



## A/FLS Series Low Temperature Cutout Control

### Application

The A/FLS Series low temperature cutout controls have electrical contacts that operate through a temperature sensing element. On the 4-wire, two-circuit models, when a temperature decrease is detected, the main load contacts (LINE-M2) open and the auxiliary or alarm contacts (LINE-M1) close.

Use the control as a low temperature cutout device on heating and cooling coils or other applications where there is a possibility of air stratification. It responds only to the lowest temperature along any 14 in. to 16 in. (35 cm to 40 cm) length of the 6 ft, 10 ft, 20 ft or 50 ft (1.8 m, 3 m, 6 m, or 15 m) 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 control stops the fan. Check to ensure the outdoor damper is installed in such a way that it closes when the fan stops.

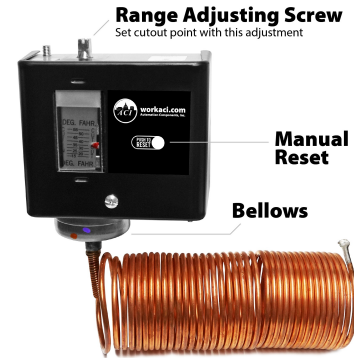
A/FLS Series Auto Reset controls automatically reset their contacts to the closed position when the sensed temperature rises above the minimum temperature differential.

The controls with manual reset lock out when the sensed temperature decreases below the set point. Push and release the reset button to re-close the contacts.

All A/FLS Series controls 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 safety and limit control devices that protect against control failure, or alarm and supervisory systems that warn of control failure.

### Installation

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



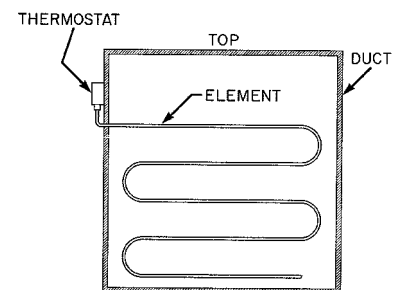
**Fig. 1 — A/FLS Series control shown with manual reset.**

Mount the control to a wall surface or panel board using the two mounting holes provided in the back of the case. The correct mounting position is with the element bellows pointing down. Order the optional mounting flange ACI Part # FLS MTG BKT separately, if preferred.

For accurate control operation, horizontally serpentine the sensing element across the face of the coil to ensure the device senses temperature in all areas.

**Table 1: Specifications**

<b>Type number</b>	A/FLS-xx-A	On a temperature decrease, main (LINE-M2) contacts open and auxiliary contacts close.
	A/FLS-xx-M	On a temperature decrease, main (LINE-M2) contacts open and auxiliary contacts close. Requires manual reset.
<b>Range</b>	15°F to 55°F (-9°C to 13°C) with STOP at 35°F (1.7°C)	
<b>Minimum differential</b>	Approximately 5°F (2.8°C); non-Adjustable	
<b>Maximum overrun temperature at the element</b>	400°F (204°C)	
<b>Vapor Pressure Sensing Element</b>	6 ft, 10 ft, 20 ft, 50 ft (1.8 m, 3 m, 6 m, 15 m) long	



**Fig. 2 — Recommended mounting and sensing element installation.**

## Wiring

**⚠ WARNING—RISK: Disconnect the power supply before you make wiring connections to avoid possible electrical shock or damage to the equipment.**

**⚠ CAUTION—RISK: Use the terminal screws furnished in the switch (8-32 × 1/4 in.). Longer terminal screws may interfere with the switch mechanism and damage the switch.**

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 control, see the label on the inside of the control cover. Use a relay or motor starter to handle loads exceeding the rating of the control.

## Optional mounting bracket

The box for the A/FLS Series low temperature cutout control also contains the attachment screws for the optional mounting bracket. Mounting bracket not included.

## Checkout procedure

Confirm the operating point of the control with an accurate thermometer.

Before leaving the installation, observe at least three complete operating cycles to ensure that all components function correctly.

## Repairs and replacement

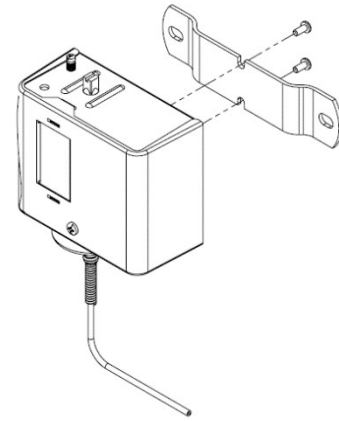
Do not make field repairs. For a replacement control, contact Automation Components, Inc.

**Table 2: LINE-M2 electrical ratings**

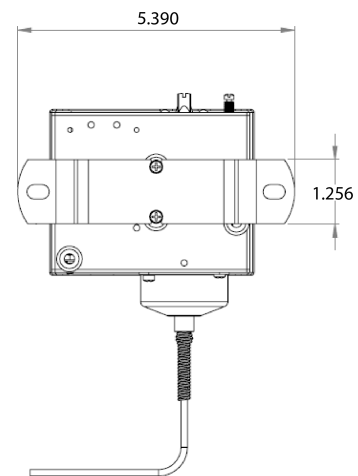
Motor rating	120 V	208 V	240 V	277 V
AC full load amp	16.0	9.2	8.0	-
AC locked rotor amp	96.0	55.2	48.0	-
AC non-inductive amp	16.0	9.2	8.0	7.2
Pilot duty	125 VA, 120 VAC to 600 VAC 57.5 VA, 120 VDC to 300 VDC			

**Table 3: LINE-M1 electrical ratings**

Motor rating	120 V	208 V	240 V	277 V
AC full load amp	6.0	3.3	3.0	-
AC locked rotor amp	36.0	19.8	18.0	-
AC non-inductive amp	6.0	6.0	6.0	6.0
Pilot Duty	125 VA, 120 VAC to 600 VAC 57.5 VA, 120 VDC to 300 VDC			



**Fig. 3 — Mounting bracket procedure with optional bracket**



**Fig. 4 — Optional mounting bracket FLS MTG BKT dimensions, in.**

**Single Point of Contact:**  
Automation Components, Inc  
2305 Pleasant View Rd.  
Middleton, WI 53562  
USA  
(888) 967-5224  
www.workaci.com