

The Robertshaw LC Series High Limit Control are fixed temperature limit controls with special hydraulic sensing elements. This sensing element is designed to activate the controller if a fluid loss should occur in the hydraulic element. The controller will then react the same as if a high limit condition existed. Individual models are available for either automatic (cycling) or manual reset applications.

Electric Or Gas Fryer Applications Requiring Manual Reset

Manual reset models have SPST switch action. If temperature exceeds fixed setting, the contacts will open. Reset button is a trip-free design, and contacts cannot be latched closed by depressing reset button as long as over-temperature condition exists.

Gas Fryer Applications Requiring Automatic Reset

Automatic reset or cycling models have SPDT switch action. If temperature exceeds fixed setting, N.C. contacts will open to provide a shut down circuit. N.O. contacts will close and permit use of an alarm system to signal the condition.

CAUTION

THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED PERSON WITH DUE REGARD FOR SAFETY AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION. CALIBRATION OF HIGH LIMIT IN THE FIELD SHOULD NOT BE PERFORMED UNDER ANY CIRCUMSTANCE. EACH APPLICATION SHOULD BE EVALUATED BY A COMMERCIAL SERVICEMAN BEFORE ATTEMPTING AN INSTALLATION. SELECT THE CORRECT MODEL TO SUIT THE APPLICATION. MOUNT CONTROL IN AN AREA THAT WILL NOT EXCEED 185°F

Specifications

Model	Description	Electrical Ratings
LCH	SPST - Break on temperature rise manual reset. Type M2*	30A (resistive load) @ 125/250/480 VAC
LCHM	SPST - Break on temperature rise manual reset. Type M2* Millivolt application.	400 mA @ 500 mV DC
LCC	SPDT - Make and/or break on temperature rise. Automatic reset.	25A (resistive load) @ 125/250/480 VAC 125 VAC pilot duty @ 125/250 VAC
LCCM	SPDT - Make and/or break on temperature rise. Automatic reset. Millivolt application.	400 mA @ 500 mV DC

For all models the Ambient Temperature Rating is 185°F (85°C)

*M2 switch - trip-free - will not recycle if reset button is depressed while temperature is above trip point.

Electric Or Gas Fryer Applications Requiring Manual Reset

Model LCH/LCHM is ideal for gas or electric fryers. Control has manual reset and SPST switch action. Reset button is a trip free design and contacts will reset only when the button is released after being depressed. Should the temperature exceed the fixed setting, contacts will open. Temperature must drop approximately 50° before depressing reset button to return the contacts to the latched closed position.

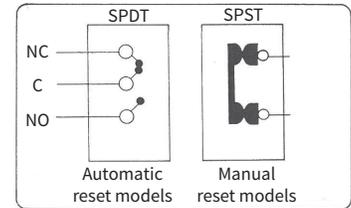
Model LCH/LCHM with Manual Reset



Model LCC/LCCM with Automatic Reset



Wiring Contact Action



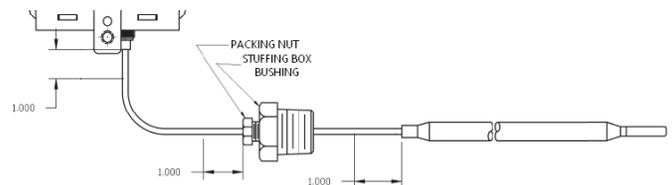
NOTE: Model LCH/LCHM with manual reset are recommended to use for electrical applications that require the reset button to be depressed after an over-temperature condition, letting the operator know there is an overheat problem. With electrical elements, the limit control is wired in series with the operating temperature thermostat. The Limit Control usually cannot carry the load circuit (see electrical rating); therefore, it must be wired in the solenoid coil side of the contactor circuit.

Bulb Location and Mounting

CAUTION: Exposing the bulb to temperatures above 575°F will destroy the diastat and voids the warranty.

Bulb location is next to the fryer thermostat bulb. A few short pieces of stainless or nickel wire could be used to strap the bulbs together.

The bulb and capillary may be installed by having capillary over top edge of the tank or install a new opening through the side of the tank. Avoid 90° bending at capillary tube within sections noted in picture below, in areas where 90° is permissible, minimum bend radius should be .250". Stuffing Box Bushing recommended tightening torque is 15-20 ft-lbs. Recommended tightening torque for Packing Nut to Stuffing Box Bushing to effect a seal is 30-40 in-lbs.



Gas Fryer Applications Requiring Automatic Reset

Model LCC/LCCM is an automatic reset or cycling type (no reset button) with SPDT switch action. If temperature exceeds fixed setting, N.C. contacts will open. The N.O. contacts would, in turn, close and could be used to signal the over temperature condition if desired. Temperature must drop approximately 25° before contacts will reset.

NOTE: The LCC/LCCM automatic reset type is the recommended model to use for gas applications as the electromagnet in the system will have a reset button.