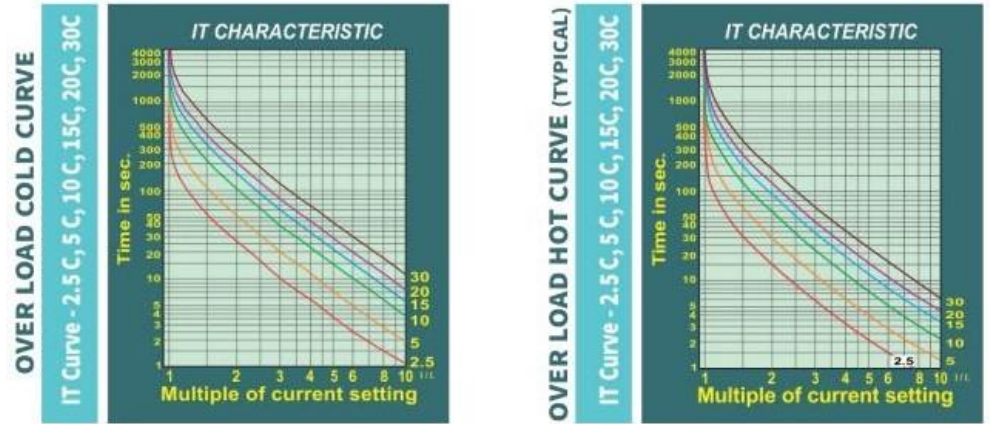


Motor Protection Device (μ HLEDX-T)



MODEL - μ HLEDX-T

FEATURES:

- LED Seven Segment Display, bright pixels
- Displays 3 phase currents and thermal capacity used
- Annunciation for each type of fault
- Numerical Algorithm for fast, reliable operation
- Thermal Overload curves selectable as per requirement
- Excellent accuracy and long time stability of thermal curves due to complete software based implementation
- Customized protection CT as per load current is supplied with relay
- Continuous self – supervision and fail safe operation
- Annunciation in case, motor fails to stop after protection device issues trip command
- Man – Machine interface through keypad
- Up to five event trip records, FIFO based
- Reset Inhibit function, Hour Counter, Onsite calibration, Password facility (on demand)
- Robust mechanical design, shock proof non-metallic screw less unit.
- IP 54 degree of protection at front of enclosure (for panel mounted).
- True RMS measurement with 0.1A resolution
- Fault History with Real Time Clock
- Overload current range upto 1000A
- Earth fault current range upto 100A

OPTIONAL:

- RS 485 Data communication over MODBUS RTU protocol
- 4-20mA Analogue output
- Both RS 485 communication and 4-20mA Analogue Output
- External reset facility
- Password facility
- Thermistor based Temperature Protection
- Pre trip alarm for thermal overload
- SSR output for short circuit protection

PROTECTION:

- Over Load
- Single Phasing - Current Based
- Unbalance Protection - Current Based
- Locked Rotor
- Under Current
- Short Circuit
- Earth Fault

RANGE:

- 0.2 to 6.25 Amp
- 0.4 to 12.5 Amp
- 0.8 to 25 Amp
- 2 to 62.5 Amp
- 4 to 125 Amp
- 40 to 250 Amp
- 80 to 500 Amp
- 100 to 1000 Amp

MEASURES & DISPLAYS:

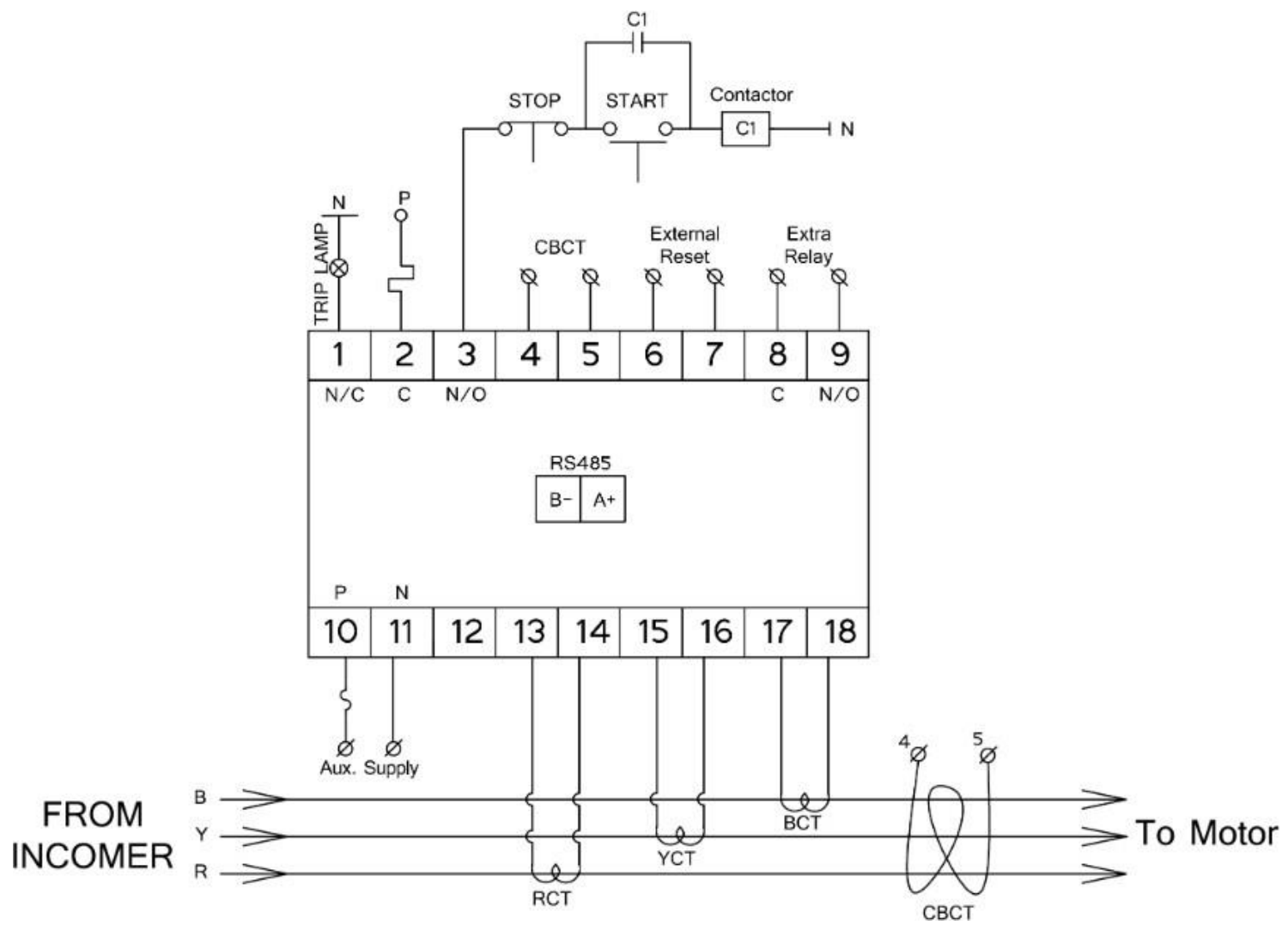
- R Phase Current (I_r)
- Y Phase Current (I_Y)
- B Phase Current (I_b)
- True RMS current measurement
- Has Hour counter (Hr) (min)
- Has Start Counter
- Has Online Calibration facility

SPECIFICATIONS:

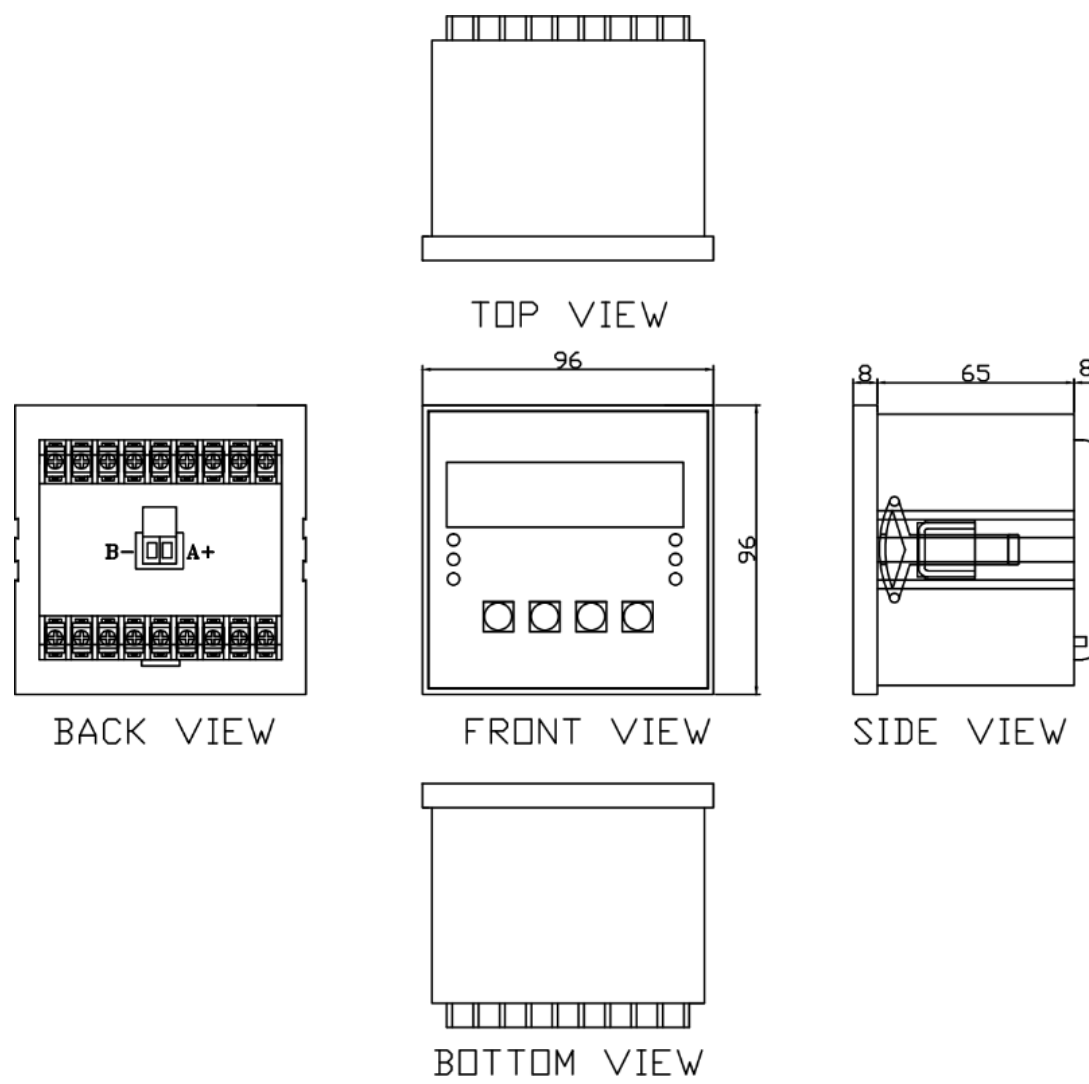
Aux. supply	230VAC (optional 110VAC / 415VAC), 50 Hz
Current Transformer (CT)	External CT
*Rated current (As per motor FLC)	Eight current / CT ranges from 0.2A to 1000A
Rated Frequency	50Hz/ 60Hz
Mass of the device	500gms. (approx.)
Mounting type	Flush mounted
Dimensions (L X W X D)	96 X 96 X 65 mm
Panel Cutout	92 X 92 mm
Device ID or max. output for 20mA	Either device ID, 1 to 250 (for RS 485 comm.) or m Out as per current range selected (for 4-20mA output)
Thermal Overload setting range	0.2 to 1000A, as per current/ CT range selected
Thermal Overload curve selection	1C, 2C, 3C, 4C, 5C.... up to 60C (sixty curves)
Thermal Overload Operating time	As per thermal curve selected
Under current function	Enable/Disable
Under current setting range	10% to 80% FLC
Under current operating time	1 to 60 sec
Locked Rotor setting range	Current/CT range selected, pick up 3 X FLC
Locked Rotor pick up delay time (during starting)	1 to 30 sec.
Earth fault trip start delay (during starting)	Enable/Disable
(When enable; earth fault function will not operate during motor starting for 10 seconds)	
Earth fault setting range	10% to 30% FLC (10% to 15% FLC for 100 to 1000A range)
Earth fault operating time	0.5 sec to 3 sec.
Short Circuit setting range	Current/CT range selected, Pick up 8 X FLC
Short Circuit operating time	Instantaneous
Single phasing function	Enable or disable
Single phasing operating time	1 to 10 sec
Unbalance protection function	Enable or disable
Unbalance protection setting range	10% to 40%
Unbalance protection operating time	3 to 10 sec.
Thermal Reset function	Enable / Disable (When enabled, MPD can be reset if thermal capacity falls below 70%. When disabled, thermal capacity becomes zero after MPD trips).
Thermal Reset Inhibit time	1 to 999 sec. (Applicable when thermal reset is disabled)
Repetitive start counter function	Enable/ Disable
Number of repetitive starts	2 to 10
Time period for repetitive starts	1 to 60 min.
History	List Five faults (FIFO based)
Data Output	RS 485 MODBUS – RTU Protocol, Baud Rate – 9600, Word length – 8
Analog Output	4-20 mA
Ambient service temperature	0 deg. C to + 55 deg. C
Degree of protection (enclosure panel mounted)	IP 54 (Front side of the Device)

***Note: Current range 80-500 Amp is available with all the above protections except short circuit protection.**

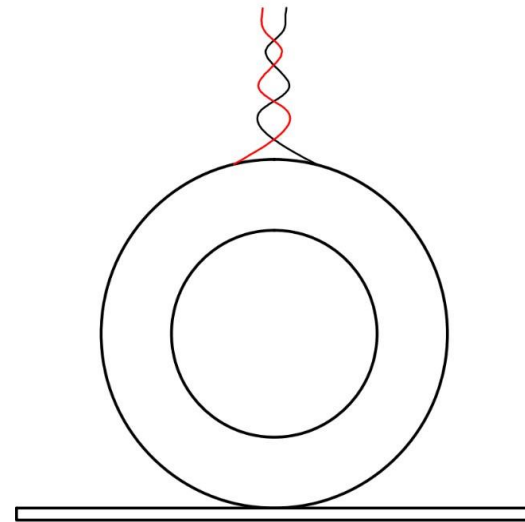
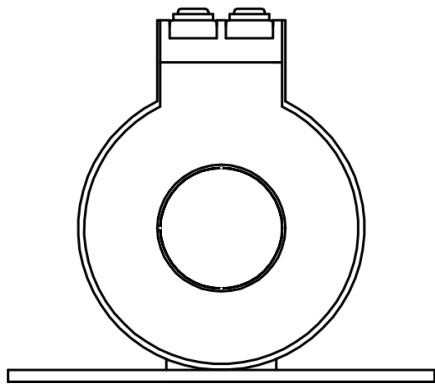
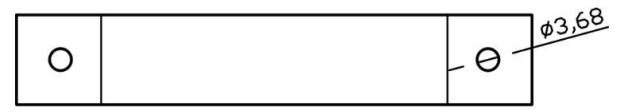
WIRING DIAGRAM



DIMENSION



CT DIMENSION

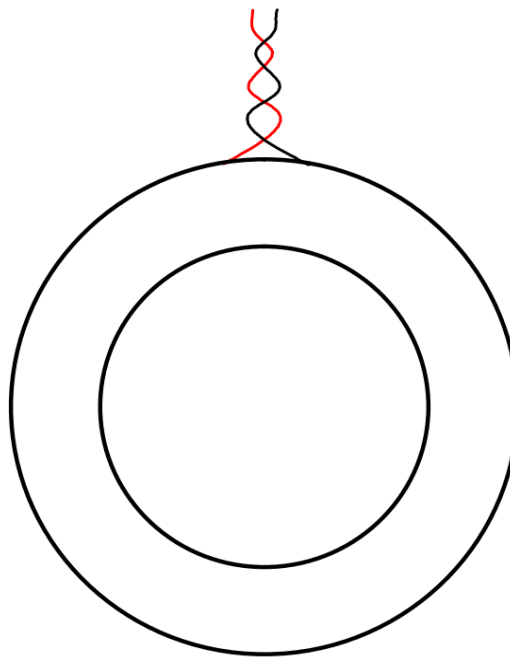


20mm LINE CT
INNER DIA.-20mm
OUTER DIA.-47mm

35mm LINE CT
INNER DIA.-35mm
OUTER DIA.-59mm

**FOR 0.2 TO 6.25A, 0.4 TO 12.5A,
0.8 TO 25A, 2 TO 62.5A**

FOR 4 TO 125A



55mm LINE CT
INNER DIA.-55mm
OUTER DIA.-85mm

FOR 40 TO 250A

For 100 to 1000 A external CT 1000/5A,CL-5P10,(customize CT) , Inner Dia- 60 to 80mm Approx.