Installation guide

Pressure switch
Types KP 1, KP 2, KP 5, KP 7W, KP 7B

Refrigerants
HCFC and non-flammable HFC

CAUTION:
Do not install these controls on ammonia systems.

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

CAUTION:
Do not install these controls on ammonia systems.

Mounting

Connections

Test pressure ($P_{\text{test}}$)

Enclosure

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

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

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Load Current</th>
<th>Loss Current</th>
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</thead>
<tbody>
<tr>
<td>120 V a.c.</td>
<td>16 FLA, 96 LRA</td>
<td></td>
</tr>
<tr>
<td>240 V a.c.</td>
<td>8 FLA, 48 LRA</td>
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</tr>
<tr>
<td>240 V d.c.</td>
<td>12 W pilot duty</td>
<td></td>
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</tbody>
</table>

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”

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

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

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
CUT-OUT = HSP = 350 psig

Manual trip function
(Electrical contacts / wiring test)

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

Note:
KP 1, KP 5 and KP 7B with man. reset: Push manual reset knob during manual tripping.

Adjustment spindle(s) location

Auto reset KP 1, KP 2, KP 5, KP 7W

Manual reset KP 1, KP 5, KP 7B

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

Note:
KP 1, man. reset is possible only after a pressure rise of 10 psi (0.7 bar), KP 5 and KP 7B, man. reset is possible only after a pressure drop of respectively 43 psi (3.0 bar) and 58 psi (4.0 bar)
Setting
(see also “Wiring”)

KP 1 (auto reset), KP 2, KP 5, KP 7W, KP 7B

1. Adjust range spindle to desired HIGH SET POINT (HSP)
2. Adjust differential spindle to desired DIFFERENTIAL (DIFF.)

Note:
KP 5 (manual reset) and KP 7B have fixed diff.
Value printed on scale plate.

HIGH SET POINT minus DIFFERENTIAL equals LOW SET POINT

Example:
HSP – DIFF. = LSP
30 psig – 20 psi = 10 psig
(2.1 bar) (1.4 bar) (0.7 bar)

If terminals 1-4 are used:  CUT-IN = HSP
CUT-OUT = LSP
If terminals 1-2 are used:  CUT-IN = LSP
CUT-OUT = HSP

KP 1 (manual reset ONLY)

1. Adjust range spindle to desired LOW SET POINT (LSP)
2. DIFFERENTIAL is fixed Value printed on scale plate

LOW SET POINT plus DIFFERENTIAL equals HIGH SET POINT

Example:
LSP + DIFF. = HSP
12 psig + 10 psi = 22 psig
(0.8 bar) (0.7 bar) (1.5 bar)

Adjustment
See instruction printed on top of control

Range

KP 1: 10 psi (0.7 bar)/rev.
KP 2: 7 psi (0.5 bar)/rev.
KP 5, 7W, 7B: 33 psi (2.3 bar)/rev.

Differential

KP 1: 3 psi (0.2 bar)/rev.
KP 2: 1.5 psi (0.1 bar)/rev.
KP 5: 4 psi (0.3 bar)/rev.
KP 7W, 7W: 7 psi (0.5 bar)/rev.

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