



**M-TRONIX**  
BRAMCO  
SAFETY INNOVATORS



## elec2-f EARTH LEAKAGE & EARTH CONTINUITY RELAY

### PRODUCT OVERVIEW

The elec2-f relay provides high-integrity earth leakage (EL) and earth continuity (EC) protection for mining and industrial power systems. Designed and engineered in Australia, the ELEC2 delivers precise, reliable performance for VVVF drives and fixed-speed circuits while meeting key AS/NZS and IEC standards.

**The elec2-f is a fascia mounted relay.**

### Key Benefits

- Mining-grade reliability
- Fast installation
- High electrical immunity
- Proven compliance to AS2081:2011
- Designed for long system life

### FEATURES

#### Earth Leakage (EL)

- 16-bit microcontroller
- Frequency: 50–60 Hz (standard) / 5–100 Hz (VSD mode)
- Failsafe or non-failsafe modes
- Latch or non-latch
- Adjustable trip current
- Adjustable trip delay
- Open-circuit toroid monitoring
- Status LEDs: Trip / Warning / Frequency / Power / Open Toroid
- 4–20 mA or 2–10 V analog output
- Local or external latch reset
- Compatible with m-tronix ELT3 (1000T) toroids

## Earth Continuity (EC) and Pilot Control (PC)

- Operational loop resistance  $\leq 45 \Omega$
- High immunity to pilot cable capacitance/inductance
- Compatible with diode termination and Smart Pilot Node
- EC relay energised when pilot circuit healthy
- Remote start via  $100 \Omega$  resistor
- Status LEDs: Power / Pilot Open / Pilot Closed / Pilot Short / Ready
- $2 \times$  C/O contacts

## APPLICATIONS

- Longwall operations
- Continuous miners
- Conveyors
- Pumping systems
- VVVF drive systems
- Industrial motor control

## TECHNICAL SPECIFICATIONS

### Electrical

Parameter	Specification
Supply Voltage	24–48 VAC/DC or 110–240 VAC
Frequency Range	50–60 Hz (std), 5–100 Hz (VSD mode)
Trip Current	Adjustable
Trip Delay	Adjustable
Analog Output	4–20 mA / 2–10 V

### Earth Continuity

Parameter	Specification
Max Loop Resistance	$45 \Omega$
Fault Detection	Open / Closed / Short
Remote Control	$100 \Omega$ resistor

### Toroid Options

Toroid Model	Diameter	Part Number
1000T	40 mm	A01334
1000T	72 mm	A01335
1000T	130 mm	A01336

### Mechanical

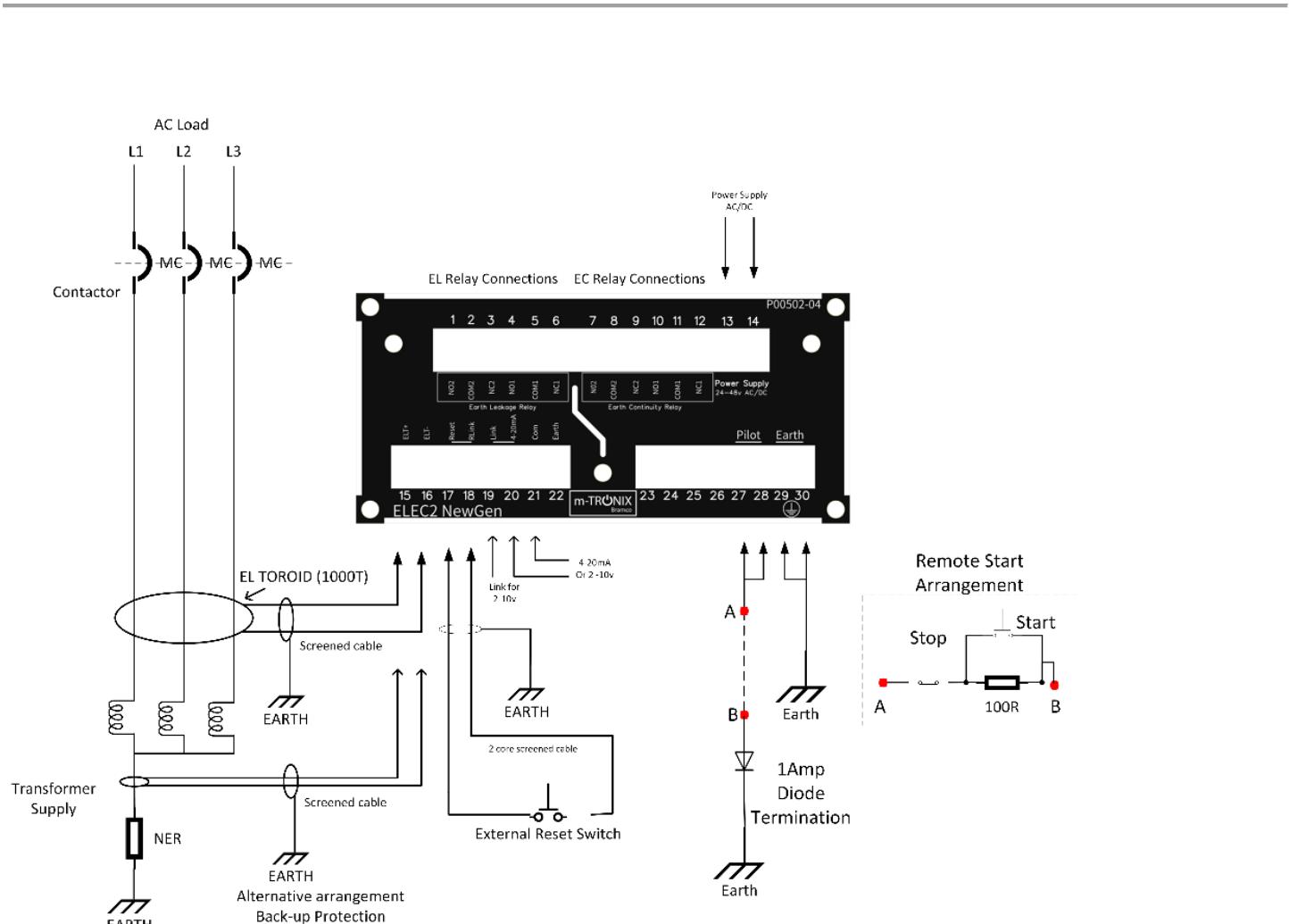
Parameter	Value
Enclosure	$96 \times 48 \times 109.5$ mm
Mounting	DIN rail

## COMPLIANCE

- AS/NZS 2081 (Earth Leakage & Continuity)
- Relevant IEC protection standards
- Designed and manufactured in Australia

## ORDERING INFORMATION

Part Number	Description
A01601	ELEC2 – 110–240 VAC
A01600	ELEC2 – 24–48 VAC/DC
MT01334	Toroid (1000T) – 40 mm
MT01335	Toroid (1000T) – 72 mm
MT01336	Toroid (1000T) – 130 mm



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