

h3

bramco ELECTRONICS

Newsletter

June 2010

fel3

Coming Soon:
Fascia Earth Leakage Relay



eI3 - Earth Leakage Relay Features



Next Generation Earth Leakage Relay - eI3 (available now)

Bramco's eI3 is **compliant** to relevant **statutory** and **industry standards** (including AS2081-pt3). We have compliance documents available for our valued clients.

The eI3 Earth Leakage relay is an **intelligent microprocessor** based, **versatile**, earth fault protection module. It has been designed to detect earth current faults flowing in a power system and provide a timed tripping mechanism.

The eI3 has been designed to eventually replace the legacy iAB range. The range is comprised of 2 key parts:

- 1) Protection Relay (eI3)
- 2) The ELT (Earth Leakage Toroid 1000:1)

Advantages:

- Incredible **accuracy** and **consistency** is within 5% at both the top and bottom of its monitoring ranges and times.
- The eI3 range can be mixed and matched with any of the 1000:1 ELTs without impacting accuracy.
- Developed for use with latest generation **VVVF drives**.

Features:

- Wide (adjustable) trip current and trip time options.
- Failsafe / Non-Failsafe operation.
- Latched / Non-Latched operation.
- Variable VSD (8-200Hz) / Fixed (50-60Hz) frequency operation.
- Visual LED indication of power, open toroid, trip, warning and frequency.
- Reset a latched trip, both locally and/or externally (local can be locked out).
- Test button for unit trip audit.
- Dual isolated output tripping relay contacts, each with N/O and N/C contacts.
- Fault current is measured via a 1000:1 external toroid (must be Bramco approved)
- Open toroid protection.
- Can be used with limited/unlimited neutral systems.
- Instrumentation output, either current loop (4-20mA) or voltage (2-10V).

eI3



Model information – Bramco's E/L range – what do I need to order???

Our E/L range comprises:

New generation.

- eI3
- eIf3
- fel3

We also offer the previous generation

- iAB
- elf2

- If you are an existing iAB valued user, you can engage the new eI3 as a replacement. You must also use our new generation 1000:1 Toroid – note details on the 1000:1 Toroid are on this newsletter. Therefore we ask that the old style toroid also be replaced.
- The same applies for existing elf2 users.
- The long serving Bramco iAB must use the legacy Toroid, the eI3 must use the 1000:1 Toroid. For use with the existing previous generation toroid, the iAB is now available with enhanced filtering for new style VVVF drives.
- The same applies for existing elf2 users.

Please contact the Bramco sales team for further information.

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Earth Leakage Toroid 1000:1 - elt3 (available now)

Leaders in Innovative Protection Systems, Bramco Electronics offers a range of precision Earth Leakage Toroids for use exclusively with the b3 range of Earth Leakage Relays.

Bramco's new 1000:1 turn toroids accuracy and consistency within 5% and can be matched to any of Bramco's Next Generation Earth Leakage Relays.

Bramco ELTs have a 15mA - 20A range, with a turn ratio of 1000:1.

Bramco 1000:1 toroids are not to be used with existing i-AB/ELF2 Earth Leakage Relays.

Bramco ELT's are supplied in the following sizes:

- 40mm, 70mm, 130mm, 200mm and 300mm (Internal Diameter)

Please contact the Bramco sales team for further information.



1000:1 Toroid Range

Next Generation Earth Leakage Module - elf3 (available now)

Bramco's fascia-mounted **intelligent micro-processing** elf3, detects earth fault currents flowing in a power system and provides visual indication of earth leakage conditions.

The elf3 is specifically designed to protect systems supplying **VVVF drives** and provides very high immunity to converter noise.

Compliant to relevant statutory and industry standards (including AS2081-pt3), the elf3 is the next generation in earth leakage protection, offering improved features over ELF2.

The elf3 uses an earth leakage toroid to measure RMS current and operates tripping contacts when the measured RMS current exceeds the trip setting for the duration of the trip time setting.

Advantages:

- Incredible **accuracy** and **consistency** is within 5% at both the top and bottom of its monitoring ranges and times.
- The elf3 range can be mixed and matched with any of the 1000:1 ELTs, without impacting accuracy.
- The Backlit Display provides a wide number of operating statistics, and is coloured to match the operating status (healthy, tripped, warning etc).
- Developed for use with latest generation VVVF drives

The elf3's features include:

- 32-bit microprocessor core.
- 50-60Hz / 2-200Hz operation.
- Backlit Graphic LCD display.
- Settings adjustable through menu.
- Optional password protection for settings.
- CT/Toroid open fault indication.
- Failsafe / non failsafe and latch/non-latch operation, configured via the menu.
- Red LCD backlight to clearly indicate a trip condition, yellow backlight for warning and green for healthy.
- Protection settings and status clearly visible at all times.

- Wide voltage supply range.
- Local reset functionality configurable through the menu.
- Provision for a remote reset button.
- Clear opening door protection to IP66.
- Instrumentation output - 4-20mA Current loop or 2-10V voltage output.
- Use with range of Bramco Earth Leakage Toroids.
- Last fault duration reading.
- Current settings, measurement information and status available via RS485 MODBUS.
- Communications settings such as baud rate configurable via menu.



elf3 Earth Leakage Module