M-TRONIX
BRAMCO
SAFETY INNOVATORS

iC3 Earth Continuity and Pilot Control Relay

PRODUCT OVERVIEW

The iC3 Earth Continuity Relay delivers next-generation protection for mining and industrial supply cables. Designed in Australia and compliant with the latest statutory and industry standards, the iC3 provides highly stable earth-continuity monitoring using advanced microprocessor-based filtering and continuous self-diagnostics.

Its enhanced stability over long pilot cables makes it ideal for VSD systems, trailing cables and electrically noisy environments.

The iC3 is compliant to AS2081:2011.

APPLICATION

The iC3 continuously monitors the resistance of the pilot-earth circuit using diode termination at the load end. The microprocessor supervises signal integrity, filters noise and detects pilot resistance faults with high accuracy.

The iC3 offers:

- Improved noise immunity for long cable runs
- Faster and more accurate pilot-integrity detection
- Adjustable trip resistance and delay for site-specific tuning
- Safe operation in hazardous areas (Ex ib compliant)

Suitable for:

- Mining electrical starters
- Continuous miners and longwall systems
- Pumping and conveyor systems
- Surface and underground fixed plant
- Any installation requiring certified earth-continuity verification

FEATURES

- Operational trip resistance selectable from **5–45 Ω**
- High tolerance to pilot capacitance and inductance — supports **long cable runs**
- Local or remote start operation (remote start/stop using **100 Ω resistor**)
- **Failsafe operation**
- Designed for explosive atmospheres — **Ex ib** compliant
- Digital filtering for improved noise performance
- Continuous microprocessor-based self-diagnostics

ORDERING INFORMATION

Part Number	Description
A01328	iC3 Relay — 240 VAC
A01329	iC3 Relay — 24–48 VAC/DC

SPECIFICATIONS

Supply:

Model	Min	Typ	Max	Unit
A01328	90	110	240	V AC 50/60 Hz
MT01329	20	24	50	V AC/DC

Power: 2 VA ±20%

Operating Temp: 0–60°C

Pilot-to-Earth Resistance:

EC Mode selectable values: 5, 10, 15, 20, 25, 30, 35, 40, 45 Ω (max)

Remote Start Mode: 105, 110, 115, 120, 125, 130, 135, 140, 145 Ω (max)

Start Resistance: 1000 Ω

Shunt Resistance for Trip:

- Less than 1 kΩ

Trip Delay:

- 100–500 ms

Relay Contacts:

- 2 × changeover contacts
- 5A – 240 V AC

Enclosure

Dimensions: 75 mm (W) × 55 mm (H) × 110 mm (D)

Material:

- High-impact resistant polycarbonate construction
- IP20 rating

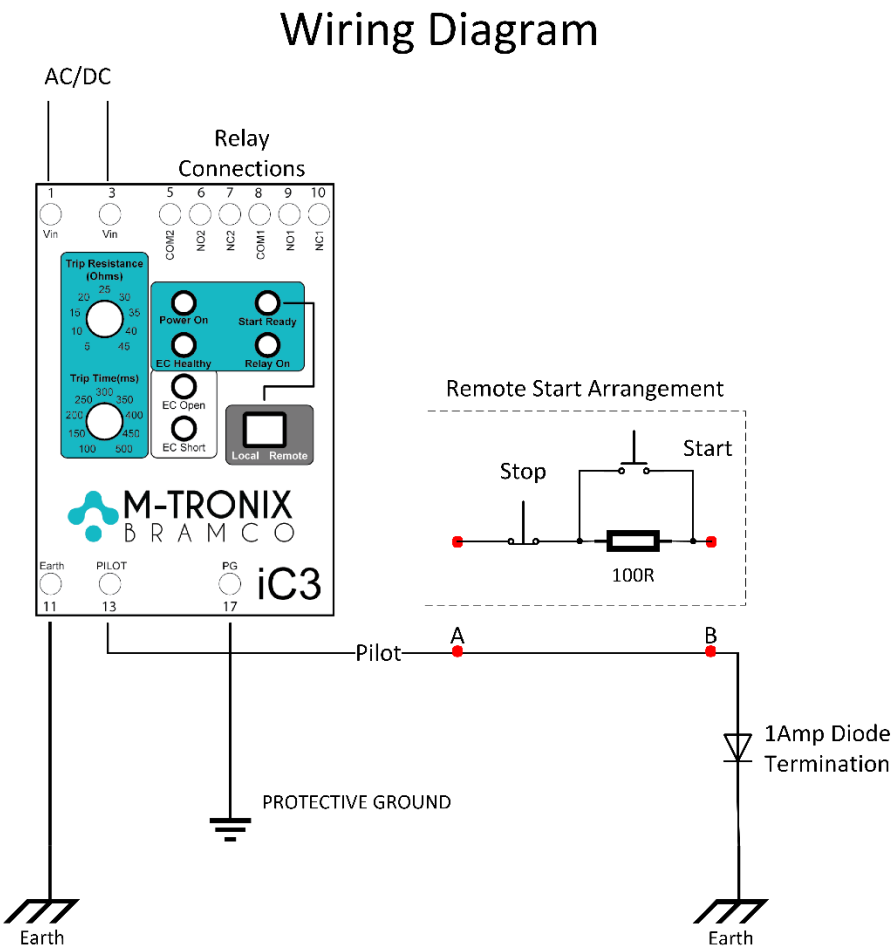
Mounting: DIN rail
Terminals: Cage screw terminals
Weight: 216 g

Certification

This product is designed and manufactured in accordance with ISO9001:2000 certified company standards.

It is compliant with AS2081:2011.

Wiring Diagram



m-tronix Pty Ltd

info@m-tronix.com.au | +61 435 939 513 | www.m-tronix.com.au