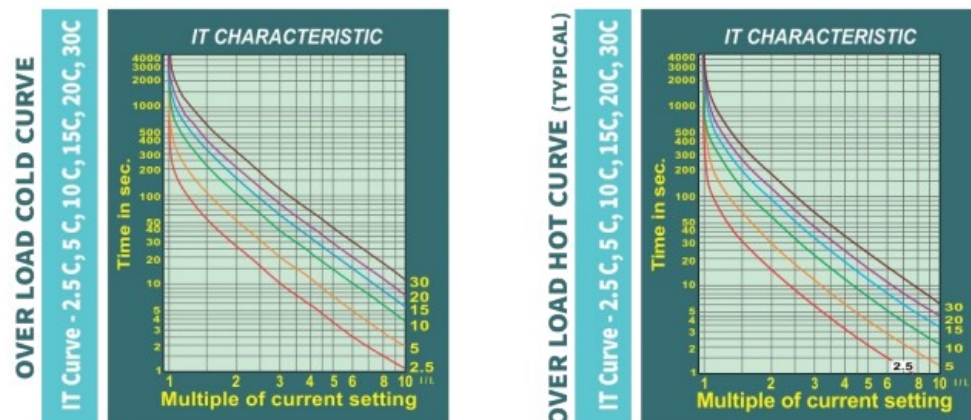


Motor Protection Device with Shaft Power (μLEDXT- SP)



MODEL - μLEDXT-SP

FEATURES:

- Microcontroller based, LED Seven Segment 2-line Display, brighter pixilation
- Continuous scanning, display true RMS 3 phase currents, %thermal capacity used by LV Motor, Line and Phase voltages, PF, Input Power (kW), Energy (KWH), **Shaft Power (kW), Efficiency (%), Torque (N-m) for linear portion of speed-torque curve and Load factor (%) of the motor**
- 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 requirement supplied with the 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, Start Counter, Hour Counter, Online calibration, Password facility (on demand)
- Robust mechanical design and adequate IP 54 degree of protection at the front of enclosure (when mounted on panel) which is shock proof non-

PROTECTION:

- Over Load
- Single Phasing
- Unbalance
- Locked Rotor
- Under Current
- Short Circuit
- Earth Fault
- Over voltage & Under voltage
- Shaft Power Under load (or Dry Run)
- Shaft Power Over load (Separate output relay)

RANGE:

- 0.2 to 12.5 A
- 0.8 to 25 A
- 2 to 62.5 A
- 4 to 125 A
- 40 to 250 A
- **80 to 500 A (without SC Protection, current measurement upto 2000A)**

MEASURES & DISPLAYS:

- 3 Phase Currents (True RMS, 0.1A resolution)
- 3 Phase Voltages
- Power factor
- Input Power, kW and Energy, KWH
- Shaft Power, kW, Efficiency (%)
- Torque (N-m), Load factor (%)
- Running Hours (Hr) (min)
- No. of Starts

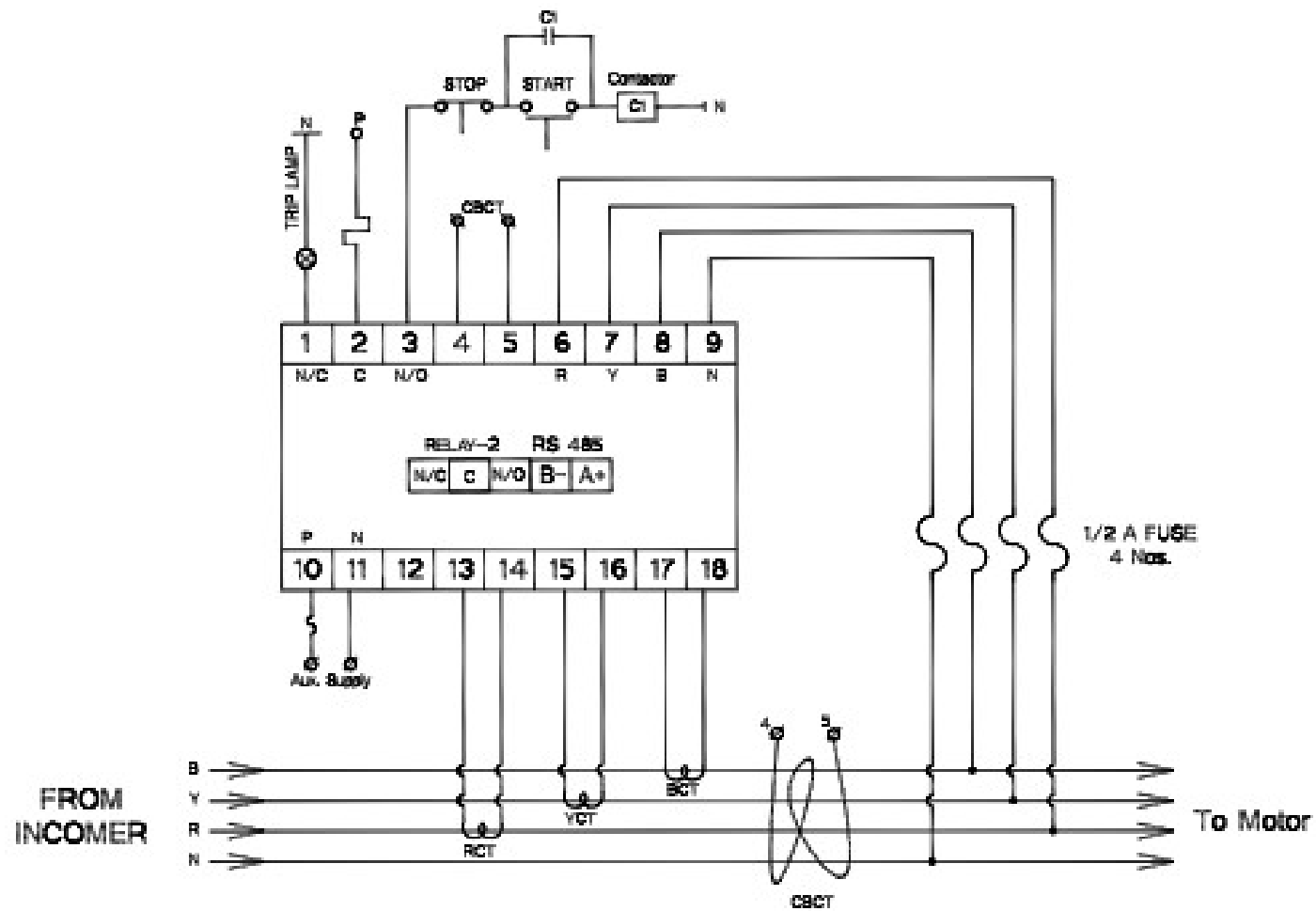
OPTIONAL:

- 4-20mA Analogue output
- External reset facility
- Password facility
- Fault history with Real time clock

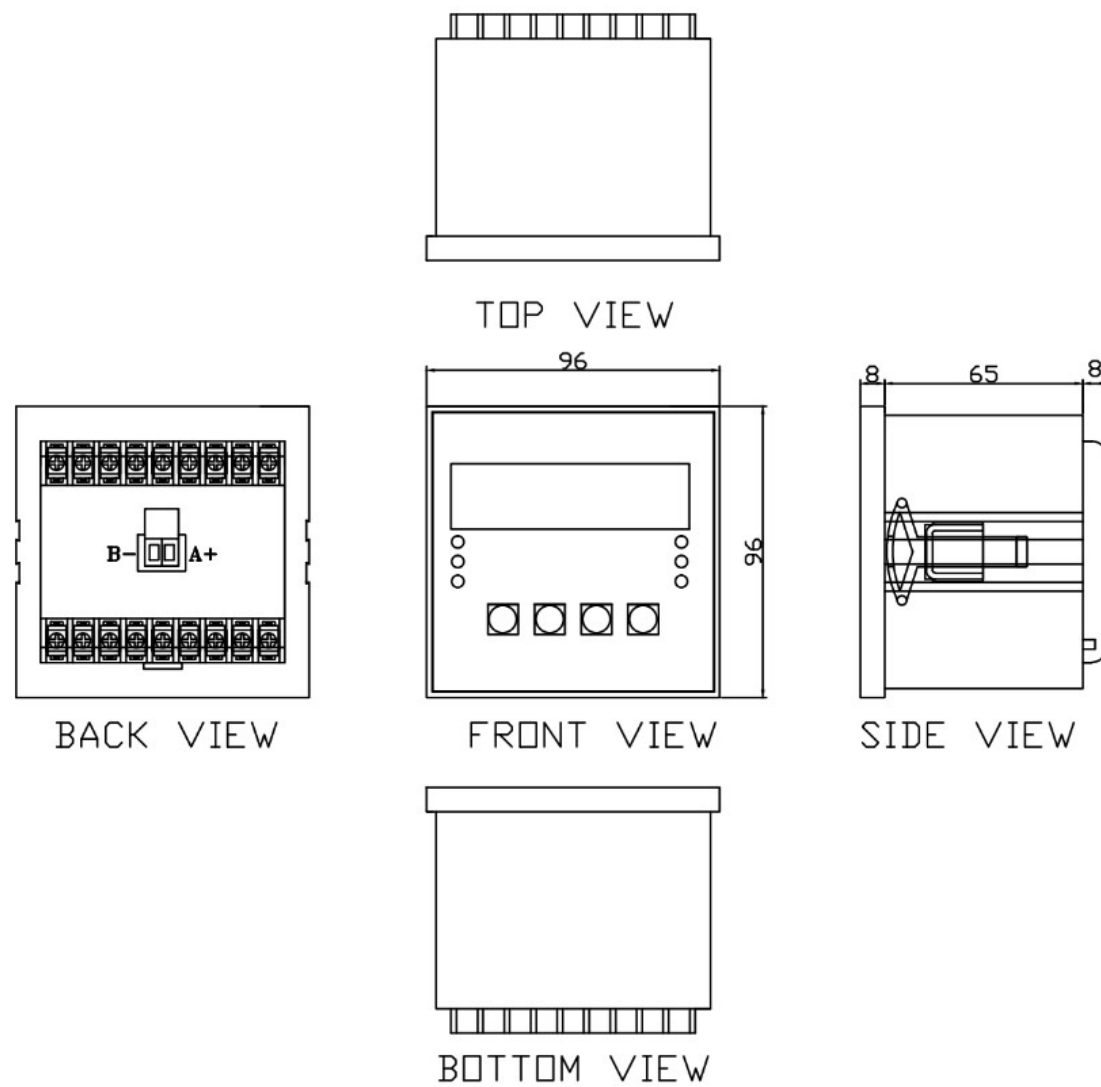
SPECIFICATIONS:

Aux. supply	230VAC (optional 110VAC / 415VAC), 50 Hz
CT	External CT supplied with the device
Rated current (As per motor FLC)	0.2 to 250A (Five CT ranges)
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
Full load current setting range	0.2 to 500A as per CT range selected
Shaft Power setting range	0.75kW to 315kW as per CT range selected
Thermal Overload setting range	0.2 to 500A, as per CT range selected
Thermal Overload curve selection	2.5C, 5C, 10C,15C,20C & 30C (six curves)
Thermal Overload Operating time	As per thermal curve selected
Under current feature	Enable/Disable
Under current setting range	10% to 80% FLC
Under current operating time	1 to 60 sec
Locked Rotor setting range	Current 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 or disable
(When enable; earth fault function will not operate during motor starting for 10 seconds)	
Earth fault setting range	10% to 30% FLC
Earth fault operating time	0.5 sec to 3 sec.
Short Circuit setting range	Current range selected, Pick up 8 x FLC (not provided in 80-500A)
Short Circuit operating time	Instantaneous (not provided in 80-500A)
Single phasing setting	Enable or Disable
Single phase operating time	2 sec (fixed)
Unbalance protection	Enable or Disable
Unbalance protection setting range	10% to 40%
Unbalance protection operating time	3 to 10 sec.
Pre-Overload Alarm point	As per current range selected
Pre-Overload Alarm time	1 to 60 sec.
Thermal reset Enable/ Disable	Enable or Disable
Thermal Reset Inhibit delay	1 to 999 sec.
Low voltage setting Range	100 to 500V
Low voltage operating time	1 to 60 sec
High Voltage Enable/ Disable	Enable or Disable
High voltage setting range	100 to 500V
High voltage operating time	1 to 5 sec
Efficiency	40% to 100%
Shaft Overload Enable/ Disable	Enable
Shaft Overload load setting range	50% to 200% of kW Selected
Shaft Overload Operating time	1 to 120 sec
Shaft Under load setting range	1 to 100% of kW selected
Shaft Under load operating time	1 to 120 sec
Rated Voltage setting range	380V to 700V AC
Rated Speed (RPM)	500 to 3000 RPM
Number of poles	2 to 8
Data Output	RS 485 MODBUS – RTU Protocol , Word length – 8
RS485 Baud Rate and Parity	9.6n,9.6e,9.6o(9600bps,none/even/odd) 19.2n,19.2e,19.2o(19200bps,none/even/odd)
Ambient service temperature	0 deg. C to + 55 deg. C
Degree of protection (enclosure panel mounted)	IP 54 (Front side of the Device)

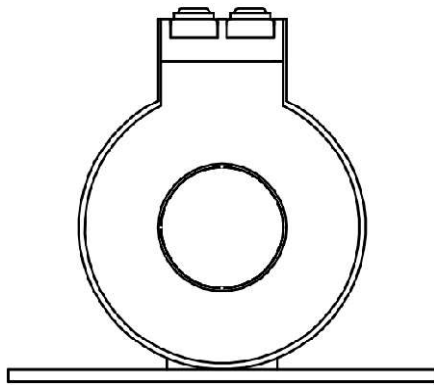
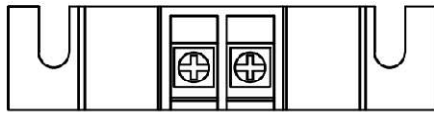
WIRING DIAGRAM



DIMENSION

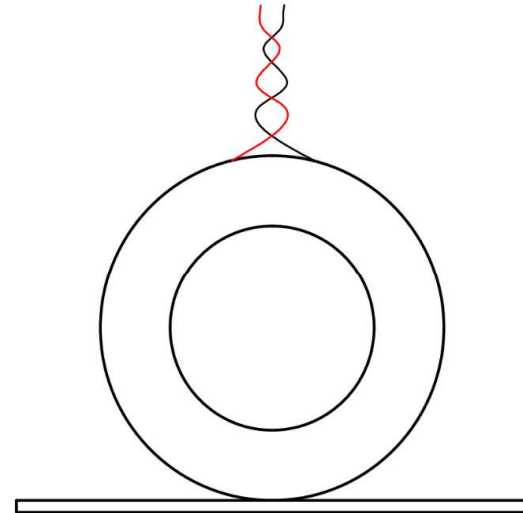
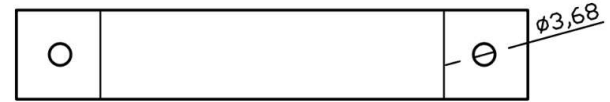


CT DIMENSION



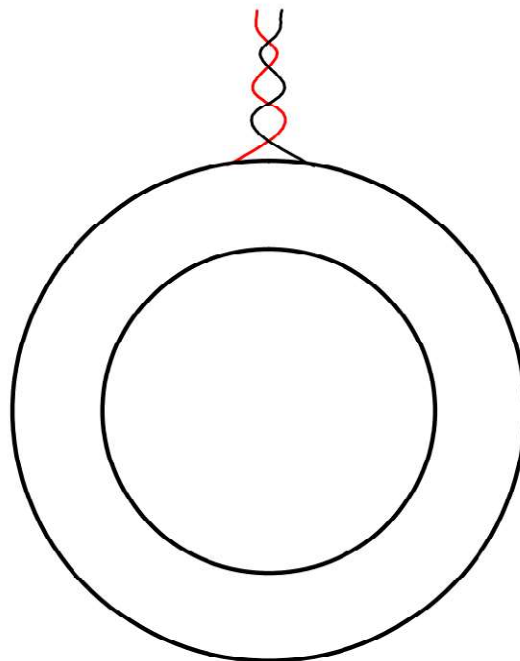
20mm LINE CT
INNER DIA.-20mm
OUTER DIA.-47mm

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



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

For 4 TO 125A



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

For 40 TO 250A