MH

Protection Relays

A Protection Class Of Its Own

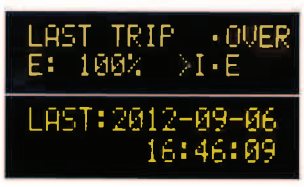
MH Protection Relays
- A New Touch of Class

The MH Protection Relay; now with a new touch of class. Continuing its legacy of design and development, the team at MH Technology is pleased to launch the 2013 version of **MH IDMTL Protection Relays**. The new MH Protection Relay is anchored on the acclaimed MTB Fault Indication System, and improved with new design flair to make bold product design statements.

The MH IDMTL Protection Relays features a first-of-its-kind, OLED Display (Organic Light Emitting Diode) that provides unparalleled clarity and crisp sharpness. A redesigned user menu accompanies the superior display for user-operation with intuitive ease.

We have no doubt that this state-of-the-art protection relay series that is truly,
A Protection Class of its Own.

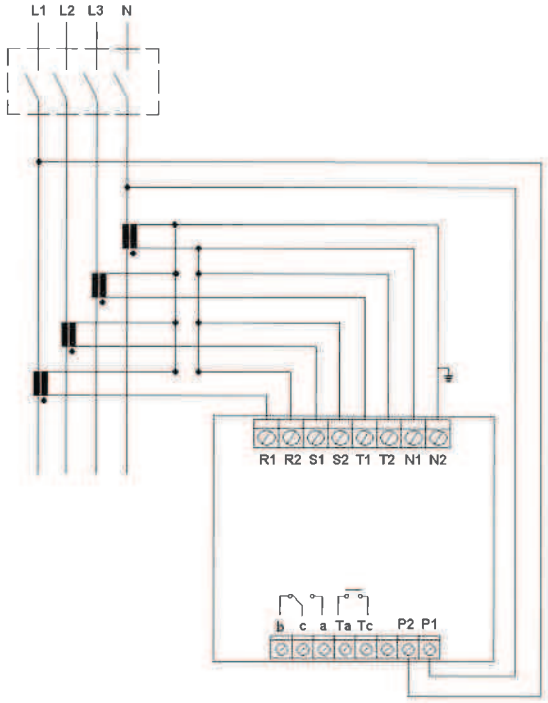
Communiction interface RS485 (Modbus RTU) option for pluggable modules



Direct access of trip event info with real time/date stamp

Added security against nuisance trip handling

MTB System Protection



About MTB Fault Indication System

MTB, or Mechanical Trip Button is a fault indication system incorporated in advanced protection relaying for electrical power networks. The MTB does not require auxiliary supply to provide a fault indication. The MTB is designed to prevent power circuits from re-energising before a fault is completely rectified. This is an essential safety feature which protection relays using electrical latching mechanisms are not able to provide.

Integrates OLED display for superior readability in high resolution

EMC type tested in accordance with IEC 61000

Type tested for vibration and mechanical shock test in accordance with IEC 60255-21-1

REA 200e

Combined IDMTL Overcurrent & Earth Fault Relay

A similar, but simplified version of MH combined IDMTL overcurrent and earth fault relay REA 200, the REA200e provides elementary protection functions excluding the MTB fault indication system.

ROA 207e

IDMTL Overcurrent Relay

A similar, but simplified version of MH combined IDMTL overcurrent relay REA 207, the ROA207e provides elementary protection functions excluding the MTB fault indication system.

REF 052e

IDMTL Earth Fault Relay

A similar, but simplified version of MH combined IDMTL overcurrent and earth fault relay REA 200, the REA200e provides elementary protection functions excluding the MTB fault indication system.

Features

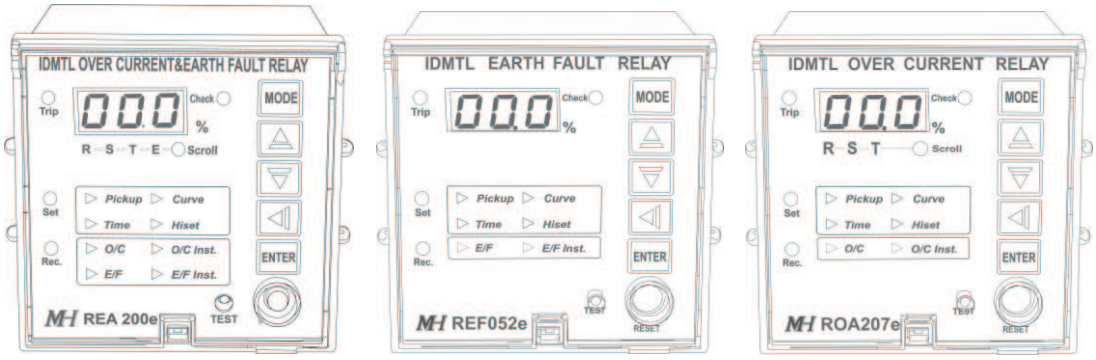
- Designed with LED display
- Added security against nuisance trip handling
- Manual test button for relay operation checking
- Curve selection in accordance with ANSI, IAC, IEC, 1.3/10
  - Normally Inverse (NI)
  - Very Inverse (VI)
  - Extremely Inverse (EI)
  - Short time Inverse (STI)
  - Moderate Inverse (MI)
- Trip value recording (4-memory)
- Integrated surge arrester against transient overvoltages
- High set mode is incorporate for instantaneous protection
- Tamper-proof design for settings protection
- Serial interface RS485 for Modbus RTU communication (Optional)

Standards

- Type tested for vibration and mechanical shock test in accordance with IEC 60255-21-1
- EMC type tested in accordance with IEC 61000
- IEC/EN 60755
- IEC/EN 61000-4-2
- IEC/EN 61000-4-3
- IEC/EN 61000-4-4
- IEC/EN 61000-4-5
- IEC/EN 61000-4-6
- IEC/EN 60255-1
- IEC/EN 60255-5

Protection Relays

E-Series



IDMTL Protection Relays

Technical Specification

	Specification for Model REA 200-E	Specification for Model REF 052-E	Specification for Model ROA 207-E
Function	Combined Earth Fault & Over Current protection	Earth Fault protection	Over Current protection
Over Current Setting	20-200% (1% step)		20-200% (1% step)
Earth Fault Setting	2-50% (0.1% step)	2-50% (0.1% step)	

Common Specification

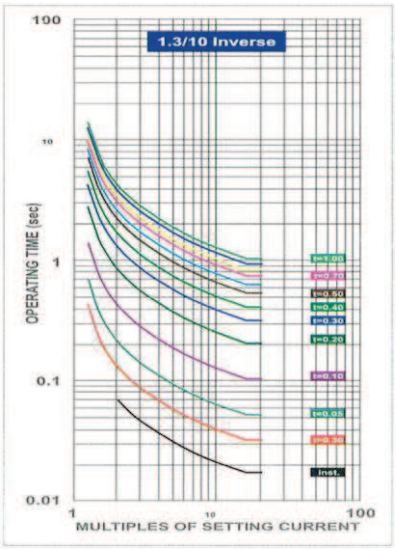
Power supply voltage	Dual voltage source AC110/240V ±15% (other voltage available upon request)
Operating frequency	50/ 60Hz
Time setting range IDMTL/DTL	0.09-3.0sec at 10x setting current 0.039-1.3sec at 10x setting current 0.1-2.0sec (0.01 sec per stop)
Instantaneous Mode (Hight-Set)	2-10x setting current
Pick-up current	100-115% of the setting current
Reset current value	≤90% of the operating value

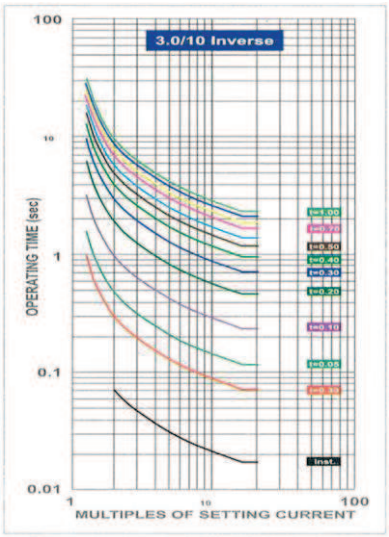
Operation and storage temperature	Operation -10°C to 55°C Storage -20°C to 65°C
Relative Humidity	95% at 40°C (IEC 60068-2-30)
Degree of protection	IP52 (IEC 60529)
Voltage withstand	Insulation IEC 60255-5 2kVrms for 1min
Overcurrent withstand	$20xI_{rated}$ for 3sec (100A O/C, 20A E/F)
Vibration	IEC 60255-2-1 0.5G between 10Hz and 150Hz

Operation Life	Electrical :> 10,000 operations
Output Contact	AC 250V 5A
Indication	Green LED (power input) Red LED (relay tripped)
Enclosure Material	ABS resin complying with UL94VO
Weight	Approximately 300g
Power Consumption	≤ 2VA
Dimension	Height 96mm, Width 96mm, Depth 112mm (behind bezel)
Panel Cut out	Height 91mm, Width 91mm

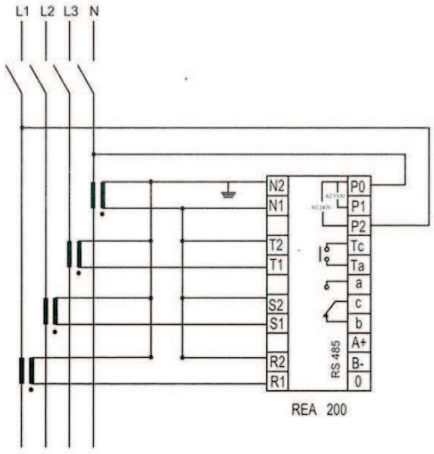
General rule for residual current protection devices	IEC 60755
Electrostatic Discharge	IEC 61000-4-2
Radiated Electromagnetic Field	IEC 61000-4-3
Electrical Fast Transient/ Burst	IEC 61000-4-4
Electrical Surge	IEC 61000-4-5
Conducted Disturbances Induced by RF field	IEC 61000-4-6
Measuring relay and protection equipment	IEC 60255-1
Insulation coordination for measuring relays and protection equipment – Requirement & tests	IEC 60255-5

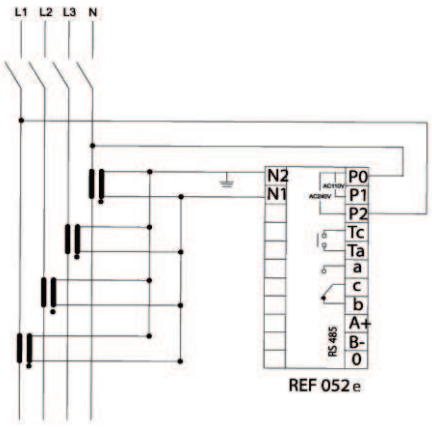
Characteristic Curve

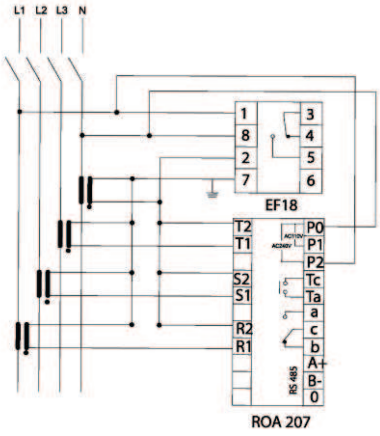




Connection Diagram







Authorised Dealer:

MHE-IDMTL-2012/8

Protection Relays
E-Series

Product specification subject to change without prior notice.