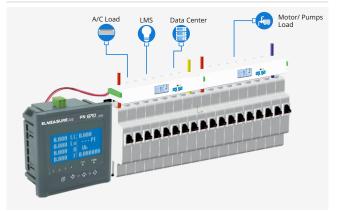


#### Features of PN 8700M

- High / Low recording VLL, VLN, A, Hz, W, VA, PF, VAR value storage with time stamp
- Accuracy Class 1, 0.5s optional
- Voltage measurement up to 600 VLL
- Display Basic, Power, Energy, Demand for both Import and Export parameters
- Simultaneous sampling of Voltage and Current,
- Programmable PT & CT ratio
- User programmable Password Protection
- Measures THD and Individual harmonics up to 63rd order with a sampling rate of 512 samples / cycle
- Captures and measures power quality events: K factor, Crest factor, Sag / Swell, Interruption and Unbalance in accordance with EN 50160
- Representation of waveforms for instantaneous V, I, Sag / Swell, Voltage and current harmonics histogram for PN 8700
- Records events such as Sag / Swell for voltage with the time stamp in 1s duration
- CO2 emission, ON Hrs, Power Interruptions
- Max demand 4 high / 4 low, 12am snapshot, 31st day snapshot
- Demand update every second to forecast VA, W & VAR accurately
- Programmable starting current in % of 5A secondary. Default 10mA
- Programmable Auto scrolling time 1 sec. to 10 sec. (Default 5 sec.)
- Programmable Energy format Counter based or Resolution based
- Phase wise Voltage Sag & Swell Wave Forms
- LCD 8 parameter display at a time, 8 Digits energy
- Power save mode with Enable/Disable option
- Byte order option Field Programmable Float / Little Endian / Big Endian data format
- High / Low recording VLL, VLN, A, Hz, W, VA, PF, VAR value storage with time stamp
- Energy resetting at 99999999 kVAh x MF.
- OLD register to store previously cleared Energy & Load hours

### Schematic Diagram



#### **EL-TAG**

# EL-TAG BRANCH CIRCUIT MONITOR

Multifunction Meter | Demand Monitor | Import Export | Harmonics | Power Quality

HIGH-END BRANCH CIRCUIT MONITOR FOR COMPREHENSIVE ENERGY MANAGEMENT!

#### **Features of EL-Tag**

- True RMS measurements
- Simultaneous sampling of Volts & Amps
- User programmable password protection
- Supports both with Display and without display (ET5730 and ET5030)
- Multi-channel data collection
- Accuracy class 1.0
- Compact 193x39x27mm (LxWxH) dimension
- Direct measurement up to 63A Pass through
- Attachable to any MCB (for same Brand MCB)
- Stand alone with Din rail Mounting and RS 485
- Neutral current Measurements and configurable phase selection through RS485
- Auto learning of Phases or Neutral. (CT polarity to be maintained).
- Measures VLL, VLN, A, W, VA, PF and Wh
- Displays Basic, Power and Energy parameters optional
- THD voltage & current measurement for all channels
- 3 Phase, 3 channels or Single phase 9 channels
- Pluggable up to 12 making 3 phase 36 channels or single phase 108 channels
- Space saving of one MCB width, 1/4th MCB length per channel
- Space saving compact design for easy installation into existing panel boards
- Installation of 10 sec per channels
- Energy resetting @ 99999999 kVAh x MF.
- Dual source sensing (ET 5720)

#### **Applications:**

- For remote reading and control, the Eltag is supported by ELNet Software, designed for remote setup and data viewing and analysis
- Building Management System: With the open modbus protocol, the Eltag can interface any system, such as building management, HMI etc
- Compact : Ideal for Data Center
- Ideal for apartments / commercial complexes billing and load pattern study on individual phase
- Individual phase kWh measurement provides user flexibility of measuring 3 phase 3 channels or single phase 9 channels
- Primary current can be independently configured making it ideal for any kind of industry or upgradation

**Note:** Additional error of 0.1% of full scale, for meter input current below 500mA for 5A setting

#### **Benefits**

- Reduce Your Panel size by 50%
- Save upto 30% cost
- Retrofit made simple
- Installation by 1/10th of conventional method
- Self/Auto configuration by single click for all 108 device
- Built in Data storage for one month

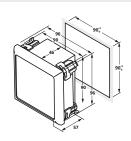


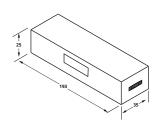
| Product Selection:                           | PN 8700M      | ET 5030               | ET 5730      | ET 5720               |
|--|---------------|-----------------------|--------------|-----------------------|
| ACCUPACY OPTION                              | Graphical LCD | No Display            | With Display | DS With Display       |
| ACCURACY OPTION                              |               |                       |              |                       |
| CLASS 1.0                                    |               |                       |              |                       |
| Class 0.5S / Class0.2S  BASIC PARAMETERS     |               |                       |              |                       |
|  |               | <b>—</b>              | <b>—</b>     | <b>-</b>              |
| V12, V23, V31                                | - <del></del> | *<br>■*               | *            | *                     |
| V, V1, V2, V3                                | _ <del></del> | <del>*</del>          |              |                       |
| A, A1 ,A2, A3                                | _ <del></del> | *                     | <del>_</del> |                       |
| Hz   |               |                       |              | <del>_</del>          |
| Angle V & A, RPM                             |               |                       |              |                       |
| Unbalance V & A  POWER PARAMETERS            |               |                       |              |                       |
|  | •             | *                     | •            | •                     |
| W, W1, W2, W3<br>VA, VA1,VA2,VA3             | <del>_</del>  | *                     | *            | <del>_</del>          |
| PF, PF1,PF2,PF3                              | - <del></del> | *                     |              |                       |
| VAR, VAR1,VAR2,VAR3                          | - <del></del> |                       |              |                       |
| POWER QUALITY PARAMETERS                     |               |                       |              |                       |
| THD - Voltage and Current upto               | ■ 63rd        | ■ * 15th              | ■ 15th       | ■ 15th                |
| Individual Harmonics upto 63rd               |               | * 1501                | = 1501       | = 1501                |
| K Factor, Crest Factor                       | - <del></del> |                       |              |                       |
| High Low - Instantaneous                     |               |                       |              |                       |
| High Low - Last Minute                       | *             |                       |              |                       |
| Voltage Sag, Swell & Interruptions           |               |                       |              |                       |
| Power cycles                                 |               |                       |              |                       |
| TEHD and TOHD                                | <del>_</del>  |                       |              |                       |
| Power THD and TDD                            |               |                       |              |                       |
| INTEGRATED PARAMETERS                        |               |                       |              |                       |
| Wh   |               | *                     |              |                       |
| Vah  |               | *                     | *            | <b>■</b> *            |
| VARh -Ind                                    |               |                       |              |                       |
| VARh-Cap                                     |               |                       |              |                       |
| Load Hours                                   |               | *                     | <b>*</b>     | <b>*</b>              |
| Phase Energy and Load hours                  | <b>*</b>      | *                     | *            | <b>*</b>              |
| RD(IE)                                       |               |                       |              |                       |
| Wh- Total and Net                            |               |                       |              |                       |
| VAh- Total and Net                           |               |                       |              |                       |
| VARh - Total and Net                         |               |                       |              |                       |
| ON hours                                     | •             |                       |              |                       |
| CO2 Emission                                 |               |                       |              |                       |
| Bar graph ( % Load)                          |               |                       |              |                       |
| Volt squared hours                           |               |                       |              |                       |
| Amp squared hours                            |               |                       |              |                       |
| TOD PARAMETERS                               |               |                       |              |                       |
| TOD Demand - Import                          |               |                       |              |                       |
| TOD Energy - Import and Export               |               |                       |              |                       |
| DEMAND PARAMETERS                            |               |                       |              |                       |
| Rising Demand (Sliding/Block - Programmable) |               |                       |              |                       |
| Forecast demand                              |               |                       |              |                       |
| Maximum demand                               |               |                       |              |                       |
| Demand Profile 4High & 4 Low                 | □ *           |                       |              |                       |
| ADDITIONAL FEATURES                          |               |                       |              |                       |
| 12am & 31st day snap shot                    | <b>■</b> *    |                       |              |                       |
| Data Logger - 1MB                            | □ *           |                       |              |                       |
| Load Efficiency                              | <b>*</b>      |                       |              |                       |
| Energy Trends                                | *             |                       |              |                       |
| Dynamic communication                        | *             |                       |              |                       |
| Dual Source                                  |               |                       |              | *                     |
| COMMUNICATION                                |               |                       |              |                       |
| RS485 (MODBUS)                               |               |                       |              |                       |
|  |               |                       |              |                       |
|  |               | <b>*</b>              |              |                       |
| Makes  |               |                       |              |                       |
| Note:  | Default       | Default -             | Optional     | Optional -            |
|  |               | in communication only | •            | in communication only |

## **Technical Specification:**

| Deploy pope  |                              | PN8700M  | EL-Tag  |
|--|------------------------------|--|---|
| Integrated 10g  15   | GENERAL CHARACTERISTICS      |  |   |
| Integrated Digits  |                              | LCD 4 row, 7/8 Parameter   |   |
| ### Park  | Ü                            | 4  | C / no display                                  |
| Rated voltage  |                              |  |   |
| Name of Current   10mA - 6   | Sensing / Measurement        |  |   |
| Frequency  |                              |  |   |
| Park   Name   Space  |                              |  | 10mA-6A, 50mA – 32A, 100mA – 63.                |
| Sampling rate   \$12 samples / cycle   \$4 samples |                              |  | 2 1 2 1 2 1                                     |
| Class 1 as per IEC 62053-21 / Class 0.5 / Class 1 : IEC 62053-22 (Optional).   Class 0.5 : IEC   |                              |  | •   |
| Class 0.25 as per IEC 6.2053-22 (Optional).   Class 0.5: IEC 6.2053-22 (Optional).   IEC 6.2053-22  |                              |  |   |
| Permissible overload   120% Burden: 0.2VA per phase   No fuse  |                              | Class 0.25 as per IEC 62053-22 (Optional).                                     | Class 0.5: IEC 62053-22 (Optional).             |
| External Fuse Rating         200mA         No fuse           CT FT Ratio Max         2000MVA Programmable         Self Powered           Auxillary supply         80-300V AC / DC         Self Powered           About update rate         1 Sec.           COMMUNICATION         1 to 247 & Odd, Even, None (Preferred Even)           Perfoctocal & Interface         Modbus, RTU, RS 485, TCPIP (Optional Wift)         RS 485 for stand alone           Baud rate         9600 bps to 38400 bps (Preferred 9600 bps)         Self Very Review of Preferred 9600 bps           Solation         2000 volts Ac isolation for 1 minute between communication & other circuits         Self Self or stand alone           ENVIRONMENTAL CHARACTERISTICS         Self Powered         Self Self or stand alone           Solation         -10°C to +55°C (14°F - 131°F)         Self Self Self Self Self Self Self Self   |                              |  | Max. per phase                                  |
| CT PT Ratio Max  |                              | ·  |   |
| Auxiliary supply 80-300V AC / DC Self Powered Power consumption 4VA nominal Jacus update rate 1 Sec.  COMMUNICATION  Device ID & Parity 1 to 247 & Odd, Even, None (Preferred Even) Portocol & Interface Modbus, RTU, RS 485, TCPIP (Optional Wifi) RS 485 for stand alone Baud rate 9600 bps to 38400 bps (Preferred 9600 bps)  Isolation 2000 volts AC isolation for 1 minute between communication & other circuits  ENVIRONMENTAL CHARACTERISTICS Operating temperature 10°C to +55°C (14°F - 131°F)  Storage temperature 25°C to +70°C (-13°F - 158°F) Humidity 5% to 95% non-condensing Measurement Category CAT III  PROTECTION CLASS Ingress protection IP 51 (IP 54 front facia optional) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  RF Fields Electromagnetic RF 61000-4-8 Immunity to Belectromagnetic IEC 61000-4-8 Immunity to Wagnetic Fields IEC 61000-4-8 Immunity to Vagnetic Fields IEC 61000-4-8 Immunity to vortage dips and interruptions IEC 61000-4-8 Immunity to vortage dips and interruptions IEC 61000-4-8 Immunity to vortage dips and interruptions IEC 61000-4-8 Immunity to Vagnetic Fields IEC 61000-4-   |                              |  | No fuse   |
| Power consumption  |                              |  |   |
| Data update rate   | 2 112                        |  | Self Powered                                    |
| COMMUNICATION  Device ID & Parity 1 to 247 & Odd, Even, None (Preferred Even)  Protocol & Interface Modbus, RTU, RS 485, TCPIP (Optional Wiff) RS 485 for stand alone  Baud rate 9600 bps to 38400 bps (Preferred 9600 bps)  Isolation 2000 volts AC isolation for 1 minute between communication & other circuits  ENVIRONMENTAL CHARACTERISTICS  Operating temperature -10° (to + 55° (14°F - 131°F)  Storage temperature -25° (to + 70° (-13°F - 158°F)  Humidity 5% to 95% non-condensing  Altitude Below 2000mts  Measurement Category CAT III  Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS  Ingress protection IP 51 (IP 54 front facia optional ) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic IEC 61000-4-8  Immunity to Magnetic Fields IEC 61000-4-8  Immunity to Voltage dips and interruptions  Fast transient IEC 61000-4-5  Conducted and Radiated CISPR- 22  Emmunity surge waves CORPA-1EC 61000-4-5  Conducted and Radiated CISPR- 22  EMMECHANICAL CHARACTERISTICS  MECHANICAL CHARACTERISTICS  Wire gauge 11 AWG (For 5A) 26-10AWG (4.0mm2) - Voltage an Communication in Co   | •                            |  |   |
| Device ID & Parrity  | Data update rate             | 1 Sec.   |   |
| Protocol & Interface Modbus. RTU, RS 485, TCPIP (Optional Wiff) RS 485 for stand alone Baud rate 9600 bps to 38400 bps (Preferred 9600 bps) Isolation 2000 volts AC isolation for 1 minute between communication & other circuits  ENVIRONMENTAL CHARACTERISTICS Operating temperature -10°C to + 55°C (14°F - 131°F) Storage temperature -25°C to +70°C (13°F - 158°F) Humidity 5% to 95% non-condensing Altitude Below 2000mts Measurement Category CAT III Pollution degree 2 (AS per IEC 61010) PROTECTION CLASS Ingress protection IP 51 (IP 54 front facia optional) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY Electrostatic discharge IEC 61000-4-2 Immunity to Electromagnetic RF Fields EC 61000-4-3 RF Fields EC 61000-4-8 Immunity to Magnetic Fields IEC 61000-4-8 Immunity to Nagnetic Fields IEC 61000-4-11 Interruptions Fast transient IEC 61000-4-1 Interruptions East transient IEC 61000-4-1 Interruptions EC 61000-4-1 In   | COMMUNICATION                |  |   |
| Baud rate 9600 bps to 38400 bps (Preferred 9600 bps)  Isolation 2000 volts AC isolation for 1 minute between communication & other circuits  ENVIRONMENTAL CHARACTERISTICS  Operating temperature -10°C to +55°C (14°F - 131°F)  Storage temperature -25°C to +70°C (-13°F - 158°P)  Humidity 5% to 95% non-condensing  Altitude Below 2000mts  Measurement Category CAT III  Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS  Ingress protection IP 51 (IP 54 front facia optional) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic RF Fields  Conducted Immunity   IEC 61000-4-6  Immunity to Magnetic Fields   IEC 61000-4-8  Immunity to voltage dips and iEC 61000-4-1  Interruptions  Fast transient IEC 61000-4-1  Immunity to surge waves   IEC 61000-4-5  Conducted and Radiated   IEC 61000-4-5  Conducted and Radiated   IEC 61000-4-5  Construction   IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL, Protection class II.  Standards   U 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight   Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)   200 gms  Torque   1 N-m (For 5A)   20 cmm/s communication  | Device ID & Parity           | 1 to 247 & Odd, Even, None (Preferred Even)                                    |   |
| Isolation 2000 volts AC isolation for 1 minute between communication & other circuits  ENVIRONMENTAL CHARACTERISTICS Operating temperature -10°C to + 55°C (14°F - 131°F) Storage temperature -25°C to +70°C (-13°F - 158°F) Humidity 5% to 95% non-condensing Altitude Below 2000mts Measurement Category CAT III Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS Ingress protection IP 51 (IP 54 front facia optional ) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY Electrostatic discharge IEC 61000-4-2 IEC 61000-4-3 IRF Fields Conducted Immunity to Electromagnetic RF Fields Immunity to voltage dips and IEC 61000-4-8 Immunity to woltage dips and IEC 61000-4-8 Immunity to voltage dips and IEC 61000-4-1 Interruptions Fast transient IEC 61000-4-5 Conducted and Radiated emissions UEC 61000-4-5 Conducted and Radiated IEC 61000-4-5 Conducted and Radiated IEC 61000-4-5 Conducted and Radiated UEC 61000-4-5 Condu   | Protocol & Interface         | Modbus. RTU, RS 485, TCPIP (Optional Wifi)                                     | RS 485 for stand alone                          |
| ENVIRONMENTAL CHARACTERISTICS  Operating temperature -10°C to +55°C (14°F - 131°F)  Storage temperature -25°C to +70°C (-13°F - 158°F) Humidity 5% to 95% non-condensing Altitude Below 2000mts  Measurement Category CAT III Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS  Ingress protection IP 51 (IP 54 front facia optional ) & Double insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY Electrostatic discharge IEC 61000-4-2 Immunity to Electromagnetic RF Fields Conducted Immunity IEC 61000-4-6 Immunity to woltage dips and IEC 61000-4-8 Immunity to voltage dips and IEC 61000-4-1 Immunity to surge waves IEC 61000-4-5 Conducted and Radiated Electrostatic discharge IEC 61000-4-5 Conducted and Radiated CISPR- 22  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  WECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms Torque 11 AWG (For 5A) 26 - 103WG (4.0mm2) - Voltage an communication   | Baud rate                    | 9600 bps to 38400 bps (Preferred 9600 bps)                                     |   |
| Operating temperature  | Isolation                    | 2000 volts AC isolation for 1 minute between communication & other circuits    |   |
| Storage temperature -25°C to +70°C (-13°F - 158°F) Humidity 5% to 95% non-condensing Altitude Below 2000mts  Measurement Category CAT III Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS Ingress protection IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2 IEC 61000-4-3 RF Fields Conducted Immunity to Electromagnetic RF Fields IEC 61000-4-6 Immunity to Magnetic Fields IEC 61000-4-8 IImmunity to Voltage dips and iEC 61000-4-11 Interruptions Fast transient IEC 61000-4-5 Conducted and Radiated Elec 61000-4-5 Conducted and Radiated CISPR- 22  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II. Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (it may vary based on optional features) 200 gms Torque 1 N-m (For 5A)  Wire gauge 11 AWG (For 5A)  Communication 10 Communication 11 AWG (For 5A)  | ENVIRONMENTAL CHARACT        | ERISTICS   |   |
| Humidity 5% to 95% non-condensing Altitude Below 2000mts  Measurement Category CAT III Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS Ingress protection IP 51 (1P 54 front facia optional ) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic IEC 61000-4-3  RF Fields  Conducted Immunity IEC 61000-4-6  Immunity to Magnetic Fields IEC 61000-4-8  Immunity to voltage dips and interruptions Fast transient IEC 61000-4-5  Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards Un packed 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For SA) 200 communication of Communicat   | Operating temperature        | -10°C to + 55°C (14°F - 131°F)   |   |
| Humidity 5% to 95% non-condensing Altitude Below 2000mts  Measurement Category CAT III Pollution degree 2 (As per IEC 61010)  PROTECTION CLASS Ingress protection IP 51 (1P 54 front facia optional ) & Double Insulation (As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic IEC 61000-4-3  RF Fields  Conducted Immunity IEC 61000-4-6  Immunity to Magnetic Fields IEC 61000-4-8  Immunity to voltage dips and interruptions Fast transient IEC 61000-4-5  Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards Un packed 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For SA) 200 communication of Communicat   | Storage temperature          | -25°C to +70°C (-13°F - 158°F)   |   |
| Altitude   |                              |  |   |
| PROTECTION CLASS         IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1)           ELECTROMAGNETIC COMPATIBILITY           ELECTROMAGNETIC COMPATIBILITY           Electrostatic discharge         IEC 61000-4-2           Immunity to Electromagnetic RF Fields         IEC 61000-4-3           RF Fields         IEC 61000-4-6           Immunity to Magnetic Fields         IEC 61000-4-8           Immunity to voltage dips and interruptions         IEC 61000-4-11           Fast transient         IEC 61000-4-4           Immunity to surge waves         IEC 61000-4-5           Conducted and Radiated emissions         IEC 61000-4-5           COnstruction         IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.           SAFETY AND STANDARDS           Construction         IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.           MECHANICAL CHARACTERISTICS           Weight         Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)         200 gms           Torque         1 N-m (For 5A)         24 - 10 AWG (4.0 mm2) - Voltage an Communication   | •                            | Below 2000mts  |   |
| PROTECTION CLASS   IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1)  | Measurement Category         | CAT III  |   |
| Ingress protection IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1)  ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic RF Fields  Conducted Immunity IR Electromagnetic RIC 61000-4-3  RF Fields  Conducted Immunity to Magnetic Fields IEC 61000-4-6  Immunity to voltage dips and interruptions Fast transient IEC 61000-4-11  IEC 61000-4-1  IEC 61000-4-5  Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 1 1 AWG (For 5A) 26 - 10AWG (4.0mm2) - Voltage an Communication 1 Communic   |                              | 2 (As per IEC 61010)   |   |
| ELECTROMAGNETIC COMPATIBILITY  Electrostatic discharge IEC 61000-4-2  Immunity to Electromagnetic RF Fields IEC 61000-4-3  RF Fields Immunity IEC 61000-4-6  Immunity to Magnetic Fields IEC 61000-4-8  Immunity to voltage dips and interruptions Fast transient IEC 61000-4-11  Immunity to surge waves IEC 61000-4-5  Conducted and Radiated Electromagnetic IEC 61000-4-5  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 26 - 10AWG (4.0mm2) - Voltage an Communication   | PROTECTION CLASS             |  |   |
| Electrostatic discharge   EC 61000-4-2   | Ingress protection           | IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1) |   |
| Electrostatic discharge   IEC 61000-4-2   Immunity to Electromagnetic RF Fields   IEC 61000-4-3   RF fields   IEC 61000-4-6   Immunity to Magnetic Fields   IEC 61000-4-6   Immunity to voltage dips and interruptions   IEC 61000-4-11   Immunity to surge waves   IEC 61000-4-5   Immunity to surge waves   IEC 61000-4-5   Immunity to surge waves   IEC 61000-4-5   Conducted and Radiated emissions   SAFETY AND STANDARDS   Construction   IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II. Standards   UL 61010-1, IEC/EN 62052-11   MECHANICAL CHARACTERISTICS   Weight   Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)   200 gms   O.4 N-m   Wire gauge   11 AWG (For 5A)   26 - 10AWG (4.0mm2) – Voltage an Communication   | FI FCTROMAGNETIC COMPA       | TIBILITY   |   |
| Immunity to Electromagnetic RF Fields  Conducted Immunity  IEC 61000-4-6  Immunity to Magnetic Fields  IEC 61000-4-8  Immunity to voltage dips and interruptions  Fast transient  IEC 61000-4-11  Immunity to surge waves  IEC 61000-4-5  Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction  IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight  Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)  UNE gauge  11 AWG (For 5A)  11 AWG (For 5A)  IEC 61000-4-8  IEC 61000-4-8  IEC 61000-4-10  IEC 61000-4-   |                              |  |   |
| Conducted Immunity IEC 61000-4-6 IEC 61000-4-8 IEC 61000-4-8 IEC 61000-4-11 IEC 61000-4-11 IEC 61000-4-11 IEC 61000-4-5 IEC 6100   | Immunity to Electromagnetic  |  |   |
| Immunity to Magnetic Fields Immunity to voltage dips and interruptions Fast transient Immunity to surge waves IEC 61000-4-4 Immunity to surge waves IEC 61000-4-5 Conducted and Radiated emissions  SAFETY AND STANDARDS Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II. Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) University of the surge of the sur   |                              | IFC 61000-4-6  |   |
| Immunity to voltage dips and interruptions Fast transient IEC 61000-4-4 Immunity to surge waves IEC 61000-4-5 Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II. Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features) Unipacked 350 gms. Packed 450 gms. (It may vary based on optional features)   |                              |  |   |
| Fast transient IEC 61000-4-4 Immunity to surge waves IEC 61000-4-5 Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) – Voltage an Communication  | Immunity to voltage dips and |  |   |
| Immunity to surge waves Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) Torque 1 N-m (For 5A)  Wire gauge 1 AWG (For 5A)  1 AWG (For 5A)  26 - 10AWG (4.0mm2) – Voltage an Communication   |                              | IFC 61000-4-4  |   |
| Conducted and Radiated emissions  SAFETY AND STANDARDS  Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) – Voltage an Communication  |                              |  |   |
| Construction   IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards   UL 61010-1, IEC/EN 62052-11    MECHANICAL CHARACTERISTICS   Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)   200 gms    Torque   1 N-m (For 5A)   0.4 N-m    Wire gauge   11 AWG (For 5A)   26 - 10AWG (4.0mm2) - Voltage an Communication  | Conducted and Radiated       |  |   |
| Construction IEC/EN 61010-1 ed.3, CAT III, 300 V LN / 600 V LL , Protection class II.  Standards UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) - Voltage an Communication  |                              |  |   |
| Standards  UL 61010-1, IEC/EN 62052-11  MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) - Voltage an Communication  |                              | IEC/EN 61010-1 and 3 CAT III 200 V I N / 600 V I   Protection class III        |   |
| MECHANICAL CHARACTERISTICS  Weight Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features) 200 gms  Torque 1 N-m (For 5A) 0.4 N-m  Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) - Voltage an Communication  |                              |  |   |
| Weight     Unpacked 350 gms. Packed 450 gms. (It may vary based on optional features)     200 gms       Torque     1 N-m (For 5A)     0.4 N-m       Wire gauge     11 AWG (For 5A)     26 - 10AWG (4.0mm2) - Voltage an Communication  |                              |  |   |
| Torque 1 N-m (For 5A) 0.4 N-m Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) – Voltage an Communication  |                              |  | 200   |
| Wire gauge 11 AWG (For 5A) 26 - 10AWG (4.0mm2) – Voltage an Communication  |                              |  |   |
| Communication  | Torque                       | 1 N-m (For 5A)   | 0.4 N-m   |
|  |                              | 11 AWG (For 5A)  | 26 - 10AWG (4.0mm2) – Voltage and Communication |

# **Mechanical Specification:**





#### **Current Transformers:**

Clip on CT-5A | 50A | 100A | 250A















# BM

Accuracy:

Sensing/

Sensing/

Measurement:

Measurement:

Input Voltage:

Input Frequency:

Input Current:

Aux-Supply

CT PT Ratio Max:

Communication

RS485 interface:

# **BRANCH CIRCUIT MONITOR**

Multi Channel Load Manager | Power Distribution Unit/System

Class 1.0 (Default) as per IEC 62053-21, Class 0.5 as per IEC 62053-22 (Optional).

True RMS, 1 Sec update time; 4 Quadrant Power & Energy

Programmable up to 999 kV. Burden: 0.2VA Max. per phase.

CT output: Can be upto 1000 mV or 100 mA from Split core

Baud rate: 4800 bps to 19200 bps. (Preferred 9600 bps).

Isolation: 2000 volts AC isolation for 1 minute between

4 Voltage inputs (V1 V2 V3 VN) Programmable 110 or

415V LL Nominal (Range 80 to 550V LL) Primary

Current inputs (A1 A2 A3) - Each channel is independently configurable. Primary Programmable

CT or Hanging CTs - Manufacturing option.

80 - 300V AC / DC, 40-70Hz.

2000 MVA Programmable.

Display resolution: 1 row 6 Digit for Integrated, 4 Digits for Instantaneous

Parity: Odd, Even, None (Prefered Even)

communication and other circuits.

COMPACT DEVICE TO ENROUTE **MULTIPLE CHANNELS!** 

1:600

up to 99 kA.

Burden: 4VA Max.

**Technical Specification:** Specification Description

#### Features:

- Multi-channel data collection
- 3 Phase, 4 channels or Single phase 12 channels
- Displays Basic, Power and Energy parameters
- Optional Pluggable Ethernet (Default RS 485)
- Space saving compact design for easy installation into existing panel boards
- True RMS measurements
- Simultaneous sampling of Volts & Amps
- Accuracy class 1.0 as per IEC 62053-21, Class 0.5 as per IEC 62053-22.
- User programmable password protection
- Energy resetting @ 999999 KVAh × Transformer ratio
- Displays more than 25 parameters Basic [VLL, VLn, A (Average &
- Phasewise), F ], Power [W, PF, VA (Total & Phasewise)] and Energy [Wh, LH]

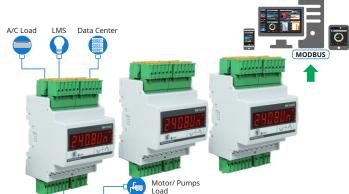
**Note:** Customization can be done for other parameters provided volume justify

#### **Applications:**

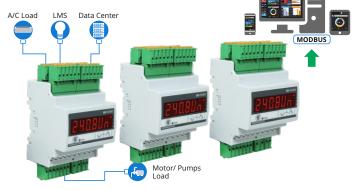
- For remote reading and control, the BM is supported by ELNet Software, designed for remote setup and data viewing and analysis
- Building Management System: With the open modbus protocol, the BM can interface any system, such as building management, HMI etc
- Compact : Ideal for Data Center
- Ideal for apartments / commercial complexes billing and load pattern study on individual phase
- Individual phase kWh measurement provides user flexibility of measuring 3 phase 3 channels or single phase 9 channels
- Primary current can be independently configured making it ideal for any kind of industry or upgradation

**Note:** Additional error of 0.1% of full scale, for meter input current below 500mA for 5A setting

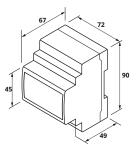
#### Unpacked: 275 gms Packed: 350 gms (weight of CT excluded) Weight:



## Schematic Diagram



# **Mechanical Specification**





#### **Current Transformers:**

