

## Earth Leakage Lockout - Frozen Contactor

Leaders in Innovative Protection Systems, Bramco's ellfc3 is **compliant** to the latest statutory and industry standards. The ellfc3 provides next generation Earth Leakage Lockout and Frozen Contactor Protection. In addition, it also monitors Phase Rotation, Phase Loss and Undervoltage.

### Application:

**ELL** - Earth Leakage Lockout: monitors earth leakage on conductors in an outgoing load circuit before load contactor is closed and to prevent closing the contactor if the earth-leakage resistance is below pre-selected level. (1MΩ)

**FC** - Frozen Contactor: monitors voltage on the outgoing load circuit when the load contactor is open, identifying leaky vacuum contactor or welded contactor, then initiate isolation of the incoming supply via circuit breaker back tripping.

**UV, Phase Loss, Phase Rotation** - Incorrect phase rotation, phase loss or undervoltage will cause the UV relay to close with no latch.

### Features:

#### ELL:

- Failsafe operation – relay opens on fault
- 1 MΩ
- Common AR interlock contact input
- Separate contacts (2)

#### FC:

- Non-Failsafe operation – relay closes on fault
- Adjustable Timer inhibit for motor loads
- More than 25VAC/60VDC on any phase will cause trip
- Common AR interlock contact input
- Separate contacts (2)

#### UV, Phase Loss, Phase Rotation:

- Phase rotation - CW/CCW down to 30% phase V
- UV Trip <70% of present phase V on any phase
- UV trip - 1 sec, non-failsafe, no latch
- LED indicators for each of these
- Separate contact (1)

#### Isolation Barrier:

- Isolation Barrier and AR contact inputs are common to the ellfc3 relay.
- Barrier monitored for integrity – causes trip if not connected or if no phase voltage present during normal operation.

### Specifications:

- Supply:**
- 110-240VAC 50/60Hz 3VA
  - 24-48VAC/DC 3VA
- Voltage Tolerance:**
- -25% + 20%
  - -50% for 2 seconds
- Operating Temp:**
- 0 – 60° C
- System Voltage:**
- 415V or 1100V
- ELL range:**
- 1 MΩ
  - 2 x C.O. 5A 250VAC contacts  
5A 250VAC (General)  
5A 30VDC (Resistive)  
(100VA Max)
- FC – Leakage voltage:**
- 25VAC or 60VDC or more
  - 2 x C.O. 5A 250VAC contacts  
5A 250VAC (General)  
5A 30VDC (Resistive)  
(100VA Max)
- UV, PL, PR:**
- Trip time - 1 sec
  - 1 x C.O. 5A 250VAC contacts  
5A 250VAC (General)  
5A 30VDC (Resistive)  
(100VA Max)
- FC Timer:**
- Inhibit range 1 – 20 seconds
- Enclosure**
- Dimensions:**
- 100mmW x 75mmH x 110mmD
- Material:**
- High impact resistant polycarbonate construction
  - IP20 Rating
  - DIN rail or screw mounting
- Mounting:**
- Terminals:**
- Cage screw terminals
- Weight:**
- 300gms

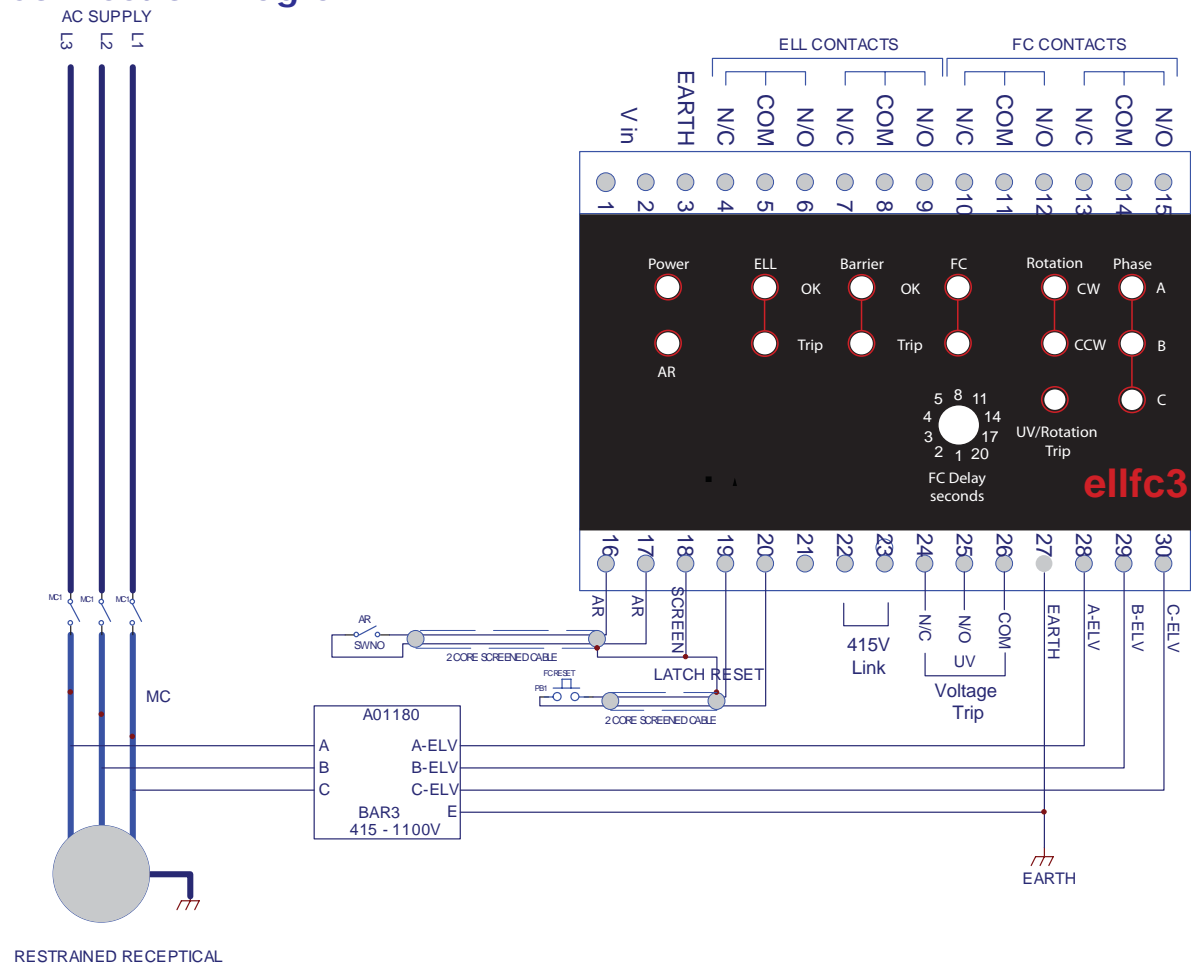


**C** = Complies to latest Standards

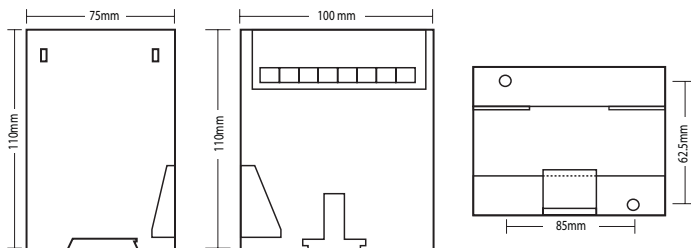


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### Connection Diagram:



### Outline and Mounting Hole Dimensions



### Ordering Information:

- A01220 - ellfc3 Relay - 110-240VAC
- A01222 - ellfc3 Relay - 24-48VAC/DC
- A01180 - BAR3 415 - 1100VAC Isolation Barrier

### Bramco Contacts

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### Compliance:

AS/NZS 2081:2011

The ellfc3 comes with  
a 2 year warranty.

