

# Series P48

## Pressure Controls for Steam, Air or (hot) Water

### Product Bulletin

The series P48 pressure controls are designed as operating or high/low cut-out control on steam, air or (hot) water applications. Also for non-combustible gases which are not harmful to the materials in contact with these mediums.

On steam applications a steam trap is recommended (see "Accessories").

Some models have been tested and approved according to PED97/23EC Cat IV (see "Type Number Selection Table").

The P48 series have been developed for special applications where pressure must be controlled.

All models have an adjustable differential depending on the range (see "Type Number Selection Table").

The P48AAA-9110 and P48AAA-9120 has the power element outside the case.

All the models have phosphor bronze bellows and brass pressure connections except the P48AAA-9150.

This model has a stainless steel bellows and pressure connection and is provided with a brass adapter 1/4"-18 PTF-SAE SHORT, DRYSEAL female to G 3/8 male.



- **Generous wiring space provided**

Easy wiring and maintenance

- **Splash-proof enclosure (IP54)**

Can be used for indoor/outdoor applications

- **SPDT contacts are provided as standard on single pressure control**

Can be wired for alarm functions

- **Trip-free manual reset**

Override is not possible in the control function

## Note

These controls are designed for use only as operating controls. Where an operating control failure would result in personal injury or loss of property it is the responsibility of the installer to add devices or systems that protect against, or warn of, control failure.

Manual reset models are possible as optional construction for quantities only.

## Mounting

Mounting can easily be done with a mounting bracket 271-51L (order separately) or directly on a surface. Mounting holes 4.5 mm diam. and M4 holes are provided.

## Adjustment

Adjustment of range and differential can be done by turning the hexagonal range screw and differential screw. These screws can also be locked by a lockplate accessory (KIT023N600) (order separately). The range scale indicates high switch point (contacts A - B open, A - C closed). Deduct differential to obtain low switch point.

## Contact function

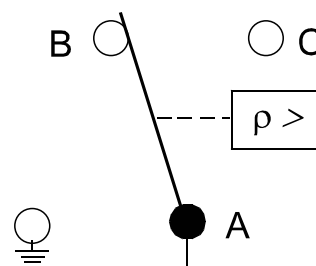


Figure 1: A - B open on pressure increase.  
A - C close simultaneously.

## Optional construction note

If your requirements are not in the type number selection table, then please contact your Johnson Controls representative.

## Repair and replacement

Repair is not possible. In case of an improperly functioning control, please check with your nearest supplier. When contacting the supplier for a replacement you should state the type/model number of the control. This number can be found on the data plate or cover label.

## Type Number Selection Table

Ordering Codes	Range (bar)	Differential (bar)	Max. bellows pressure (bar)	Approved acc. to PED 97/23EC Cat IV
P48AAA-9110	0 - 1	0.16 - 0.55	3.5	Yes
P48AAA-9120	0.2 - 4	0.25 - 0.80	8	Yes
P48AAA-9130	-0.2 - 10	1 - 4.5	15	Yes
P48AAA-9140	1 - 16	1.3 - 2.5	25	Yes
P48AAA-9150	3 - 30	3 - 12	33	No
P48BEA-9140	4 - 16	Manual Reset	25	Yes

### Note:

1 bar = 100 kPa ≈ 14.5 psi

## Accessories (order separately)

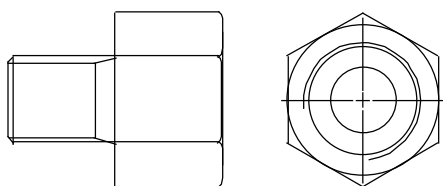


Figure 2: Brass adapter G 3/8 female to 1/4-18 NPT male

Order number: CNR012N001R

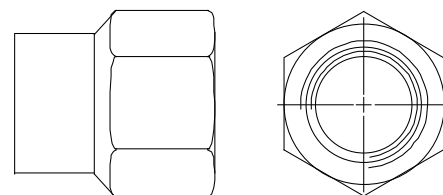


Figure 3: Brass adapter G 3/8 female to 1/4-18 NPT female

Order number: CNR013N001R

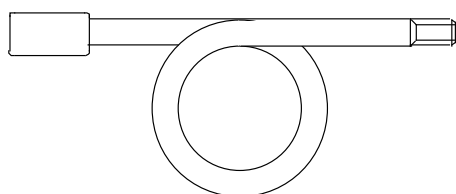


Figure 4: Steam trap 1/4-18 NPT male/female

Order number: TBG16A-600

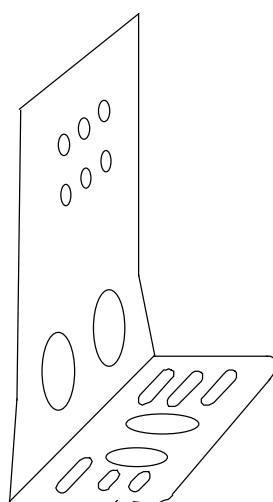


Figure 5: Mounting bracket

Order number: 271-51L

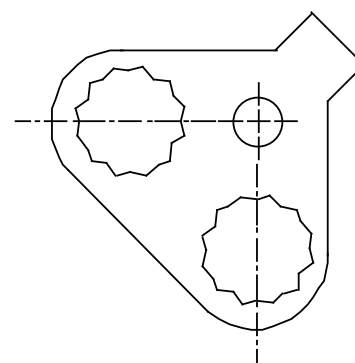


Figure 6: Locking kit

Order number: KIT023N600  
(incl. with PED appr. models)

## Power element dimensions (mm)

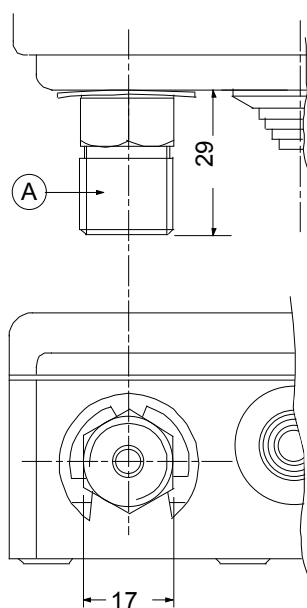


Figure 7: All ranges except 0 to 1 bar and 0.2 to 4 bar  
A. G 3/8

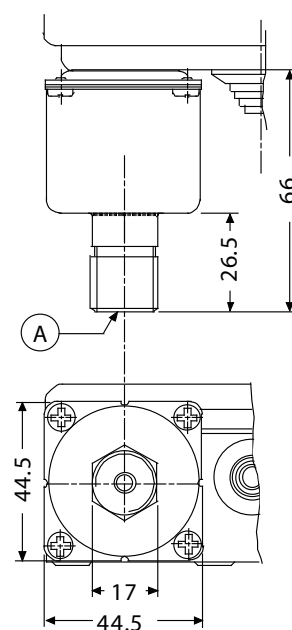
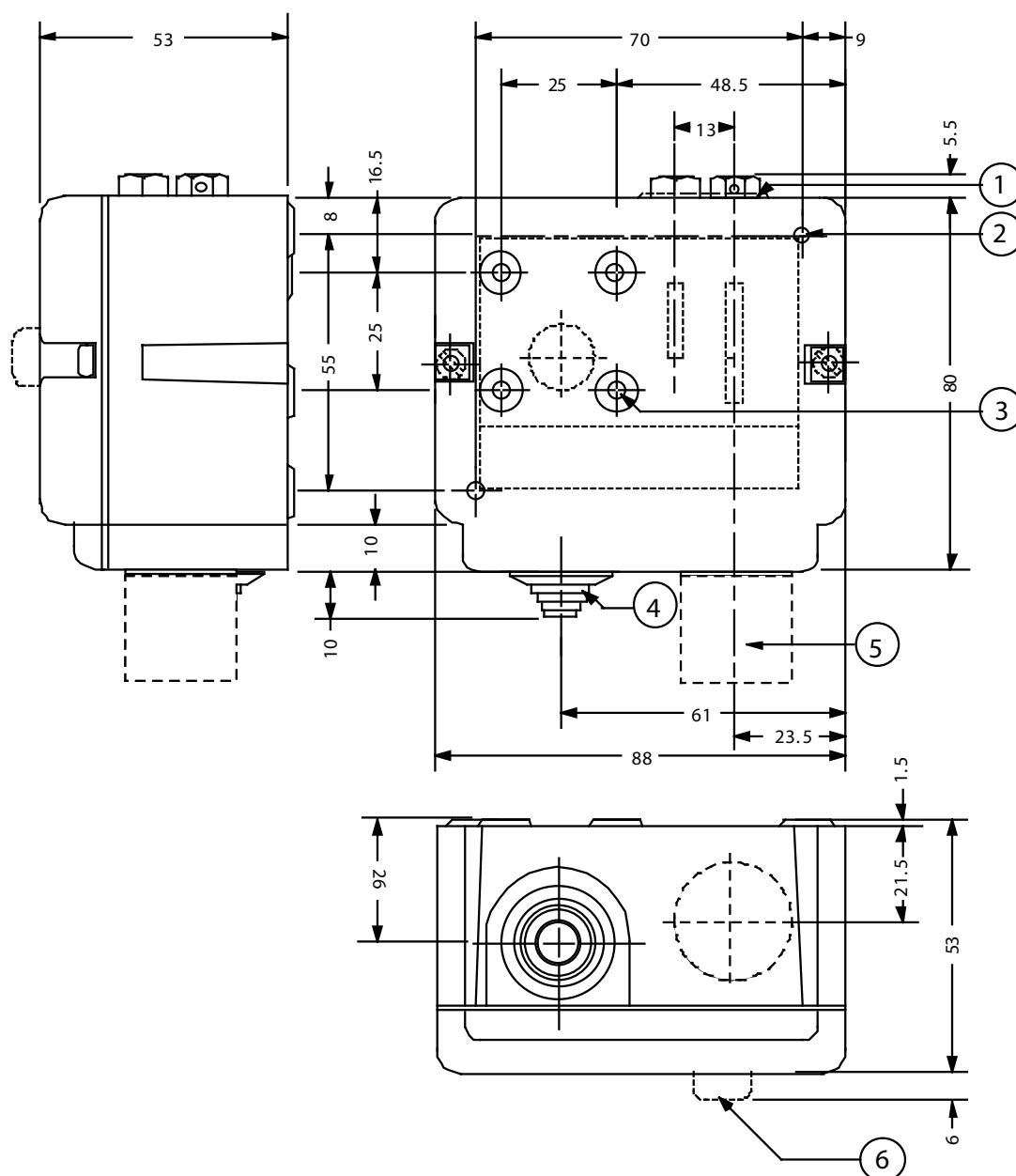


Figure 8: Ranges 0 to 1 bar and 0.2 to 4 bar  
A. G 3/8

## Dimensions (mm)



**Figure 9:**

1. Lockplate (if applied)
2. Two mounting holes  $\varnothing 4.5$
3. Four mounting holes M4 (deep 6 mm)
4. Cable inlet grommet (cable range  $\varnothing 5$  to  $\varnothing 13$ )
5. Power element (see Figure 1 and Figure 2)
6. Reset button (reset models only)

## Technical Specifications

<b>Types, ranges differentials</b>	See "Type number selection table"
<b>Media</b>	Steam, air, water, non-combustible gases
<b>Max. medium temperature</b>	+80 °C
<b>Pressure connector</b>	G 3/8 male *
<b>Ambient temperature limits</b>	-50 to + 55 °C (+70 °C maximum duration two hours)
<b>Material</b>	
<b>case and cover:</b>	Weather-proof aluminium die cast
<b>contact unit:</b>	Large silver nickel contact surface
<b>bellows:</b>	Phosphor bronze **
<b>Protection</b>	IP54
<b>Electrical rating</b>	~16(10)A 400 V 220 Vac, 12 W (pilot duty only)
<b>Packaging</b>	Individual package
<b>Shipping weights</b>	
<b>ind. pack:</b>	0.5 kg
<b>overpack:</b>	P48AAA-9110 24 pcs (12 kg)
	P48AAA-9120
	P48AAA-9150 36 pcs (20 kg)
	P48AAA-9130
	P48AAA-9140
	P48BEA-9140
<b>CE Compliance</b>	Johnson Controls, Inc., declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

### Note:

\* Except P48AAA-9150: 1/4"-18 PTF-SAE SHORT, DRYSEAL plus adapter to G 3/8 male.

\*\* Except P48AAA-9150: stainless steel 316 L.

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.