

Auxiliary Switch and Potentiometer Kits

Description

The S91 Series Auxiliary Switch Kits and Potentiometer Kit mount on the auxiliary end of the M100 Series Actuator to provide switching and feedback functions.

The switch kits may be used to operate relays or contactors, or to directly control small motor loads. The potentiometer kit can be used to provide position feedback or to economically slave additional actuators. The kits are for use in heating, refrigeration, air conditioning, and industrial applications.

The switch kits have one (S91DJ) or two (S91EJ) Single Pole, Double Throw snap-acting switches. The switches are actuated by cams positioned by the actuator's output shaft to open or close the switch contacts at the desired actuator position, from 10 to 150° of actuator travel. Switch actuation points must be field set.

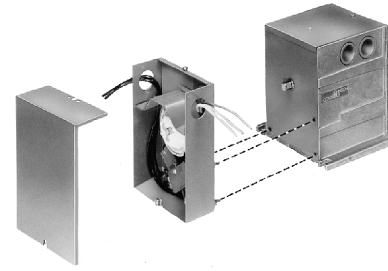
The S91PT contains a 1000 ohm feedback potentiometer which has three screw terminals and 1/4 inch male quick-connect terminals for field wiring. The potentiometer strokes across the entire 1000 ohm band over a fixed span of 300° of rotational travel. The zero point on the potentiometer is adjustable.

Features

- easy field mounting to Johnson Controls M100 Series spring return and non-spring return actuators
- two 7/8 inch diameter holes for 1/2 inch conduit
- long-wearing cam followers for consistent switch operation
- low-cost position feedback

Applications

- capacity control on multi-stage refrigeration machines
- multi-speed fan controls
- staging of multiple nozzles on boilers
- operation of pilot lights
- adding slave actuators to existing M100F Series actuators
- floating control with position feedback into an energy management system
- position feedback into controller monitoring inputs



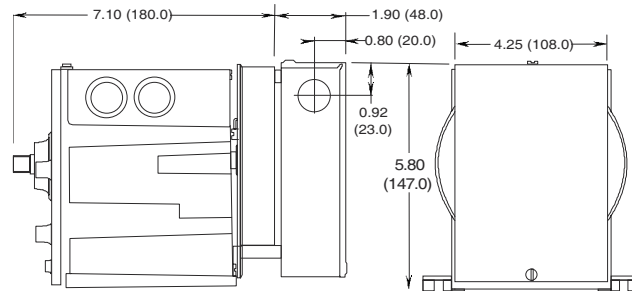
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Repair Information

If the M9000-300 Weather Shield Enclosure fails to operate within its specifications, replace the unit. For a replacement enclosure, contact the nearest Johnson Controls® representative.

Selection Chart

Code Number	Description
S91DJ-1	1 Auxiliary Switch
S91EJ-1	2 Auxiliary Switches
S91PT-1	Potentiometer Kit



Technical Specifications

S91 Series Auxiliary Switch	
Switch Action	One or two Single Pole, Double Throw
Switch Differential	3 to 80°, adjustable
Switch Contact Rating	Total switching load is limited to 2000 VA in any of the following combinations: Pilot Duty: 50 VA at 24 VAC; 125 VA at 120 - 277 VAC Full Load: 7.2A at 120V, 3.6A at 250V, 2.9A at 277V Locked Rotor: 43.2A at 120V, 21.6A at 250V, 17.4A at 277V Non-Inductive: 11.0A at 120V, 8.0A at 250V, 7.2A at 277V
Rotation Range	10 to 150° of actuator travel, adjustable
Electrical Connection	Color coded wire leads, 16 AWG
Mechanical Connection	Couples to M100 auxiliary output shaft
Ambient Conditions	Operating: -40 to 140°F (-40 to 60°C), 90% RH maximum Storage: -40 to 140°F (-40 to 60°C), 90% RH maximum
Agency Compliance	UL Listed, File E27734 Guide XAPX CSA Certified, File LR948, Class 4813 02

S91 Potentiometer Kit	
Feedback Signal	1000 ohms over 300° of actuator travel 30 VAC/DC, 1/3 watt maximum, adjustable zero
Mechanical Connection	Couples to M100 auxiliary output shaft
Ambient Conditions	Operating: 10 to 125°F (-12 to 52°C), 90% RH maximum Storage: -40 to 125°F (-40 to 52°C), 90% RH maximum
Agency Compliance	None
Enclosure	NEMA 1 General Purpose
Electrical Connection	Screw terminals and 1/4 inch spade terminals