

C-9506 Air Switching Cumulator

The C-9506 Air Switching Cumulator is an auxiliary device designed to switch its output pressure from zero to full supply pressure when the pilot pressure reaches the switch point. It is ideally suited for exhaust damper applications requiring a high output volume for quick operation. The switch point is factory set at approximately 9 PSIG (63 kPa) and is adjustable from 2 to 12 PSIG (14 to 84 kPa).

The C-9506 also doubles as the unit replacement for all models of D-9502 and V-9502 Positioners.

Operation

The C-9506 is a two-position device with a 1 PSI (7 kPa) differential. When the pilot pressure is below the switch point, the output will be zero. As the pilot pressure rises above the switch point, the output will switch to full supply pressure. When the pilot pressure drops to 1 PSI below the switch point, the output pressure will drop back to zero.

Note: The C-9506 should not be activated by a transmitter or low-sensitivity controller. A low volume input change could cause the instrument to cycle.

Mounting

The C-9506 is designed for mounting in any position using the two mounting holes in the base of the instrument. Allow enough clearance for cover removal and switch point adjustment. Air connections are made to barbed fittings for 5/32 or 1/4 in. O.D. polytubing.

Calibration

Note: The calibration procedure below should only be followed when the C-9506 is used as an air switching cumulator. To calibrate the C-9506 when it is used as a positioner, refer to Product Data D-9502 and/or V-9502 for the proper procedure.

To adjust the switch point of the C-9506 air Switching Cumulator, refer to Fig. 2 and proceed as follows:

1. Furnish 20 PSIG (140 kPa) to the supply "S" port.
2. Apply the desired switch point pressure to the pilot "P" port.
3. Remove the cover and turn the adjusting screw counterclockwise to increase or clockwise to decrease the switch point until the output pressure switches to 20 PSIG.



Fig. 1: C-9506 Air Switching Cumulator

Note: The output pressure reading can be taken either using a pressure gage in the output line or at the hypodermic needle test point on the cumulator body.

4. Increase and decrease the pilot pressure to check the switch point differential of the C-9506.

Specifications

Product	C-9506-1 Air Switching Cumulator
Action	Two-Position, Direct Acting
Switch Point	Factory Set at Approximately 9 PSIG (63 kPa); Adjustable from 2 to 12 PSIG (14 to 84 kPa)
Differential	1 PSI (7 kPa)
Maximum Supply Pressure	25 PSIG (175 kPa) Air Supply Must Be Clean, Dry, and Oil Free
Air Consumption	5 SCIM (1.4 mL/s)
Output Flow Capacity	1000 SCIM (273 mL/s)
Air Connections	1/8 in. NPT Barbed Fittings for 5/32 or 1/4 in. O.D. Poly tubing
Ambient Operating Temperature Limits	-20 to 150°F (-29 to 66°C)
Materials	Body Die Cast Aluminum with Iridite Finish
	Cover Noryl®
	Diaphragm Fabric Reinforced Rubber
Shipping Weight	1.5 lb (.68 kg)

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.

Application and Drawing Identification

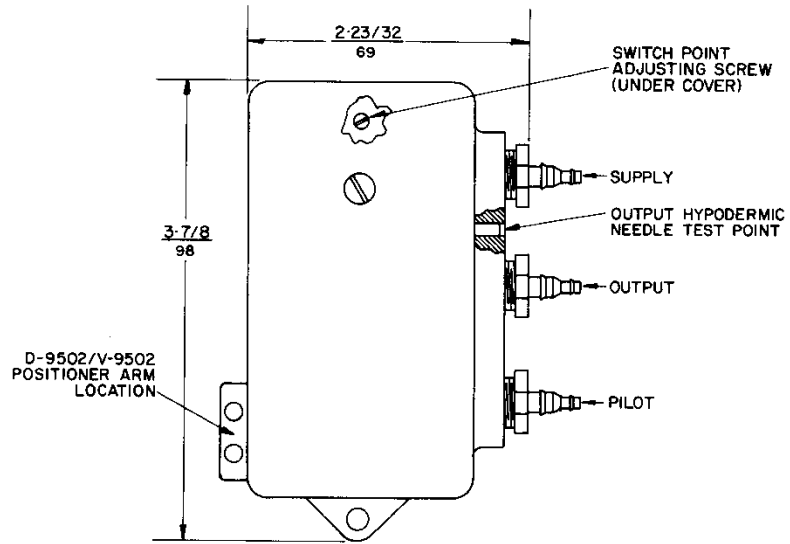
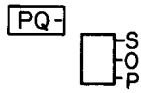


Fig. 2: C-9506 Dimensions $\frac{\text{in.}}{\text{mm}}$

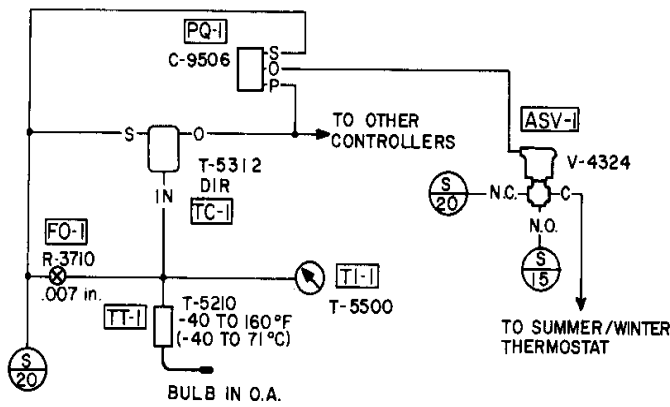


Fig. 3: Typical Application using C-9506

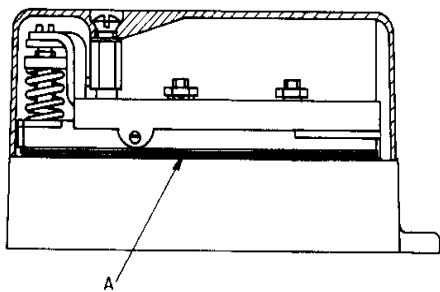


Fig. 4: C-9506 Air Switching Cumulator

Table 1: Repair Parts

Item	Description	Shipping Weight lb ²	Code Number
A	Diaphragm Assembly: Includes Diaphragm, Six Diaphragm, Reinforcements, One Seat, Three Nuts, One Spring, Two Metal Balls, One Ball Retainer, Two Screws, and One Gasket. For Old-Style Cumulators with Air Connections on Three Sides	.03	V-9502-600
	For New-Style Cumulators with Air Connections on One Side	.03	D-9502-611

European Single Point of Contact:

JOHNSON CONTROLS
WESTENDHOF 3
45143 ESSEN
GERMANY

NA/SA Single Point of Contact:

JOHNSON CONTROLS
507 E MICHIGAN ST
MILWAUKEE WI 53202
USA

APAC Single Point of Contact:

JOHNSON CONTROLS
C/O CONTROLS PRODUCT MANAGEMENT
NO. 22 BLOCK D NEW DISTRICT
WUXI JIANGSU PROVINCE 214142
CHINA



Controls Group
507 E. Michigan Street
P.O. Box 423
Milwaukee, WI 53202

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