EVANS has the system for Engine Temperature Control

ENGINE TEMPERATURE CONTROLS AND SWITCHES

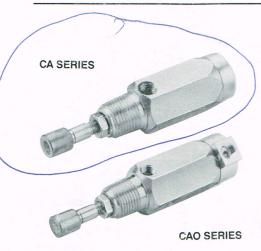




EVANS Fan Clutch Controls

COMFORT AIR, INC. 1610 Center Avenue NE Grand Rapids, MI 49505 (616) 454-2200 FAX (616) 454-0059

Evans Tempcon Fan clutch controls are designed to accurately operate any type of on-off fan clutch. They are installed in the engine cooling system and sense changes in engine temperature. When the fan is required they open an air valve, activate a solenoid valve, or trip a relay to turn on the clutch and fan. Once the engine temperature has reached a safe point, the actuator turns off the clutch and fan.



CA AND CAO SERIES FAN CLUTCH ACTUATORS FOR EVANS TEMPCON AND HORTON AIR ON-OFF FAN CLUTCHES

CA SERIES FAN CLUTCH ACTUATORS

A single function, normally closed, air valve. The Evans Tempcon heavy-duty and the Horton are air-on spring-off clutches. The CA series Evanstat reacts to changes in engine temperature and at a preset point, the valve opens to turn on the clutch and fan. When a safe engine temperature is reached, the CA Evanstat closes off the air and turns off the clutch and fan. A built in poppet valve gives instant full-line flow of air to engage the clutch. The poppet feature allows instant on-off actuation of the clutch increasing bearing life and reducing friction material wear. (SEE CHART 9, PAGE 7 FOR PART SELECTION.)

CAO SERIES FAN CLUTCH OVERRIDE ACTUATORS

The CAO Series operates the same as the CA Series but has a built in BY-PASS AIR CIRCUIT FOR AIR CONDITIONING OR OTHER FAN CLUTCH OVERRIDES. (SEE CHART 9, PAGE 7 FOR PART SELECTION.)



SS SERIES EVANSTAT FOR KYSOR OR BENDIX AIR OPERATED FAN CLUTCHES

A single function normally open air valve that responds to changes in engine coolant temperature. Kysor and Bendix are spring-on air-off fan clutches. Air flows through the SS Evanstat until the engine temperature exceeds the preset temperature. The air supply to the clutch is then cut off and the spring in the clutch engages. When the engine temperature reaches a safe point the Evanstat sends air to the clutch to disengage. (SEE CHART 9, PAGE 7 FOR PART SELECTION.)



EVANSTEMP™ TYPE C — 1/2"NPTF TYPE D — 3/8" NPTF

Available as normally open or normally closed switch. Switch mounts in engine coolant and senses temperature. When the preset temperature is reached the switch completes the circuit to operate a solenoid valve or relay. This switch will operate all types of on-off fan clutches. (FOR MORE INFORMATION AND PART SELECTION SEE EVANSTEMPTM CONTROL SWITCHES ON PAGE 6.)

SOLENOID VALVE



SOLENOID VALVE Part Number CA030035

For use with EvanstempTM electronic switches and air override devices. Can be plumbed for normally open or normally closed, and will accommodate a variety of fan clutch/shutter operations and override needs.

FREON PRESSURE SWITCH Part Number CA030121

For use with on-off fan clutches on vehicles with air conditioning and radiator mounted condensers. Switch installs in the high side of the freon system. When wired into the override system, the freon switch will engage the fan clutch/shutter when required to protect the A/C system.



EVANS Shutter Controls

Radiator shutters provide the best protection against over-cooling an engine. When combined with Evans Tempcon's shutter controls and an on-off fan clutch, the Evans Tempcon System will provide optimum engine temperature control.



SS SERIES EVANSTAT FOR SPRING LOADED OPEN SHUTTERS

A single function, normally open, air valve (the same as shown on Page 2 for fan clutch actuator). The Evanstat installs in the engine coolant and senses temperature. As soon as the engine is turned on air flows to the shutter and closes it for fast engine warm-up. When engine temperature reaches the set point of the Evanstat, air is shut off to the shutter and it opens. When the ram air across the radiator lowers engine temperature to the reset point, the Evanstat opens sending air to close the shutter. In this manner the shutter opens and closes to provide **optimum engine temperature**. (SEE CHART 9. PAGE 7 FOR PART NUMBER SELECTION.)

SSO EVANSTAT FOR SPRING LOADED CLOSED SHUTTERS AND OVERRIDES

A single function normally closed air valve. Operates opposite to the SS Evanstat to operate shutters or shutter and fan clutch overrides. (SEE CHART 9, PAGE 7 FOR PART NUMBER SELECTION.)



EVANSTEMP™ TYPE C — 1/2" NPTF TYPE D — 3/8" NPTF

These are highly accurate electronic long life control switches that mount in engine coolant. At the pre-set temperature they will activate a solenoid and open and close a shutter as required. (See Control Switch Section on Page 6 for specifications and part number selection.)

TYPE C & D



EVANSAIR REPLACEMENT AIR CYLINDERS

These air cylinders mount on Evans Tempcon's and competitive shutters. Air cylinders open and close the shutters as required.

TYPE	LONG	SHORT CA200000 6.0"	
Part No. Length	CA200004		
	7.9"		
Stroke	3.2"	1.2"	
Replaces Kysor P/N	1047-21550-01	1017-32150-01	



VERNATHERM CONTROLS

VERNATHERM CONTROLS FOR EVANS MODULATING TYPE SHUTTERS

DEDLACEMENT DOWER ELEMENTS FOR VERNATHERM CONTROLS

A mechanical control that installs in the cooling system and gives infinite control of the shutter opening. Thermal response allows the actuator to modulate the shutter as coolant temperature changes. For more information on Vernatherm controls contact your Evans Tempcon Representative.



POWER ELEMENT	TEMPERATURE SETTING	PART NUMBER	
	150°	CA030131	
2 Inch Diameter	170°	CA030088	
	180°	CA030132	
1-3/8 Inch Diameter	170°	CA030030	
	175°	CA212002	
	180°	CA030125	
	185°	CA030127	

DUAL FUNCTION ELECTRONIC SWITCHES

TYPE E

Dual function electronic switch. Two separate switches with the same No. or NC. function.

1/2" NPTF POLARITY: POSITIVE

CHART 7

	NORMALLY OPEN			NORMALLY CLOSED		
	PART NO.	TEMP. 1	TEMP. 2	PART NO.	TEMP. 1	TEMP. 2
	AB201152	175°	195°	AB201161	175°	195°
*	AB201153	180°	195°	AB201162	180°	195°
	AB201154	185°	195°	AB201163	185°	195°
	AB201155	190°	200°	AB201164	190°	200°
CELLED	AB201156	195°	205°	AB201165	195°	205°
- VNCELLE	AB201157	195°	210°	AB201166	195°	210°

OTHER TEMPERATURES AVAILABLE

TYPE G

Dual function electronic switch. Two separate switches, one Normally Open and one Normally Closed.

TYPE E & G

EVANSTEMP

1/2" NPTF POLARITY: NEGATIVE

CHART 8

TEMP. 1 NORMALLY OPEN			TEMP 2 NORMALLY CLOSED		
PART NO.	TEMP. 1	TEMP. 2	PART NO.	TEMP. 1	TEMP. 2
AB201316	180°	190°	AB201320	200°	210°
AB201317	185°	195°	AB201321	205°	215°
AB201318	190°	200°	AB201322	210°	220°
AB201319	195°	205°	AB201323	215°	225°

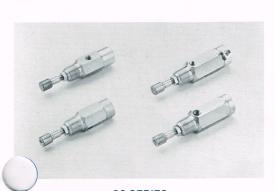
OTHER TEMPERATURES AVAILABLE

FAN CLUTCH AND SHUTTER CONTROLS

CHART 9

TEMP SETTING	SS SERIES	SSO SERIES	CA SERIES	CAO
140°	CA200020	CA200219	(1)	(1)
160°	CA200021	CA200220	(1)	(1)
165°	CA200022	CA200221	CA200005	(1)
170°	CA200023	CA200181	CA200006	(1)
175°	CA200024	CA200182	(1)	CA200080
180°	CA200025	CA200222	CA200007	CA200038
185°	CA200026	CA200081	CA200008	CA200079
190°	CA200027	CA200065	CA200009	CA200044
195°	CA200028	CA200066	CA200010	CA200045
200°	CA200029	CA200067	CA200011	CA200082
205°	CA200030	CA200236	CA200012	(1)
210°	CA200218	CA200223	(1)	(1)
215°	CA200227	CA200232	(1)	(1)
220°	CA200031	CA200224	(1)	(1)
230°	CA200235	CA200233	(1)	(1)
240°	CA200228	CA200234	(1)	(1)
245°	(1)	CA200134	(1)	(1)
250°	CA200068	CA200064	(1)	(1)

(1) — Can be made available on special order.



SS SERIES SSO SERIES CA SERIES CAO

OPERATING CHARACTERISTICS OF SSO, SS, CA AND CAO SERIES EVANSTAT

SET POINT ACCURACY: +/- 4° F OPERATING TEMPERATURE: to 300° F THREAD SIZE: 1/2 in. NPTF

RESET POINT: 8-14° F of set point

FOR ALL SWITCHES AND VALVES CONSULT TECHNICAL BULLETIN TB101 FOR INSTALLATION INSTRUCTIONS