

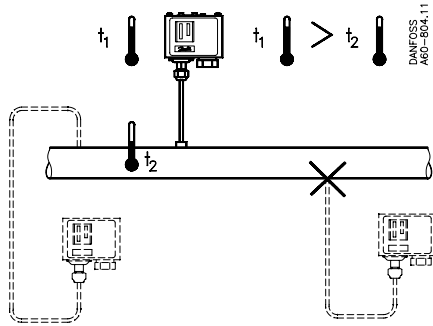
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### Refrigerants

The ammonia controls can be used with R 711 (NH<sub>3</sub>) refrigerants.

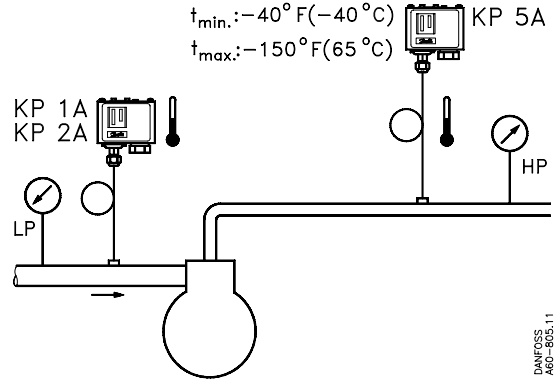
### Mounting requirements



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

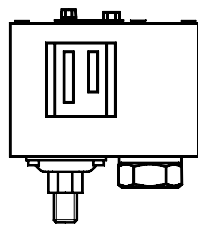
### Ambient temperatures

$t_{min.}: -40^{\circ}F (-40^{\circ}C)$   
 $t_{max.}: -150^{\circ}F (65^{\circ}C)$



DANFOSS A60-805.11

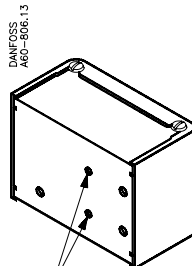
### Test pressure (p<sub>TEST</sub>)



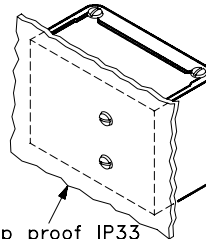
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$p_{test} \max.$   
 KP 1A, 2A: 285 psig (20 bar p<sub>e</sub>)  
 KP 5A: 505 psig (35 bar p<sub>e</sub>)

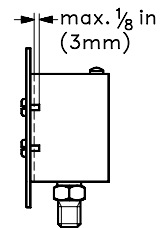
### Enclosure



8-32 UNC(M4)



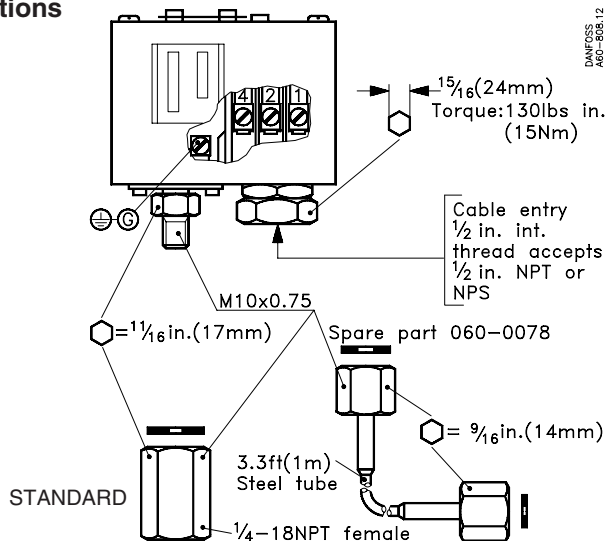
Drip proof IP33  
 (IEC 529/DIN40050)



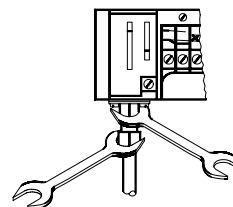
max. 1/8 in  
 (3mm)

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

### Connections



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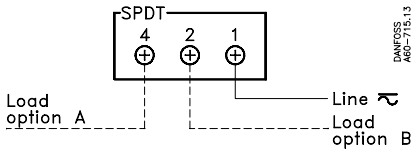
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## Wiring

**CAUTION:** Disconnect power supply before wiring connections are made to avoid possible electrical shock or damage to equipment.

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

### Terminal block



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

### Contact load ratings

120 V a.c.	16 FLA, 96 LRA
240 V a.c.	8 FLA, 48 LRA
240 V d.c.	12 W pilot duty

## Load Option A

*CUT-OUT on pressure drop*

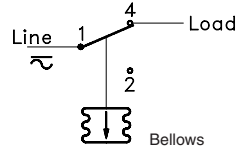
Wire terminals 1-4:

CUT-IN = High Set Point (HSP)

see "Setting"

CUT-OUT = Low Set Point (LSP)

see "Setting"



Terms 1-4 close on pressure rise  
Terms 1-4 open on pressure drop

Example: CUT-IN = 30 psig  
CUT-OUT = 10 psig

This means CUT-IN = HSP = 30 psig  
and CUT-OUT = LSP = 10 psig

Note:

□ = Bellows movement on pressure rise  
⇩ = Bellows movement on pressure drop  
The free terminal can be used for signal purpose.

## Load Option B

*CUT-OUT on pressure rise*

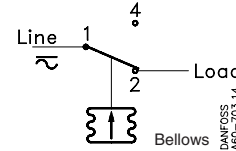
Wire terminals 1-2:

CUT-IN = Low Set Point (LSP)

see "Setting"

CUT-OUT = High Set Point (HSP)

see "Setting"



Terms 1-2 close on pressure drop  
Terms 1-2 open on pressure rise

Example: CUT-IN = 250 psig  
CUT-OUT = 350 psig

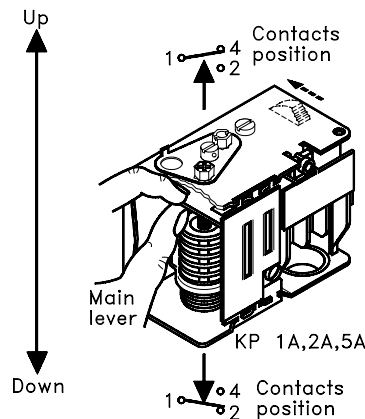
This means CUT-IN = LSP = 250 psig  
and CUT-OUT = HSP = 350 psig

## Manual tripping

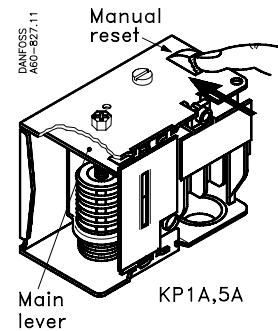
(Electrical contacts/wiring test)

**TRIP (main lever)**  
use FINGERS ONLY!  
(Do NOT use screwdriver)

Note:  
KP 1A and KP 5A w/man. reset:  
Push manual reset knob during manual tripping.



## Manual reset

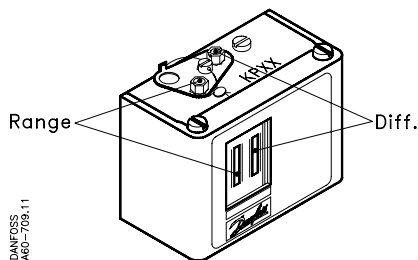


To resume control operation after safety cutout, push reset knob as indicated.

Note:  
KP 1A, man. reset is possible only after a pressure rise of 10 psi (0.7 bar).  
KP 5A, man. reset is possible only after a pressure drop of 43 psi (3.0 bar).

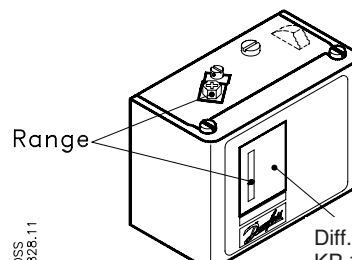
## Adjustment spindle(s) location

Auto reset



KP 1A, 2A, 5A

Manual reset



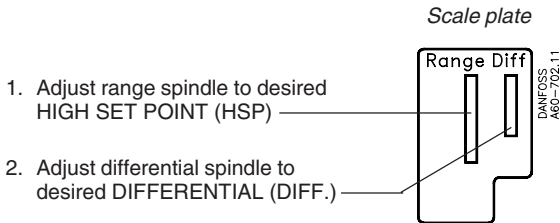
KP 1A, 5A

Diff. (fixed)  
KP 1A: 10 psi (0.7 bar)  
KP 5A: 43 psi (3 bar)

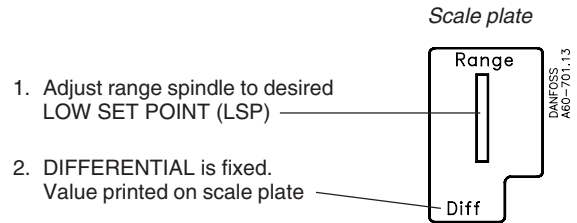
## Setting

(see also "Wiring")

KP 1A (auto. reset), KP 2A and KP 5A



KP 1A (manual reset ONLY)



Note:

KP 5A (manual reset) has fixed diff.  
Value printed on scale plate.

HIGH SET POINT minus DIFFERENTIAL equals LOW SET POINT

Example:

$$\begin{array}{rclcl} \text{HSP} & - & \text{DIFF.} & = & \text{LSP} \\ 30 \text{ psig} & - & 20 \text{ psi} & = & 10 \text{ psig} \\ (2.1 \text{ bar}) & & (1.4 \text{ bar}) & & (0.7 \text{ bar}) \end{array}$$

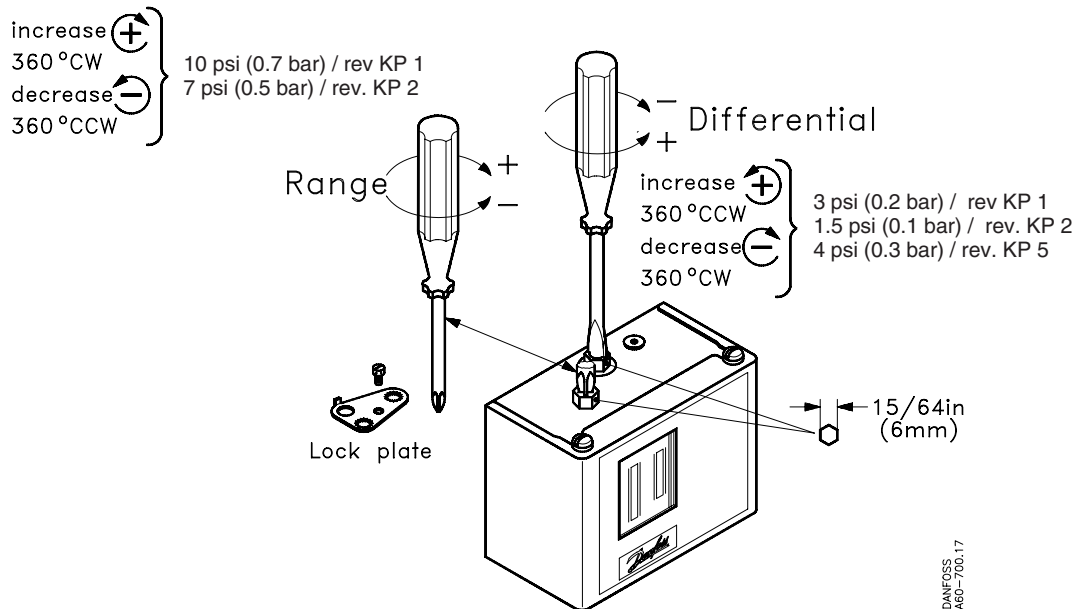
LOW SET POINT plus DIFFERENTIAL equals HIGH SET POINT

Example:

$$\begin{array}{rclcl} \text{LSP} & + & \text{DIFF.} & = & \text{HSP} \\ 12 \text{ psig} & + & 10 \text{ psi} & = & 22 \text{ psig} \\ (0.8 \text{ bar}) & & (0.7 \text{ bar}) & & (1.5 \text{ bar}) \end{array}$$

## Adjustment

See instruction printed on top of control



Note:

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