**LLC8 SERIES**

Low Level Cutoff Liquid Level Controls

**Description**

The LLC8 Series is a low cost, single-probe conductive liquid level control designed for low liquid level cutoff protection. It offers a factory fixed time delay of 1 - 60s and is available for input voltages of 24, 120, or 230VAC. LED indicator illuminates whenever the LLC8’s isolated, 10A, SPDT output relay is energized. Sense resistance is fixed from 5K - 250KΩ. Available with manual/automatic reset or a special manual reset with a power outage feature that auto resets the unit when power is restored and the water level is acceptable. 24 and 120VAC units are UL recognized as limit switches under UL353 (230VAC units are UL 508) and CSA certified under Standard 14.

**Operation**

**Automatic Reset (Reset switch not connected):** When liquid rises to low level cutoff probe, output relay and LED indicator energize. When liquid falls below the low level cutoff probe, the output relay and LED indicator de-energize after a fixed time delay.

**Manual Reset (Reset switch connected):** When the liquid level falls below low level probe, the output relay and LED de-energize after a fixed time delay. When the liquid level rises to low level probe, the output relay and LED indicator remain de-energized until the NC manual reset switch is opened; then they energize immediately.

**Power Outage Manual Reset (Reset switch connected):** A power outage causes the output relay and LED indicator de-energize. Upon restoration of power, if the liquid is touching the low level probe, the output relay and LED indicator will re-energize. If the liquid level is below the low level probe, the output relay and LED indicator remain de-energized until the NC reset switch is opened.

**Features & Benefits**

### FEATURES | BENEFITS
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Isolated 12VAC probes | Prevents scale buildup on probe
Open PCB design | Cost effective design for OEM low liquid level cutoff protection
Conformally coated PCB | Protects against moisture and corrosion
LED indication | Visual indication output relay is energized
Power outage protection (see ordering table for models) | Automatically resets the unit when power is restored and the water level is acceptable
24VAC & 120VAC models meet UL353 | Required for use as a low level limit switch

**Ordering Information**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INPUT VOLTAGE</th>
<th>TIME DELAY (FIXED)</th>
<th>SENSE RESISTANCE</th>
<th>RESET</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLC825F5M</td>
<td>24VAC</td>
<td>5s</td>
<td>5kΩ</td>
<td>Manual/automatic</td>
</tr>
<tr>
<td>LLC842F103M</td>
<td>120VAC</td>
<td>2s</td>
<td>10kΩ</td>
<td>Manual/automatic</td>
</tr>
<tr>
<td>LLC843F10M</td>
<td>120VAC</td>
<td>3s</td>
<td>10kΩ</td>
<td>Manual/automatic</td>
</tr>
<tr>
<td>LLC843F10P</td>
<td>120VAC</td>
<td>3s</td>
<td>10kΩ</td>
<td>Power outage manual reset</td>
</tr>
<tr>
<td>LLC843F26M</td>
<td>120VAC</td>
<td>3s</td>
<td>26kΩ</td>
<td>Manual/automatic</td>
</tr>
<tr>
<td>LLC843F26P</td>
<td>120VAC</td>
<td>3s</td>
<td>26kΩ</td>
<td>Power outage manual reset</td>
</tr>
<tr>
<td>LLC845F25P</td>
<td>120VAC</td>
<td>5s</td>
<td>25kΩ</td>
<td>Power outage manual reset</td>
</tr>
<tr>
<td>LLC8430F25P</td>
<td>120VAC</td>
<td>30s</td>
<td>250kΩ</td>
<td>Power outage manual reset</td>
</tr>
<tr>
<td>LLC8430F26P</td>
<td>120VAC</td>
<td>30s</td>
<td>26kΩ</td>
<td>Power outage manual reset</td>
</tr>
<tr>
<td>LLC8610F12M</td>
<td>230VAC</td>
<td>10s</td>
<td>12kΩ</td>
<td>Manual/automatic</td>
</tr>
<tr>
<td>LLC863F26P</td>
<td>230VAC</td>
<td>3s</td>
<td>26kΩ</td>
<td>Power outage manual reset</td>
</tr>
</tbody>
</table>

If you don’t find the part you need, call us for a custom product 800-843-8848

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Relay contacts are isolated. Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

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Littelfuse Protection Relays & Controls

Protection Relays
Pump Controls and Liquid Level Controls

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Rev. 1-A-062716
Accessories

P1015-13 (AWG 10/12), P1015-64 (AWG 14/16), P1015-14 (AWG 18/22) Female Quick Connect
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.

P1015-18 Quick Connect to Screw Adapter
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

PHST-38QTN Electrode
Designed for a maximum steam pressure of 240 PSI; 400° F. UL353 Recognized.

LLP-24 Threaded Probe (24”)
Threaded stainless steel probe measuring 24” (61 cm) long. For use with PHST-38QTN liquid level control electrodes.

Specifications

Control
Type
Resistance sensing for conductive liquids with time delay

Sense Voltage
12VAC nominal at probe terminals

Sense Resistance
Fixed 5K - 250KΩ

Sense Resistance Tolerance
±10%

Time Delay
Tolerance
±20%

Repeat Accuracy
±10%

Time Delay vs Temp. & Voltage
±10%

Power Outage Reset Delay
≤1s

Input
Voltage
24, 120, or 230VAC

Tolerance
24VAC
-15% - 20%

120 or 230VAC
-20% - 10%

AC Line Frequency
50/60 Hz

Output
Type
Electromechanical relay

Form
Isolated SPDT

Rating
10A resistive @ 120/240VAC;
1/4 hp @ 125VAC, 1/2 hp @ 250VAC

Protection
Surge
IEEE C62.41-1991 Level A

Isolation Voltage
≥ 2500V RMS input to output terminals

Mechanical
Mounting
0.5 in. (12.7 mm) x .187 (4.76 mm) dia. nylon standoffs (3)

Termination
Dimensions
H 63.5 mm (2.5”); W 55.6 mm (2.19”);
D 47.8 mm (1.88”)

Electrical
Reset Switch & Probe(s)
0.25 in. (6.35 mm) male quick connect terminals
0.187 x 0.03 in. (4.75 x 0.76 mm) male quick connect terminals

Environmental
Operating/Storage
Temperature
-40° to 60°C / -40° to 80°C

Coating
Printed circuit board is conformal coated to resist moisture & corrosion

Humidity
95% relative, non-condensing

Weight
≈ 5 oz (141.7 g)