

Exclusive Distributors of All
Bramco Products
40 Years of Unwavering Innovation



elf3

Earth Leakage Module

# elf3 - Earth Leakage Module

#### Overview:

m-Tronix is your authorised and exclusive distributor of the range of Bramco products, which are industry leaders since 1945. Utilising these designs, as continuously developed by the Leishman family and team, m-Tronix builds, services and supports these advanced, innovative products, known and widely engaged as Bramco.

## **Application:**

Leaders in Innovative Protection Systems, the Bramco m-Tronix 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 VF drives and provides very high immunity to converter noise. Compliant to latest Australian standards, the elf3 is the next generation in earth leakage protection, offering improved features over ELF2.

#### **Features:**

- 32-bit microprocessor core.
- 50-60Hz (VSD Mode Off).
- 5-100Hz (VSD Mode On).
- 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.
- Diagnostics screen to view all current conditions and settings.
- 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 m-Tronix Earth Leakage Toroids
- Last fault duration reading.
- Logging of previous trip details.
- Current settings, measurement information and status available via RS485 MODBUS ASCII/RTU.
- Communications settings such as baud rate configurable via menu.
- Backward compatible with ELF2 when installed with new 1000T EL Toroid.

## **Specifications:**

#### Supply:

- 24 48V AC/DC (50/60Hz)
- 110-240VAC (50/60Hz)
- 3VA

#### **Voltage Tolerance:**

• -25% to +20%

#### **Relay Contacts:**

- DPCO 5A 250VAC (General)
- 5A 30VDC (Resistive) (100VA Max)

#### **Operating Temp:**

• 0-60º C

#### **Model Varients:**

30-500mA 50-500ms
 0.5A-5A 50ms-20s
 2A-20A 50ms-20s

#### **Monitoring Outputs:**

- 4-20mA output into 500 ohm or
- 2-10V output with internal resistor
- RS485 MODBUS RTU/ASCII

#### Material: Glass filled Noryl L94V1

#### **Fascia Mounting:**

- Fascia Mount din dimensions 96 x 96mm with clear opening door bezel IP66 rated
- Phoenix plugs provided

Panel opening: 90 x 90mm

Weight: 500g

### **Compliance:**

#### AS/NZS 2081 - 2011

Electrical Equipment for Coal and Shale Mines - Electrical Protection Devices

The elf3 comes with a 2 year warranty



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## **Ordering Information:**

Mt01324 elf3 Compliant 30-500mA 50-500ms MT01325 elf3 Low Range 0.5A-5A 50ms-20s MT01326 elf3 High Range 2A-20A 50ms-20s

## **Toroid Ordering Information:**

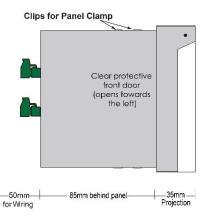
Green = Healthy

Yellow =

Warning

MT01334 Toroid (1000T) 40mm MT01335 Toroid (1000T) 72mm MT01336 Toroid (1000T) 130mm

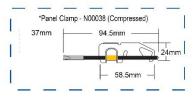




## Typical displays coloured to match operating status:



### \*Supplied with 1 x Sealing Gasket and 2 x Panel Clamps



## **M-TRONIX Contacts**

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## Compliance:

AS/NZS 2081:2011 The elf3 comes with a 2-year warranty.