Floatless Level Controller

Conductive Type

LC-FL

Sensing

Digital Panel Meters

Temperature Controllers

Timers & Counters

Level Controllers

Convertors & Amplifiers

Weighing

Automation

Components

SALIENT FEATURES

- ◆ Automatic Water supply & Drainage
- ◆ Socket for ease of installation on DIN rail
- ◆ 230 VAC Operation with full Surge Protection
- ◆ Ideal for Level Control of any Conductive Liquid
- ◆ Compact plug-in controller for 1 or 2 Point Control

CE

ELECTRODE 3   SOCKET

Model Number Legend

$$\underset{1}{\underline{\text{LC}}} \text{-} \underset{2}{\underline{\text{FL}}} \underset{3}{\underline{\square}}$$

1. Series

LC

2. Type

FL   :   Float Less Level Controller

3. Power Supply

230AC   : 230 V AC

Example:
LC-FL230AC
LC Series - Float Less Level Controller, 230 VAC Input Power Supply

NOTE: Contact us for models not shown in catalogue.
8 Pin Socket is not supplied along with the unit and are sold separately; look in RS series catalogue for the same (www.inno.sg/rs).
Required Electrodes & its holders are sold separately; look in LS-E series catalogue for the same (www.inno.sg/ls-e).

Application Examples

• Level control in tanks, reservoirs, sewage plants, underground wells, sumps, mixing plants, etc.

• Level control for element protection in pipes, channels and irrigation systems.

• Flow detection in pipes, channels.

•Dispensing of liquids by volume.

• Alarm and control warning of abnormal or dangerously high or low level in critical storage tanks.

•Indication of liquid buildup due to filter blockages.

• Ice bank control in water chillers, ice makers, bulk milk tanks, etc.

Ratings and Specifications

Models	LC-FL230AC
Input Voltage	200 to 240 VAC
Input Frequency	50 to 60 Hz (47 to 64 Hz Max.)
Electrode Voltage*	8 VAC / 24VAC
Power Consumption	3.2 VA Approx.
Operating Resistance*	0 ~ 7KΩ Approx. / 0 ~ 25KΩ Approx.
Release Resistance*	15 KΩ Approx. / 38 KΩ Approx.
Response Time	Operate: 80ms ; Release: 160ms
Control Output	5 A, 250 VAC (Resistive load at 55° C)
Insulation Resistance*	Max. 100 MΩ (at 500 VDC)
Dielectric Strength*	2000 VAC, 50/60 Hz for 1min.
Ambient Temperature	Operation: -10° ~ 55° C; Storage: -20° ~ 60° C (non-freezing; non-condensing)
Ambient Humidity	Operation: 35 ~ 85% RH; Storage: 35 ~ 90% RH (non- condensing)
Expected Switching Life	Mechanical: > 5,000,000 operations
Weight	200 grams Approx.

Note: * - Electrode Voltage is the secondary voltage of the transformer.
Operating Resistance is measured between electrodes E1 & E3.
Release Resistance is measured between electrodes E2 & E3.
Insulation Resistance is measured between power terminals and electrode terminals, & between electrode terminals and contact terminals.
Dielectric Strength is measured between power terminals and electrode terminals, & between electrode terminals and contact terminals.
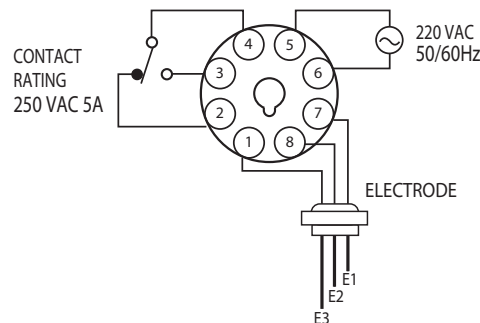
Dimension Drawing
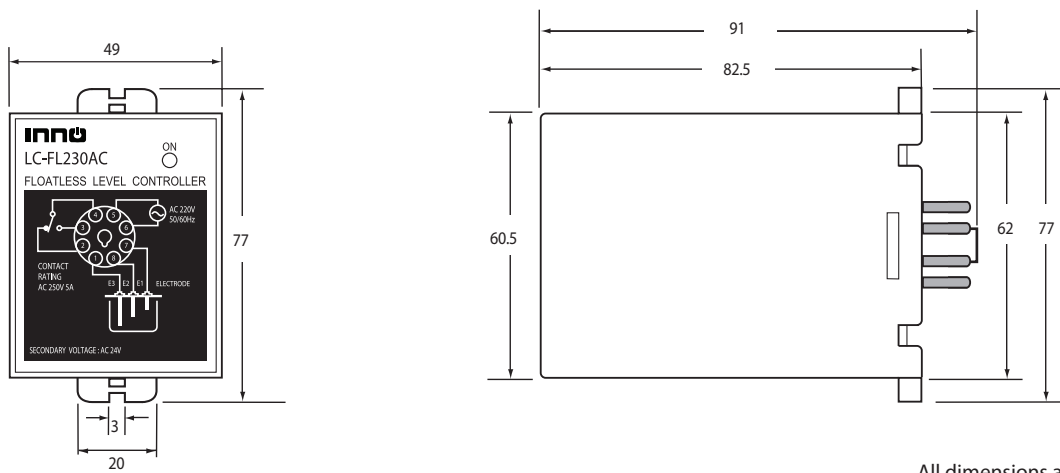
All dimensions are in mm

Connection

CONTACT RATING 250 VAC 5A

220 VAC 50/60Hz

ELECTRODE

E1
E2
E3

Operation

The floatless level controller consists of a plug-in controller connected to a set of stainless steel probes which are inserted into the liquid.

SINGLE POINT CONTROL
A low voltage is applied between the level and reference probes or between tank and probe if tank is conductive. The liquid provides the conducting medium between the reference probe and level probe. The output relay in the controller is energized when the liquid level reaches the high-level probe and de-energizes when the liquid falls below it.

TWO POINT CONTROL
For two point control a reference, low level and high level probe is used. In this case the relay does not de-energize until the liquid level falls below the low level probe. Using low level probe allows a wide differential between switching a pump On and Off, and can avoid excessive pump operation during tank emptying or filling.

If the tank is metallic, the electrode will simply be connected to the tank reference, which further reduces the cost of the Electrode.

www.inno.sg/lc-fl

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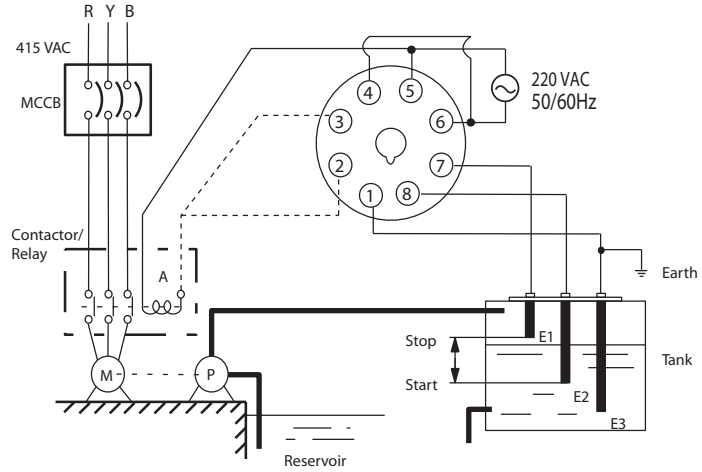
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Automatic Water Supply and Drainage Control

Water Supply

• Connect contactor coil terminal 'A' to '2'.
• The pump stops when the water level reaches 'E1' and starts when the water level drops below 'E2'.

Drainage

• Connect contactor coil terminal 'A' to '3'.
• The pump starts when the water level reaches 'E1' and stops when the water level drops below 'E2'.

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Cat. No. LC-FL-412