A/FLS Series Low Temperature Cutout Thermostat Line Voltage

Application

The A/FLS Series low temperature cutout thermostats have electrical contacts operated by a temperature sensing element. On the 4-wire, two-circuit models, the main load contacts (LINE-M2) open on a temperature drop and simultaneously the auxiliary or alarm contacts (LINE-M1) close.

The thermostat is used as a low temperature cutout device on heating and cooling coils or other applications where there is a possibility of air being stratified. It responds only to the lowest temperature along any 14 to 16" (35 to 40 cm) length of the 6, 10, 20 or 50 foot (1.8, 3, 6, or 15 meter) long sensing element. The sensing element is usually located on the downstream side of the coil. When the temperature along any point of the sensing element reaches the set point, the thermostat will stop the fan. The outdoor damper is installed to close when the fan stops.

The thermostats with manual reset will lock out when the sensed temperature drops below the set point.

The reset must be pushed and released before the contacts can be reclosed.

All A/FLS Series thermostats are designed for use *only* as operating controls. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of the installer to add devices (safety, limit controls) that protect against, or systems (alarm, supervisory systems) that warn of control failure.

Installation

Mounting

⚠ CAUTION: Locate the thermostat case and bellows where the ambient temperature is always warmer than the set point. The thermostat operates only from the lowest temperature along the entire 6, 10, 20, or 50 foot sensing element. Avoid sharp bends or kinks in the sensing elements.

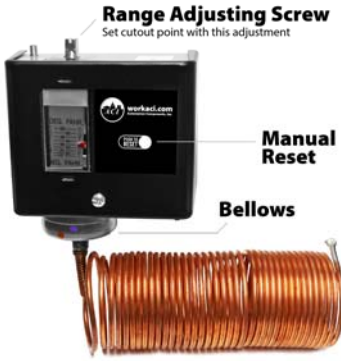

Fig. 1 -- Electric thermostat shown with manual reset.

The thermostat may be mounted to a wall surface or panel board using the two mounting holes provided in the back of the case. The desired mounting position is with the element bellows pointing down. An optional mounting flange (ACI Part # FLS MTG BKT) can be ordered separately, if preferred.

For accurate thermostat operation, the sensing element should be horizontally serpentined across the face of the coil to sense temperature in all areas.

Specifications

Type Number	A/FLS-xx-A	A70GA	4-Wire, 2-Circuit, Main (LINE-M2) Contacts, Open on Temperature Drop, Simultaneously Auxiliary Contacts Close
	A/FLS-xx-M	A70HA	4-Wire, 2-Circuit, Main (LINE-M2) Contacts, Open on Temperature Drop, Simultaneously Auxiliary Contacts Close, Manual Reset
Range			15 to 55°F (-9 to 13°C) with STOP at 35°F (1.7°C)
Minimum Differential			Approximately 5°F (2.8°C); Non-Adjustable
Maximum Overrun Temperature at the Element			400°F (204°C)
Element			Vapor Pressure; 6, 10, 20, 50ft (1.8, 3, 6, 15m) Long

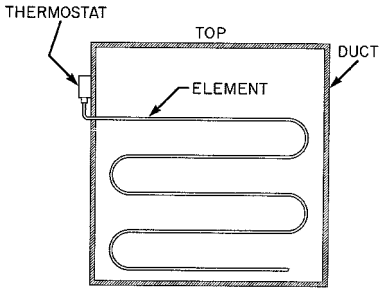

Fig. 2 — Recommended mounting and sensing element installation.

Wiring

⚠ WARNING: Disconnect the power supply before wiring connections are made to avoid possible electrical shock or damage to the equipment.

Make all wiring connections using copper conductors only and in accordance with the National Electrical Code and all local regulations. For maximum electrical rating of the thermostat, see the label on the inside of the thermostat cover. Loads exceeding the rating of the thermostat can be handled with a relay or motor starter.

⚠ CAUTION: Only use terminal screws furnished in the switch (8-32 × 1/4 in.). Longer terminal screws can interfere with the switch mechanism and damage the switch.

Checkout Procedure

The operating point of the thermostat should be confirmed by an accurate thermometer.

Before leaving the installation, observe at least three complete operating cycles to be sure that all components are functioning correctly.

Repairs and Replacement

Field repairs must not be made. For a replacement thermostat, contact Automation Components, Inc.

Pole Number	LINE-M2 (Main)				LINE-M1 (Auxiliary)			
Motor Rating	**120V**	**208V**	**240V**	**277V**	**120V**	**208V**	**240V**	**277V**
AC Full Load Amp	16.0	9.2	8.0	-	6.0	3.3	3.0	-
AC Locked Rotor Amp	96.0	55.2	48.0	-	36.0	19.8	18.0	-
AC Non-Inductive Amp	16.0	9.2	8.0	7.2	6.0	6.0	6.0	6.0
Pilot Duty – Both Poles	125 VA, 120 to 600 VAC 57.5 VA, 120 to 300 VDC							

Single Point of Contact:
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