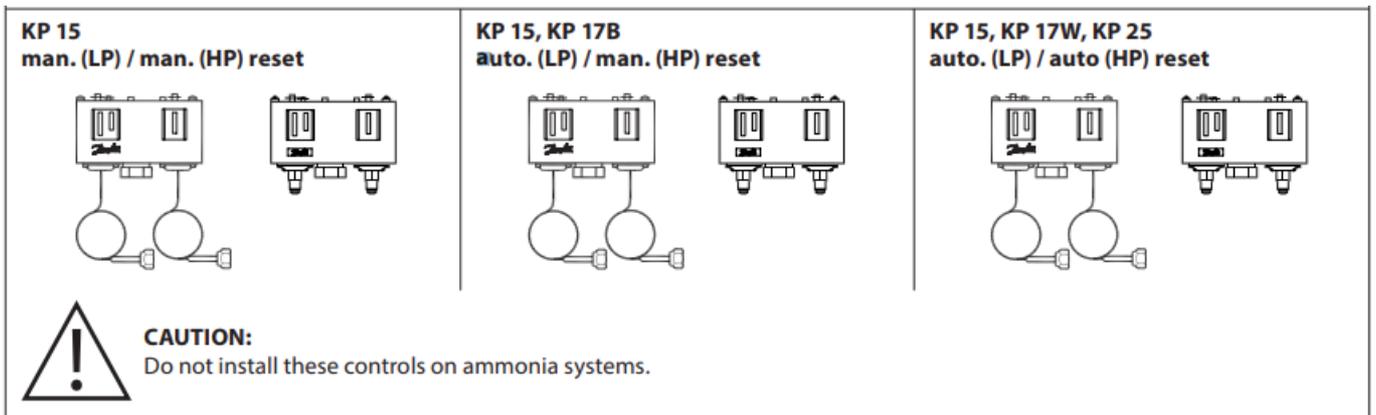


**Danfoss KP 15 Pressure Switch and Combustion Controls**



**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/>



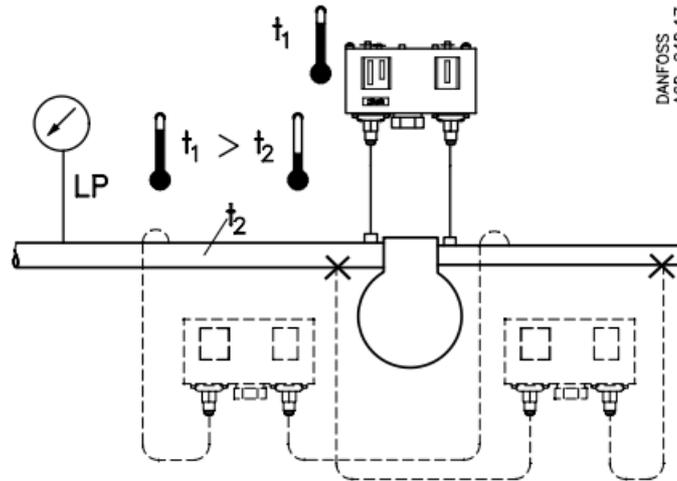
**CAUTION:**

Do not install these controls on ammonia systems.

**Ambient temperatures / Mounting requirements**

- t1 min.: -40 °F (-40 °C)
- 13 °F (- 25 °C) (PED approved products)
- t1 max.: 149 °F ( 65 °C)

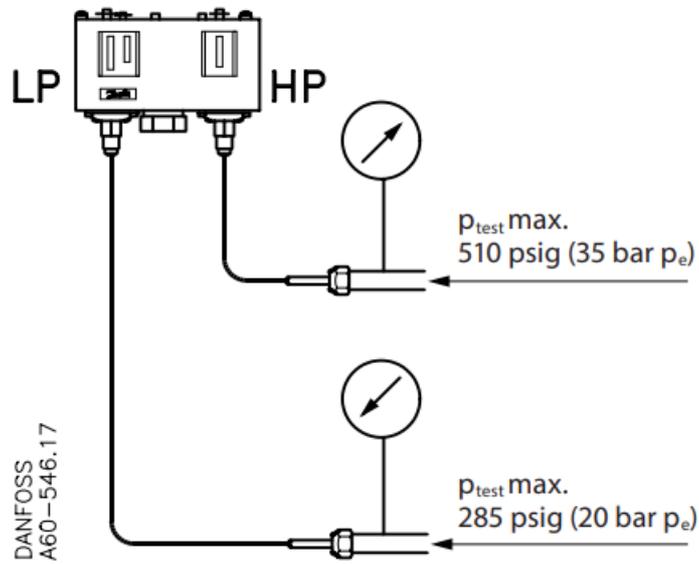
$t_1$  min.: -40 °F (-40 °C)  
-13 °F (-25 °C) (PED approved products)  
 $t_1$  max.: 149 °F (65 °C)



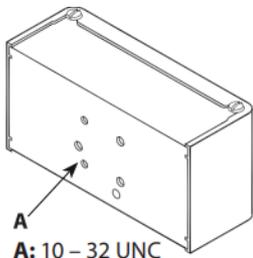
**CAUTION:**

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

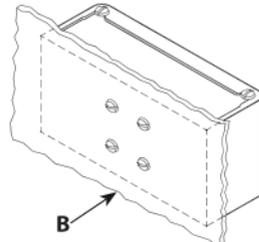
**Test pressure (Ptest)**



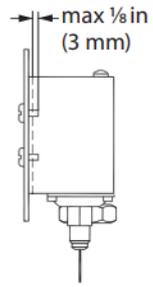
**Enclosure**



**A:** 10 – 32 UNC  
Threads (4 holes)



**B:** Enclosure ~NEMA1

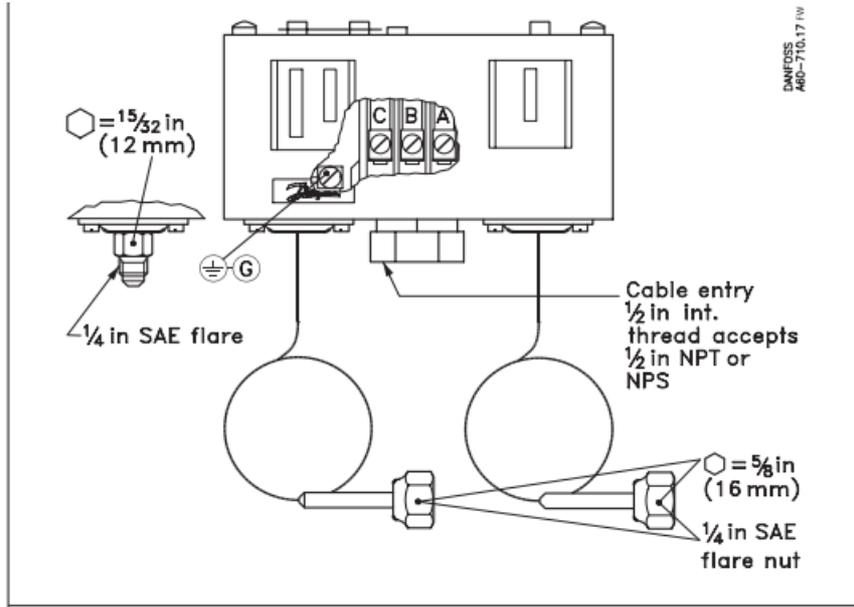


Danfoss  
60-714, 14 IW

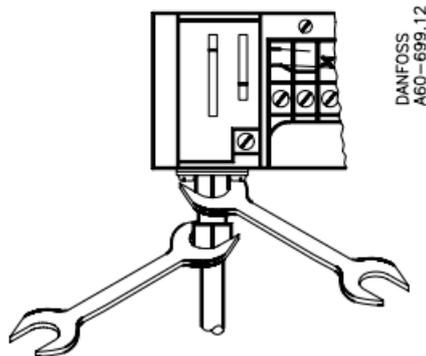


**CAUTION:**  
The mounting panel must be plane to avoid damage of control.

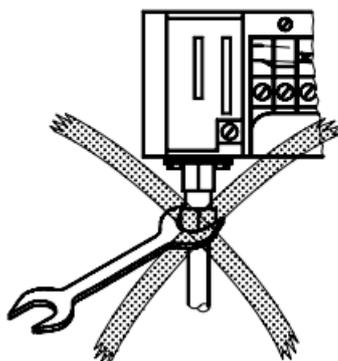
## Connections



## Assembly



DANFOSS  
A60-699, 12



DANFOSS  
A60-488, 12

**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.

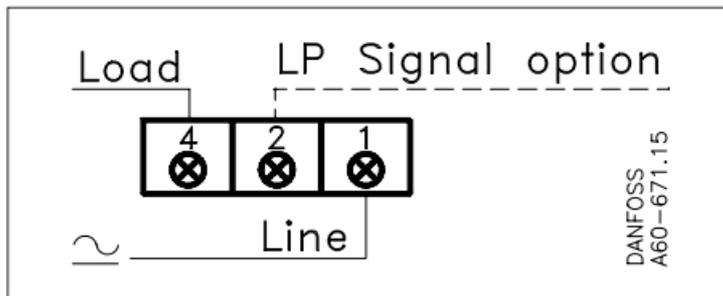
**Wiring**

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

**SPDT**

Controls with low pressure (LP) signal

**Terminal block**



**CAUTION:**

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

**Low pressure (LP) side:**

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

**High pressure (HP) side:**

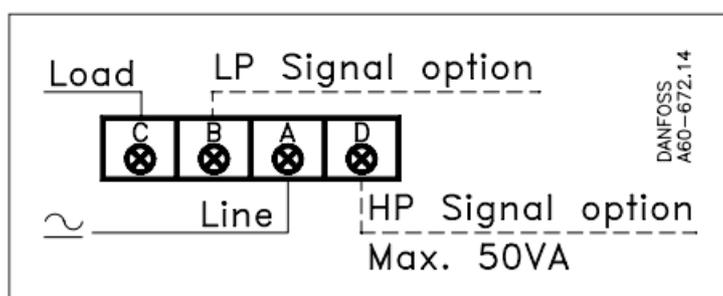
A-C open on HP rise  
A-C close on HP drop

**LP signal option:**

A-B close on LP drop  
See label for current wiring inside cover.

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

**Terminal block**



**CAUTION:**

Use terminal screws furnished in the contact block.

Use tightening torque 20 lb. in (2.3 Nm).

Use copper wire only.

**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

**LP signal option:**

A-B close on LP drop

**HP signal option:**

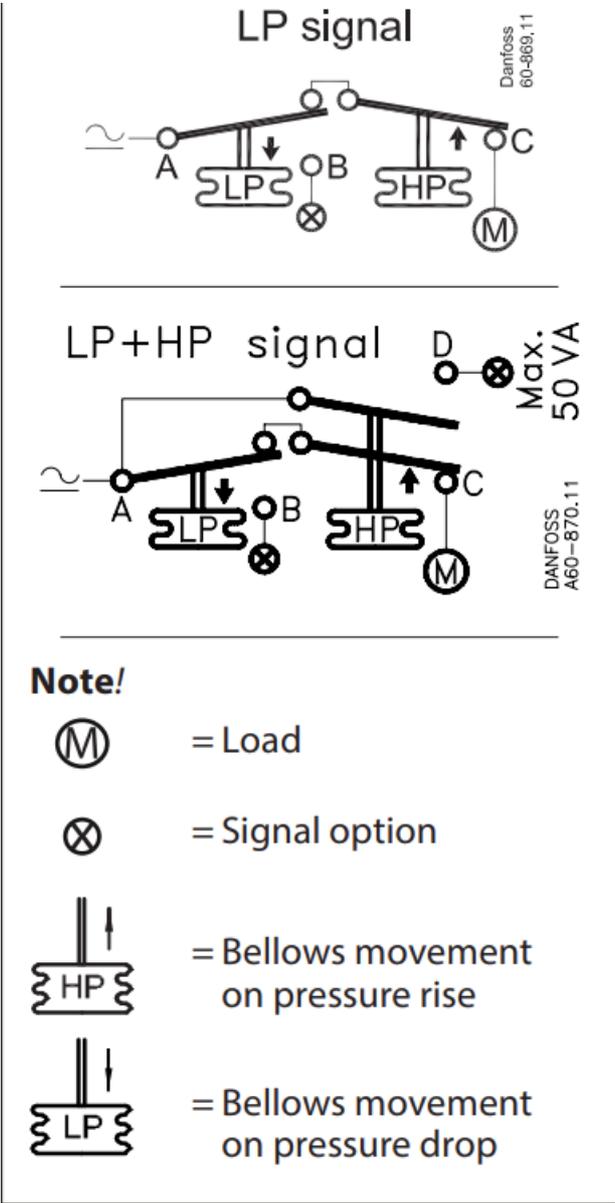
A-D close on HP rise

**Contact load ratings**

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

See label inside cover

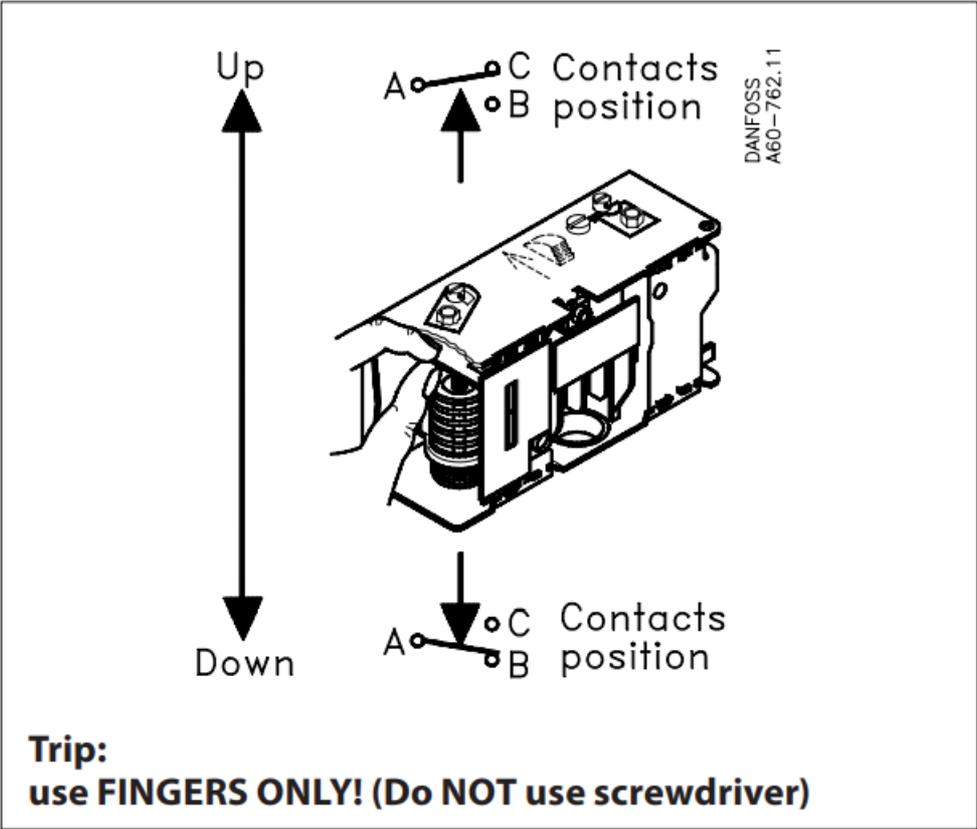
**Function**



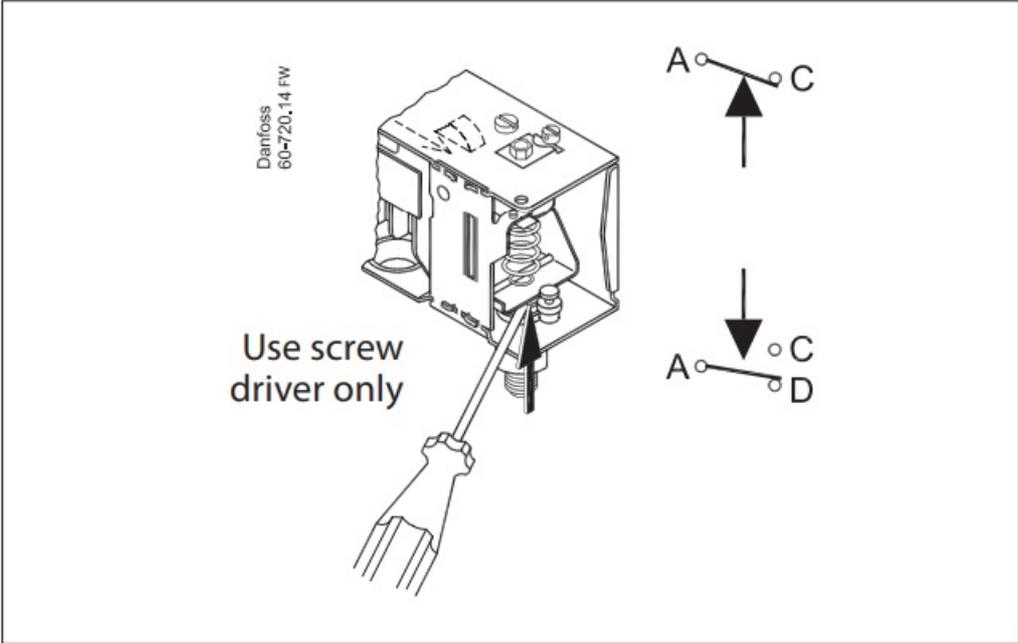
**Manual tripping**

(Electrical contacts/wiring test)

**LP side**

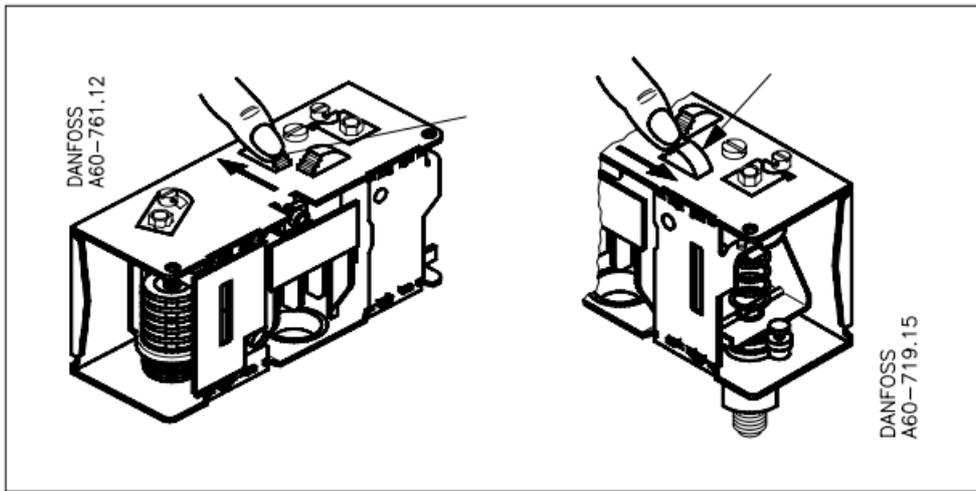


HP side



**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.

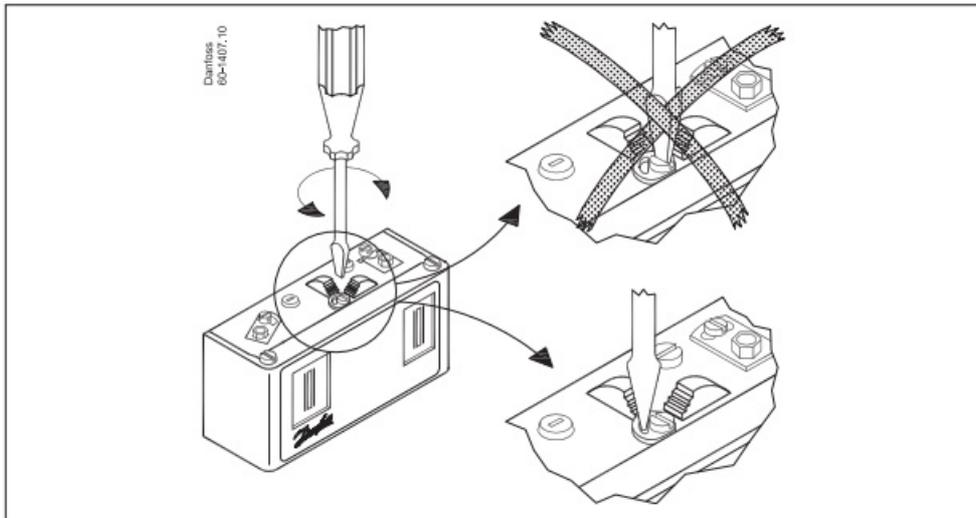
**Note:**

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**

<p><b>LP man.</b></p>	<p><b>LP auto.</b></p>	<p><b>LP auto.</b></p>	<p><b>LP man.</b></p>
<p><b>HP man.</b></p>	<p><b>HP man.</b></p>	<p><b>HP auto.</b></p>	<p><b>HP auto.</b></p>

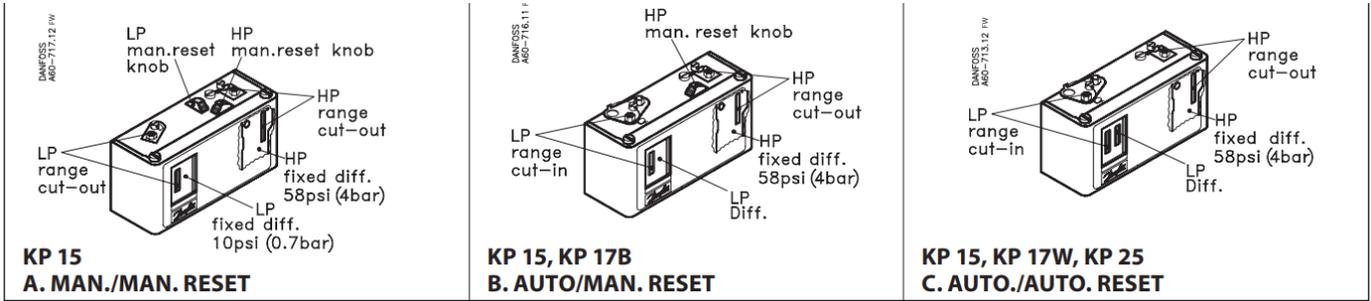
**Note:**

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**



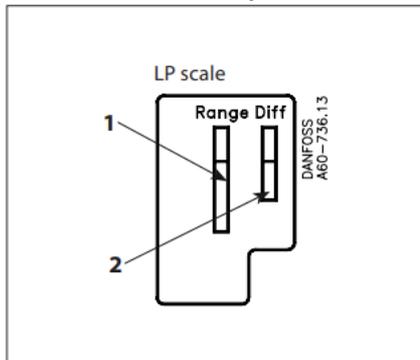
**Setting**

**Low pressure (LP) side setting**

**High pressure (HP) side setting**

**Low pressure (LP) side setting**

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



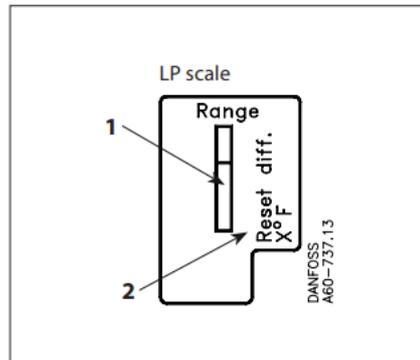
1. Adjust range spindle to desired CUT-IN value.
2. Adjust differential spindle to desired DIFFERENTIAL (DIFF.) value.

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.

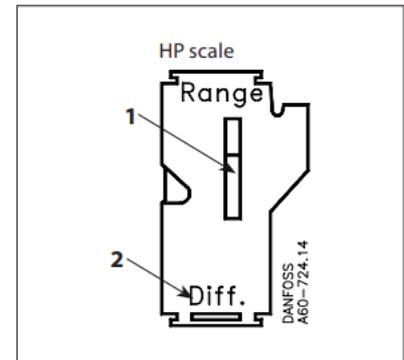
CUT-IN equals CUT-OUT plus DIFFERENTIAL

**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**



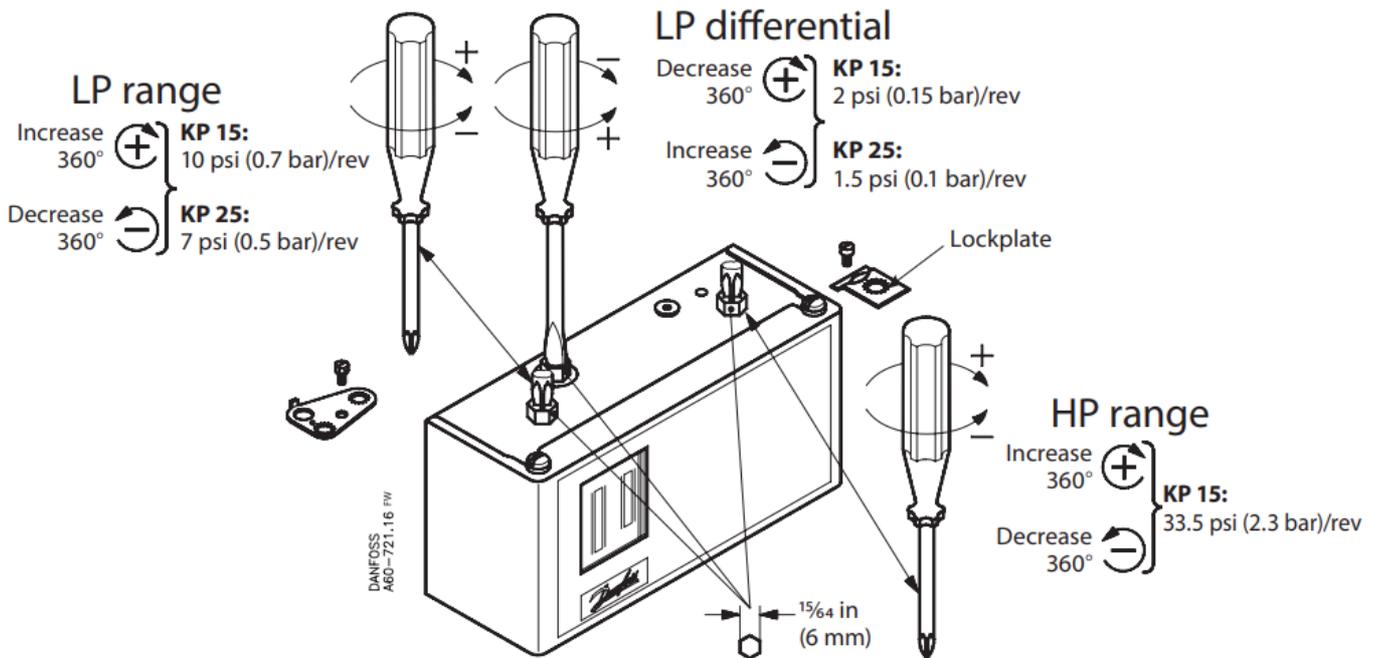
1. Adjust range spindle to desired CUT-OUT value.
2. DIFFERENTIAL (DIFF.) is fixed. Value printed on scale plate.

CUT-OUT minus DIFFERENTIAL equals CUT-IN

**Example:**

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

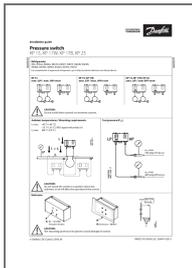
**Adjustment**



### Note:

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

## Documents / Resources



[Danfoss KP 15 Pressure Switch and Combustion Controls](#) [pdf] Installation Guide  
 KP 15, KP 17W, KP 17B, KP 25, KP 15 Pressure Switch and Combustion Controls, KP 15, Pressure Switch and Combustion Controls, Combustion Controls

## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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