

**No Restriction on
Meter Modbus Register
address map**

TINY MASTER SERIES

SMART

- Accuracy Class 1.0 IEC 61036 / CBIP 88 (0.5, 0.2 Option)
- True RMS Measurement
- Simultaneous Sampling of Volts & Amps
- Best Parameters Grouping / Bright Displays
- Simultaneous Display of 4 Parameters
- User Programmable Password Protection
- Auto-scaling of Kilo, Mega, Giga and Decimal Point
- Neutral Current Display, RPM Measurements
- Low PT, CT Burden
- Clearance and Creepage distance meets UL 508 Safety Standard
- Finger Touch Proof Terminals for Voltage and Current Connections



INTELLIGENT

- Built-in Voltage & Current Phase Analyser Measures 4 Quadrant Power & Energy (4 Quadrant Energy for R/D Option)
- Auto Scrolling
- Communication with PCs, PLCs, DCS thru Optional RS 485/RS 232 Serial Interface
- Transducers Options RS485 / RS232 Serial Interface
- Demand Control Option - Sliding or Fixed Window
- Programmable Demand Period and Block (Forecast) Time
- Field Programmable Watts Demand (or) VA Demand (or) Amps Demand
- Field Programmable Forecast based Demand or Independent Step Demand Control
- Energy TOD (6 slots) Options
- Demand TOD (4 slots) Options

COMPACT

- 96 × 96mm Bezel
- 45mm behind bezel
- Sealed Dust-proof rugged Construction
- Quick and easy installation using self locking side locks
- Light Weight - Approx 300 gms Unpacked
- Polycarbonate Casing

Rugged & Safety Construction

- Emission : CISPR 11
- Fast Transient : 3kV Min
IEC 61000 - 4 - 4,
LEVEL 3 ESD
IEC 61000 - 4 - 2
- Impulse voltage : 6kV, IEC60060,1.2/50
- Isolation Voltage: 4kV, 50Hz, 1 Min (Enclosure to Terminals)

UNIVERSAL

- Field Programmable Star (Wye) or Delta or Single Phase Configuration
- Programmable PT, CT ratio upto 2,000 MVA
- Programmable CT Secondary
- Auxiliary supply 80-300V AC/DC
- Wider input voltage range 80 - 550VLL

TM 5410

DEMAND CONTROLLER



TM 5410 Demand Controller (Single Relay)

- Sliding Window
- Programmable Demand Period (5min to 30Min. in steps of 1 Min.)
- Programmable Forecast Time (5min to 15Min. in steps of 1 Min.)
- Single Potential free Contact (Relay Output)
- Field Programmable Watts Demand (or) VA Demand (or) Amps Demand
- View Present Demand, Forecast Demand, Maximum Demand and Additional load on single page

Two Relay

- Above features Plus
- 2nd User Defined Potential free Contact Relay Output (useful for Alarm or disconnection of non essential loads)

TM 7400 / L

DEMAND MONITOR/ CONTROLLER



TM 7400 / TM 7400L Demand Monitor

- RTC synchronisation with EB meters
- Demand Monitor Option - Sliding or Fixed Window
- Programmable Demand Period (5min to 30Min. in steps of 1 Min.)
- Programmable Forecast Time (5min to 15Min. in steps of 1 Min.)
- Field Programmable Watts Demand (or) VA Demand (or) Amps Demand
- Field Programmable Forecast Demand or Independent Step Demand Control
- View Present Demand, Forecast Demand, Maximum Demand and Additional load on single page

Demand Controller

- Above features Plus
- 4 User Defined Potential free Contact Relay Output

**4 Rows
6 Digits each
LED Version**

**8 Rows
8 Digits each
LCD Version**

TM 7400 / L

DEMAND TOD MONITOR CONTROLLER



TM 7400 / TM 7400L Demand TOD / Energy TOD Monitor

- Features of TM 7400 Demand Monitor
- User Defined Demand TOD (4 slots)
- User Defined Energy TOD (6 slots)
- View Present Demand, Forecast Demand, Maximum Demand and Additional load on single page
- Automatic switching of pages based on Maximum Demand slot

Demand TOD / Energy TOD Controller

- Above features Plus
- 4 User Defined Potential free Contact Relay Output

BASIC PACK**TM 1400**

- Displays more than 20 Basic parameters
- **Simultaneous display of Average VLL, VLN, Amps, Hz or Average and Phasewise parameters in a single page**
- VLL, VLN, Current Average and Phasewise
- Voltage and Current Phase Angles
- Neutral Current Display
- Generator RPM Display

Programmable
Relay output (option up to 4)
for any threshold V,A,HZ, Phase missing, Rev
Direction -Programmable tripping time

POWER PACK**TM 2400**

- Displays more than 11 Power parameters
- **Simultaneous display of Average W, VA, PF, VAR or Average and Phase wise parameters in a single page**
- Watts Total and Phasewise
- VAR Total and Phasewise
- PF Average and Phasewise
- VA Total and Phasewise
- Generator RPM Display

Programmable
Relay output (option up to 4)
for any threshold W,VA,PF, Phase missing, Rev Dir.
-Programmable tripping time

ENERGY PACK**TM 3400**

- **Simultaneous display of two Energy in a single page**
- Wh and VAh.
- VARh Inductive and Capacitive.
- 8 Digit resolution for each Energy.
- Received / Delivered (Import/Export) Energy option.
- Separate Load hours for Received, Delivered and Net.
- ' OLD ' register to store previously cleared Energy values and Load hours.

Programmable
Relay output (option up to 4)
for any threshold Wh, Phase missing, Rev Dir.
-Programmable tripping time

BASIC + POWER**TM 4400**

TM 4400 = TM 1400 + TM 2400.

- Displays more than 25 Basic and Power parameters
- **Simultaneous display of Average Basic (VLL, VLN, Amps, Hz) or Total Power (W, VA, PF, VAR) parameters or Average / Total and Phasewise of Instantaneous parameters**
- Generator RPM Display
- Quick and Easy Navigation and Programming

Programmable
Relay output (option up to 4)
for any threshold V,A,HZ,Wh, Phase missing, Rev Dir.
-Programmable tripping time

POWER+ENERGY**TM 5400**

TM 5400 = TM 2400 + TM 3400

- Displays All Power and Energy parameters
- **Simultaneous display of all Power parameters (W, VA, VAR, PF) or Total and Phasewise of Power parameter or two Energy (Wh, VAh or VARh Inductive, Capacitive)**
- Received / Delivered (Import/Export) Energy option
- Separate Load hours for Received, Delivered and Net
- ' OLD ' register to store previously cleared Energy values and Load hours

Programmable
Relay output (option up to 4)
for any threshold W,VA,PF,Wh, Phase missing, Rev Dir.
-Programmable tripping time

MASTER PACK**TM 7400 / 7400L**

TM 7400 = TM 1400 + TM 5400

- Displays more than 75 parameters
- **Simultaneous display of VLL, VLN, Amps, Hz or W, VA, VAR, PF or Wh, VAh, VARh Inductive, Capacitive in a single page**
- Analog Voltage Input (0-1V)/Current Input (0-20mA or 4-20mA), programmable to any full scale value (optional)
- Digital Outputs (4 potential free contacts-optional)
- THD Measurement Optional

Programmable Relay output (option up to 4)
for any threshold V,A,HZ,W,VA,PF,Wh, Phase missing
-Programmable tripping time

TEXTILE PACK**TM 3410**

- Specially designed for Textile Industries Applications
- **Displays Amps and PF Average and Phasewise**
- Wh and VAh in the single page and each with 8 digit Resolution
- Neutral current display
- Current phase Angle
- 'OLD' Registers to store the previously cleared Energy values
- Yarn count information programmable/communicatable

GEN PACK

TM 5410



- Displays more than 50 parameters
- Specially designed for Gen set Applications
- Displays VLL, VLN, A Average and Phase wise, Frequency
- Voltage and Current Phase Angles, W, PF Total and Phasewise
- Wh and VAh in the single page and each with 8 digit Resolution
- Freeze Display through keys. (Optional)
- 'OLD' Registers to store the previously cleared Energy values
- Generator RPM & Load hours display

Programmable Relay output (option up to 4) for any threshold V,A,H,z,W,VA,PF,Wh, Phase missing -Programmable tripping time

DUAL ENERGY

TM 3420



- Directly replaces 2nos, Energy Meters.
- Requires only potential free contact from AMF.
- Option of Accumulation in alternate registers if VLL (or) Amps (or) Frequency (or) Watts (or) VA (or) PF is more than the set (Hurdle) value.
- Relay output option based on set value.
- Individual Load hours for main and Alternate registers (Eg.: EB or Gen) for effective utilisation study.

Digital Outputs : (Up to 4 relay Outputs)	Applications
<ul style="list-style-type: none"> * 4 User Defined Potential Free Contact based on threshold setting (LG : 2 user defined relay) * Protection Relay for any of Under / Over voltage / Current/ Frequency, Phase missing, W, VA, PF, Wh * Programmable trip time 1 to 50 sec to suit different load conditions * Rating Control Relays: NO contact SPST. 250 V_{AC} / 30 V_{DC} @ 5 Amps resistive 	<ul style="list-style-type: none"> * Automatic connection or disconnection of Gensets supply to Common bus * Protection of equipment from Under/ Over Voltage or Current or Frequency * Protection of 3 phase equipment from Phase missing, Over load etc.

Digital Inputs : (Up to 4 Inputs)	Applications
<ul style="list-style-type: none"> * Accept 4 digital inputs (internal excitation) * Min. Pulse Width : 50 msec. * Min. Duration of successive pulse : 100 msec. * Input impedance : 50 kΩ 	<ul style="list-style-type: none"> * Cost effective network * Avoid PLC or Data concentrator for networking * Reduces wiring complexity by 1/4th * Can be used to monitor production flow / quantity.

Analog Input : (Up to 2 Inputs)	Applications
<ul style="list-style-type: none"> * Accept Analog Current inputs 0 to 20 mA or 4 to 20mA * Accept Analog voltage inputs 0-1V DC * Programmable for any Full scale and Offset. Accuracy: 2% 	<ul style="list-style-type: none"> * Process parameters like Temperature , Pressure, RPM etc., which has 4 -20mA or 0 -20mA output can be integrated and communicated. * Single meter solutions for Genset data like Oil level, Temperature with Electrical parameter