



NLM3 - Neutral Link Monitor

Overview:

M-Tronix is your source for highly innovative electronic control, protection, and monitoring systems for mining and general industry. M-Tronix is your exclusive distributor of the Bramco product range.

Application:

Leaders in Innovative Protection Systems, the Bramco M-Tronix nlm3 is compliant to the latest statutory and industry standards. Including AS2081:2011.

The Neutral Link Monitor relay (nlm3) is an NER integrity protection device designed to continuously monitor the current limitation system on the secondary star point to earth connection of a supply transformer.

The unit can also be utilized to monitor a direct connection to earth from the star point. The NLM3 monitors the NER Resistance integrity, excess phase voltage rise, neutral earth leakage current, with the ability to adjust trip times for protection coordination.

Features:

nlm3 connects directly to AC supply systems with line voltages up to 1100 Volt without any additional barrier assembly.

It can also be utilized on systems with line voltages up to 4160 Volt with the addition of a barrier assembly.

Earth Leakage Current is monitored in the neutral to earth circuit using an external EL toroid (Toroid not included).

LED indication of Power On, NER integrity, Excess Voltage and Earth Leakage current

The unit is configured as fail safe and latch on fault.

- Back up protection is provided by detecting voltage rise across the NER

Trip Delay Times are individually adjustable for:

- Earth leakage
- NER integrity
- Over-voltage
- Adjustable earth leakage current trip
- Adjustable excess voltage trip
- Adjustable NER resistance limits
- Earth leakage frequency response range
- selectable: 50 – 60Hz or 5 – 100Hz
- Open circuit toroid protection
- Reset push button input provided
- Time-stamped log of trip events
- Password protection for setting all parameters.

Ordering Information:

A01243 - Neutral Link Monitor - nlm3

A01334 - 40mm Toroid 100T (see factory for alternate sizes)

Specifications:

Supply:	MODEL	MIN	TYP	MAX	UNIT
	A01243	20	24	50	V ac/dc

Power: 4VA +/-20%

Operating Temp: 0 – 60° C

Communications: RS485 serial port Modbus ASCII / RTU

Instrumentation output: 4-20 ma or 2-10 volt

NER Resistance Values:

- NER 10 to 650 ohms depending on system voltage and limiting current required.
- Consult the factory for your system needs.

EL System Voltages: 415 /1100V - 240/635V phase

NER trip value adjustment: 50% to +100% (as required in AS/NZS 2081:2011)

Trip Tolerance: 10% to +0%

EL Current Range: 30-500mA

Trip Delay Timer:

- 50 to 500 milliseconds for over-voltage and earth leakage.
- 2 to 10 seconds for NER integrity

Excess Voltage Trip: 5 - 50% phase voltage

Relay Contacts:

- 2 pole changeover 5A 250V AC (100VA Max) for earth leakage
- 2 pole changeover 5A 250V AC (100VA Max) for over-voltage and NER integrity.

Enclosure

Dimensions: 150mmW x 75mmH x 110mmD

Material:

- High impact resistant polycarbonate construction

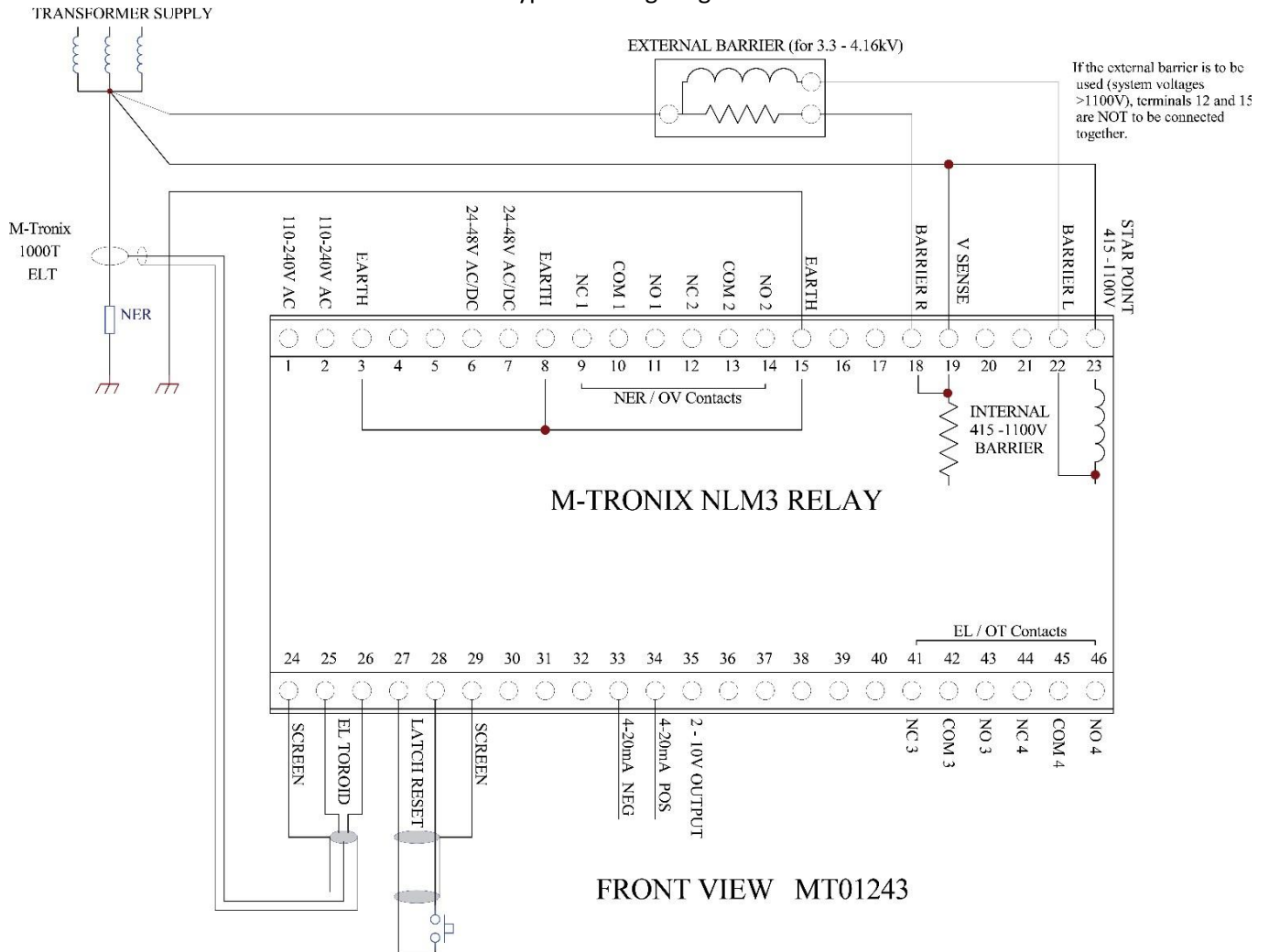
- IP20 Rating

Mounting:

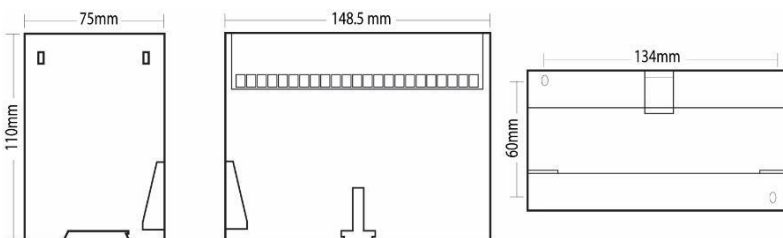
DIN rail



Typical Wiring Diagram



Enclosure dimensions



M-TRONIX Contacts

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Compliance:

AS/NZS 2081:2011
 Electrical Equipment for Mines
 Electrical Protection Devices.
 The NLM3 comes with
 a 2 year warranty.