

Series P48

Pressure Controls for Steam, Air or (hot) Water

Introduction

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)

Description

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 NPT female to R3/8 male.



P48 Pressure Control for Steam, Air or (hot) Water

Feature and Benefits	
<input type="checkbox"/> Generous wiring space provided	Easy wiring and maintenance
<input type="checkbox"/> Splash-proof enclosure (IP54)	Can be used for indoor/outdoor applications
<input type="checkbox"/> SPDT contacts are provided as standard on single pressure control	Can be wired for alarm functions
<input type="checkbox"/> 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

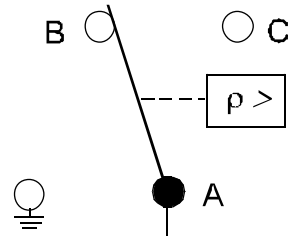


Fig. 1

**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

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

Note: 1 bar = 100 kPa ≈ 14.5 psi

Accessories (order separately)

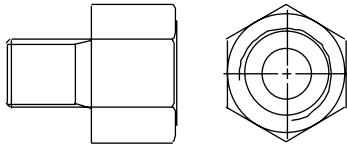


Fig. 2
Brass adapter R3/8 female
to 1/4-18 NPT male
order number
CNR012N001R

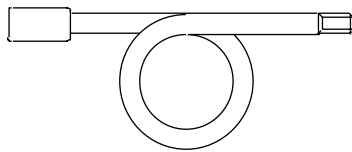


Fig.3
Steam trap 1/4-18 NPT
male/female
order number TBG16A-600

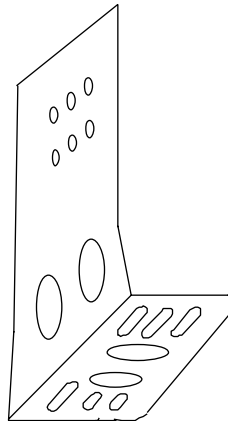


Fig. 4
Mounting bracket
order number 271-51L

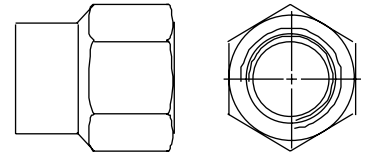


Fig. 5
Brass adapter R3/8 female
to 1/4-18 NPT female
order number
CNR013N001R

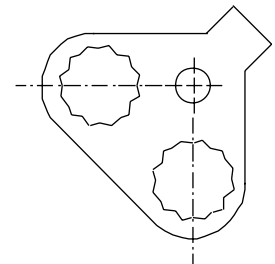


Fig. 6
Locking kit
order number KIT023N600
(incl. with PED appr. models)

Power element dimensions (mm)

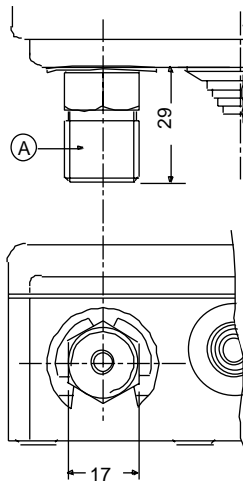


Fig. 7
All ranges except 0 to 1 bar and 0.2 to 4 bar
A. R3/8

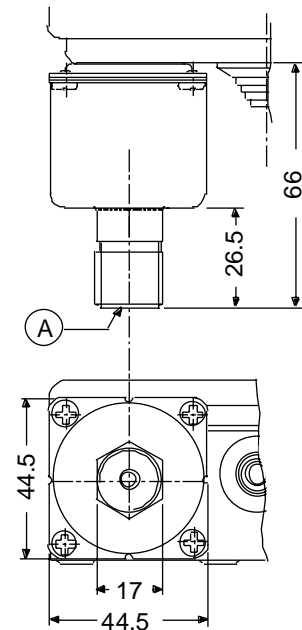
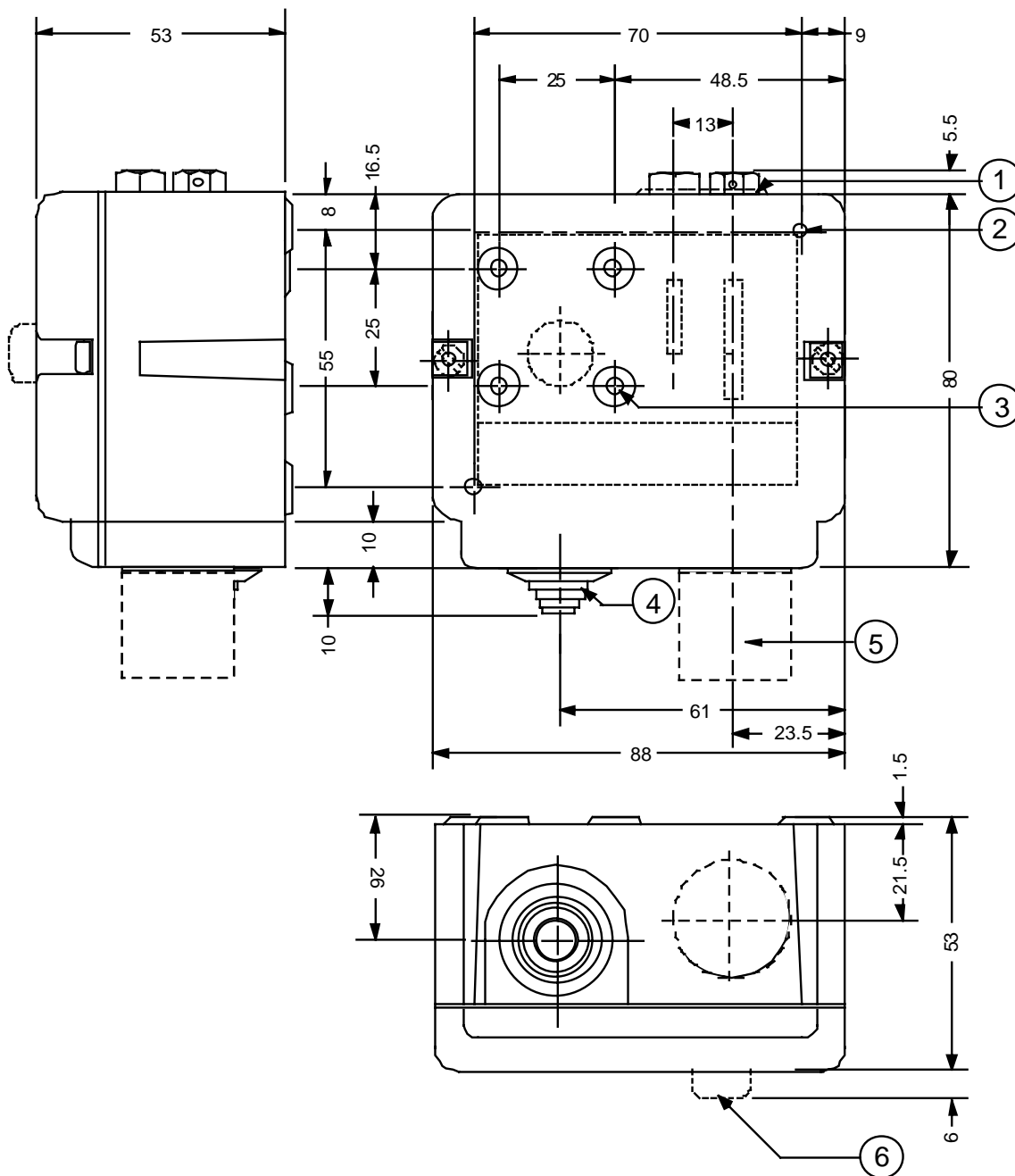


Fig. 8
Ranges 0 to 1 bar and 0.2 to 4 bar
A. R3/8

Dimensions (mm)



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 fig 1 and 2
6. Reset button (reset models only)

Fig. 9

Specifications

Types, ranges differentials	See type number selection table	
Media	Steam, air, water, non-combustible gases	
Max. medium temperature	+80 °C	
Pressure connector	R 3/8 male*	
Ambient temperature limits	-50 to + 55 °C (+70 °C maximum duration two hours)	
Material	case and cover	Weather-proof aluminium die cast
	contact unit	Large copper backed silver cadmium (AgCdO) contacts on phosphor bronze conductor leaves
	bellows	Phosphor bronze**
Protection	IP54	
Electrical rating	~16(10)A 400 V ∴ 220 V, 12 W (pilot duty only)	
Packaging	Individual package	
Shipping weights	ind. pack	0.5 kg
	overpack	P48AAA-9110 24 pcs. (12 kg)
		P48AAA-9120
		P48BEA-9120
		P48AAA-9150 36 pcs (20 kg)
		P48AAA-9130
		P48AAA-9140
		P48BEA-9140
		P48AAA-9230

* Except P48AAA-9150: 1/4"-18 NPT plus adapter to R3/8 male and P48AAA-9230 which is G1/4" female.

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

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



Johnson Controls International, Inc.

Headquarters: Milwaukee, WI, USA
 European Headquarters: Brussels, Belgium
 European Factories: Lomagna (Italy), Leeuwarden (The Netherlands) and Essen (Germany)
 Branch Offices: Principal European Cities.

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 Printed in Europe