Type: E-FLC3

Floatless Level Controller with Alarm Output

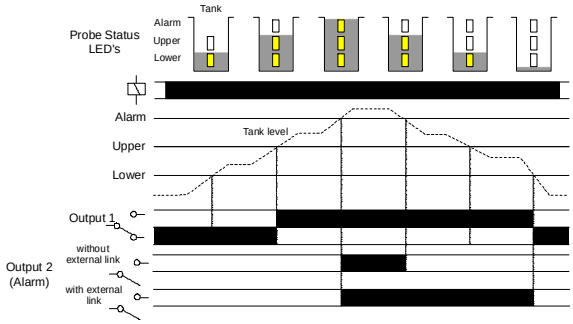
- **Designed to monitor the level of a liquid within a tank or container**
- **3 levels of monitoring - Low, High and Alarm levels**
- **Fixed Operate and Release Resistance**
- **Up to 1km distance between controller and probes**
- **Built in Surge Arrestors protect each probe input against lightning strikes**
- **Unique LED indication of probe/tank level status**
- **Additional LED indication for supply and relay output status**
- **1 x SPDT relay output (Output 1) and 1 x SPNO relay output (Output 2 - Alarm)**



Dims:
W. 70mm

Terminal Protection to IP20

FUNCTION DIAGRAM



INSTALLATION AND SETTING

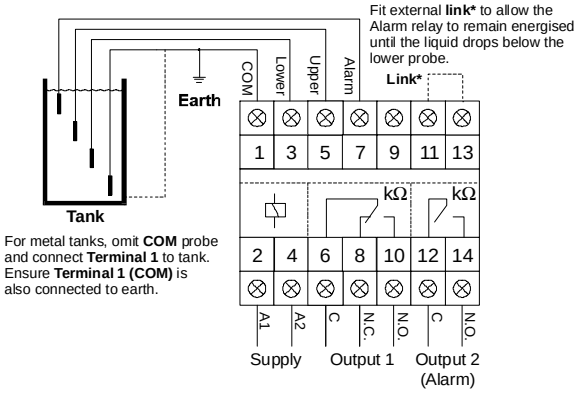
Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Connect the unit as shown in the diagram below. For metal tanks, the COM probe can be connected to the tank itself. For non-metallic tanks, ensure the COM probe is located below the other probes (i.e., at the bottom).
- NOTE: Terminal 1 (COM) must be connected to Earth at all times.
- Apply power and the green "power on" LED will illuminate.
- The LED's on the front of the controller will illuminate according to the level of the liquid within the tank.
- When the Lower and Upper probes are covered by the liquid, both yellow LED's will illuminate and "output 1" relay will energise. The relay will remain energised until both probes are uncovered. Both yellow LED's will extinguish. A red LED is provided to indicate the status of this relay (illuminated when relay is energised).
- If the Alarm probe is also covered by the same liquid, the yellow "Alarm covered" LED will illuminate and "output 2" relay will energise. This will remain energised until:
  a, the Alarm probe is uncovered, (terminals 11 and 13 NOT linked), or
  b, the liquid drops below the Lower probe (terminals 11 and 13 linked).
  A red LED illuminates when this relay is energised.

Note: For testing purposes only (and with the tank empty), it is possible to energise the "output 1" relay by connecting a N.O. push button between COM and Upper probe. The relay will de-energise when the push button is released.

This unit should be installed in conjunction with the latest wiring regulations and practices (IEE, etc)

CONNECTION DIAGRAM



For metal tanks, omit **COM** probe and connect **Terminal 1** to tank. Ensure **Terminal 1 (COM)** is also connected to earth.

TECHNICAL SPECIFICATION

Supply voltage Un:	230V AC 48 - 63Hz
Supply variation:	85 - 115% of Un
Isolation:	Over voltage cat. III
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664
Power consumption:	≈ 3VA @ Un. ≈ 8VA @ 1.15 x Un.
Interelectrode voltage:	≈ 8 V AC @ Un
Maximum current:	≈ 5mA AC
Function resistance	
Operate:	≈ 4kΩ min.
Release:	≈ 15kΩ max.
Time delay	
Operate:	≤ 80mS
Release:	≤ 160mS
Distance between probes and relay:	1km max.
Surge Protection (applied to each probe input when referenced to COM)	
Spark-over voltage:	90V DC ±20V
Impulse discharge current:	10kA (8/20µS waveform)
Ambient temp:	-20 to +60°C
Relative humidity:	+95%
Output:	1 x SPDT (Output 1), 1 x SPNO (Output 2 - Alarm)
Output rating:	AC 1 250V AC 8A (2000VA) AC 15 250V AC 2.5A DC 1 25V DC 8A (200W)
Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2kV AC (rms) IEC 60947-1
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664
Housing:	Grey flame retardant Lexan UL94 VO
Weight:	≈ 300g
Mounting option:	On to 35mm symmetric DIN rail to BS5584:1978 (EN50 002, DIN 46277-3)
Terminal conductor size:	≤ 2.5mm² stranded ≤ 4mm² solid
Approvals:	Conforms to IEC. CE and Compliant.

OPTIONS

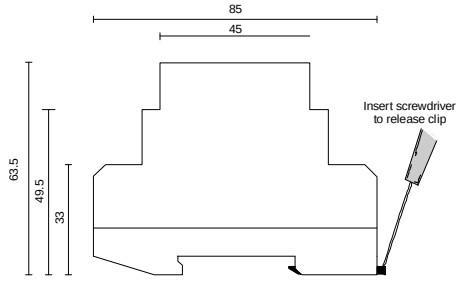
1. The operation of the "output 1" relay can be inverted such that the relay de-energises when the lower and the upper probes are covered by the liquid. Please order as E-FLC3/R when this option is required.

2. For other supply voltages, please contact Sales.

ACCESSORIES

Please refer to latest catalogue for probes, probe holders, etc

MOUNTING DETAILS



Broyce Control Ltd., Pool Street, Wolverhampton, West Midlands WV2 4HN. England

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The information provided in this literature is believed to be accurate (subject to change without prior notice); however, use of such information shall be entirely at the user's own risk.