TERA Series

Single / Dual Source Energy Meters

Single Source Energy Meters

EN 1600 — TERA
888888
M
K
Wh/VAh
TRUE RMS
CLR SAVE
PRG OK
PGL ML
Com
www.axonelcop.com
AXON™ Electric

Dual Source Energy Meters

EN 2600DS — TERA
EB 386089   M K
DG 428302   M K
Wh/VAh
TRUE RMS
CLR SAVE
PRG ENERGY OK
PGL ML
Com
www.axonelcop.com
AXON™ Electric
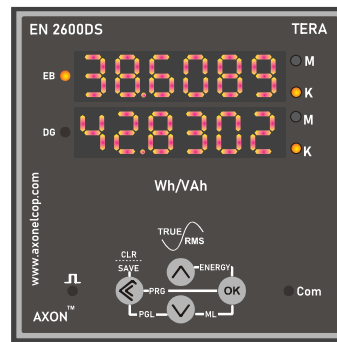
Safety information

Important information

Read these instructions carefully and look at the equipment to be come familiar with
The device before trying to install, operate, service or maintainit. Thefollowing
Special messages may appear throughout this bulletin or on the equipment to warn
Of potential hazards or to call attention to information that clarifies or simplifies a
procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that
An electrical hazard exists which will result in personal injury if the instructions are
Not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury
Hazards. Obey all safety messages that follow this symbol to avoid possible injury
Or death.

⚠ DANGER
DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION
CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE
NOTICE is used to address practices not related to physical injury.

Please note

Electrical equipment should be installed, operated, serviced and maintained only
By qualified personnel. No responsibility is assumed by Phaser Electric for any
Consequences arising out of the use of this material. A qualified person is one who
Has skills and knowledge related to the construction, installation, and operation of
Electrical equipment and has received safety training to recognize and avoid the
Hazards involved.

Safety precautions

Installation, wiring, testing and service must be performed in accordance with all Local and national electrical codes.

⚠ **DANGER**
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
• Apply appropriate personal protective equipment(PPE) and follow safe Electrical work practices. See NFPA70E in the USA, CSAZ462 or applicable Local standards.
• Turn off all power supplying this device and the equipment in which it is Installed before working on the device or equipment.
• Always use a properly rated voltage sensing device to confirm that all power Is off.
• Do not exceed the device's ratings for maximum limits.
• Never short the secondary of a potential/voltage transformer(PT/VT).
• Never open circuit a current transformer(CT).
• Always use grounded external Cts for current inputs.
• Replace all devices, doors and covers before turning on power to this equipment.
Failure to follow these instructions will result in death or serious injury.

⚠ **WARNING**
UNINTENDED OPERATION
Do not use this device for critical control or protection applications where human Or equipment safety relies on the operation of the control circuit.
Failure to follow these instructions can result in death, serious injury, or Equipment damage.

Overview

The TERA series meters are digital Energy meters that offers comprehensive 3-phase electrical instrumentation and load management facilities in a compact and rugged package.

The TERA Smart series meters offer value for the demanding needs of your energy monitoring and cost management applications. All meters in the Accu Smart series range comply with Class1,Class0.5S, or Class0.2S accuracy standards and feature high quality, reliability, and affordability in a compact and easy to install.

Features

- True RMS Measurement
- Measurement range 20mA to 6A
- Class 0.2, Class 0.5, Class 1.0 Models.
- Programmable primary / secondary for both Voltage & Current
- Input Burden 0.2VA Max/Phase
- **Universal Auxiliary input** 50-300V AC/DC
- Automatic switching of display, based on input source as **EB** or **DG** through **DG Sensing input**
- **Separate registers** for EB & DG energy
- **Positive energy** accumulation/**reverse lock** programmable
- Old register to store the previous cleared energy values
- Automatic switching to energy parameter after viewing of phase wise parameters
- Optional Alarm Relay Outputs

- Simultaneous sampling of Volts & Amps
- RPM measurement for generator
- Auto-scrolling Option
- **Auto-scaling** of decimal point
- Average & phase wise information
- Optional Alarm Relay Outputs

Feature summary

Parameter	iE8311
Accuracy Class for Wh	Class1 Class0.5S Class0.2S
Accuracy Class for VARh	2.0 1.0
Sampling rate per cycle	83

Parameter	EN 1600	EN 2600DS	LoRa	Wi-Fi
Voltage: • VL-N-per-phase and 3phase average • VL-L-per-phase and 3phase average	Avg ☒ Per-Ph ☒ Avg ☒ Per-Ph ☒	Avg ✓ Per-Ph ☒ Avg ✓ Per-Ph ☒	Avg ✓ Per-Ph Avg ✓ Per-Ph ✓	Avg ✓ Per-Ph Avg ✓ Per-Ph ✓
Current: • Per-phase and 3phase average • Calculated neutral current	Avg ☒ Per-Ph ☒	Avg ✓ Per-Ph ☒	Avg ✓ Per-Ph ✓	Avg ✓ Per-Ph ✓
Power Factor • Per phase and 3phase total (TruePF)	Tot ☒ Per-Ph ☒	Tot ☑ Per-Ph ☒	Tot ☑ Per-Ph ☑	Tot ☑ Per-Ph ☑
Frequency	☒	☒	☑	☑
Power: • Active power(kW)-Phase wise and total • Apparent power(kVA)-Phase wise and total • Reactive power(kVAR)-Phase wise and total	Tot ☒ Per-Ph ☒ Tot ☒ Per-Ph ☒ Tot ☒ Per-Ph ☒	Tot ☑ Per-Ph ☒ Tot ☑ Per-Ph ☒ Tot ☒ Per-Ph ☒	Tot ☑ Per-Ph ☑ Tot ☑ Per-Ph ☒ Tot ☑ Per-Ph ☒	Tot ☑ Per-Ph ☑ Tot ☑ Per-Ph ☒ Tot ☑ Per-Ph ☒
3Phase unbalance	Current ☒ Voltage ☒	Current ☒ Voltage ☒	Current ☒ Voltage ☒	Current ☒ Voltage ☒
Demand parameters(kW,kVA,kVAR,I) • Last demand • Present demand • Predictive demand • Peakdemand:Timestamp for peakdemand	☒ ☒ ☒ ☒	☒ ☒ ☒ ☒	☒ ☒ ☒ ☒	☒ ☒ ☒ ☒
Energy:kWh,kVAh(4Quadrant) • Delivered(Import/Forward) • Received(Export/Reverse) • Last Cleared(Old)	EB Delivered ☑ DG Delivered ☒ Old-EB ☑ Old-DG ☒ Received ☒	Delivered ☑ Received ☑ Old ☑	Delivered ☑ Received ☑ Old ☒	Delivered ☑ Received ☒ Old ☒
Meter On hours Load Run hours Power Interruptions	☑ ☑ ☑	☑ ☑ ☑	☒ ☑ ☒	☒ ☑ ☒
THD: • VoltageL-N • VoltageL-L • Current per phase	☒ ☒ ☒	☒ ☒ ☒	☒ ☒ ☒	☒ ☒ ☒
IndividualHarmonics	☒	☒	☒	☒
Min/Max with time stamp • VL-L average • VL-N average • Current average • Frequency • Active power,Total • Apparent power,Total • Reactive power,Total • Power factor,Total	☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒	☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒	☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒	☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒
RTC	☒	☒	☒	☒

The meter stores all accumulated active, reactive and apparent energy parameters
In non-volatile memory:

• KWh, kVARh, kVAh(delivered)

• KWh, kVARh, kVAh(received)

• KWh, kVARh, kVAh(delivered+received)

• KWh, kVARh, kVAh(delivered-received)

Panelmeter

The back of your meter supports various power system connections.
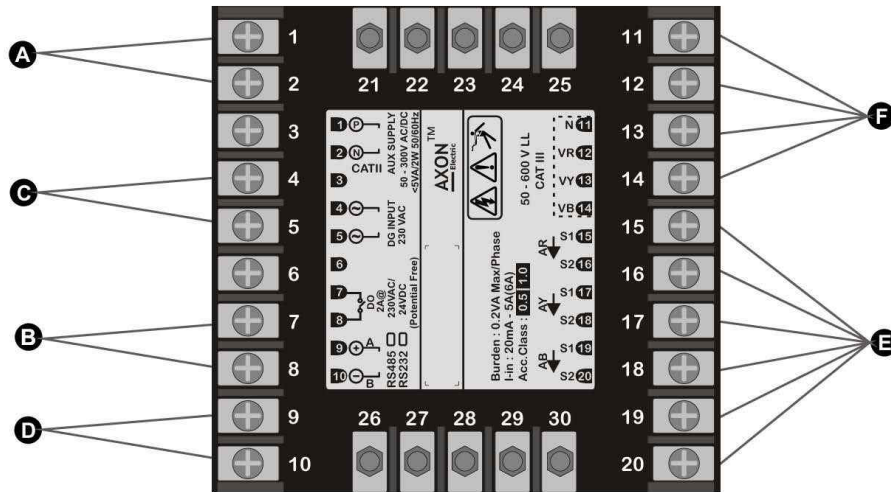
|		
A	Auxiliary power supply(control power)terminals(P+,N-)	
B	Digital Output(Potential Free Relay 'NO' Contact)	
C	Digital Isolated Input(+, -)	
D	RS-485communications(A+,B-)	
E	Input current terminals[A1(S1,S2),A2(S1,S2),A3(S1,S2)]	
F	Input voltage terminals(V1,V2,V3,VN)	

3P4W- STAR- DUAL SOURCE CONNECTIONS
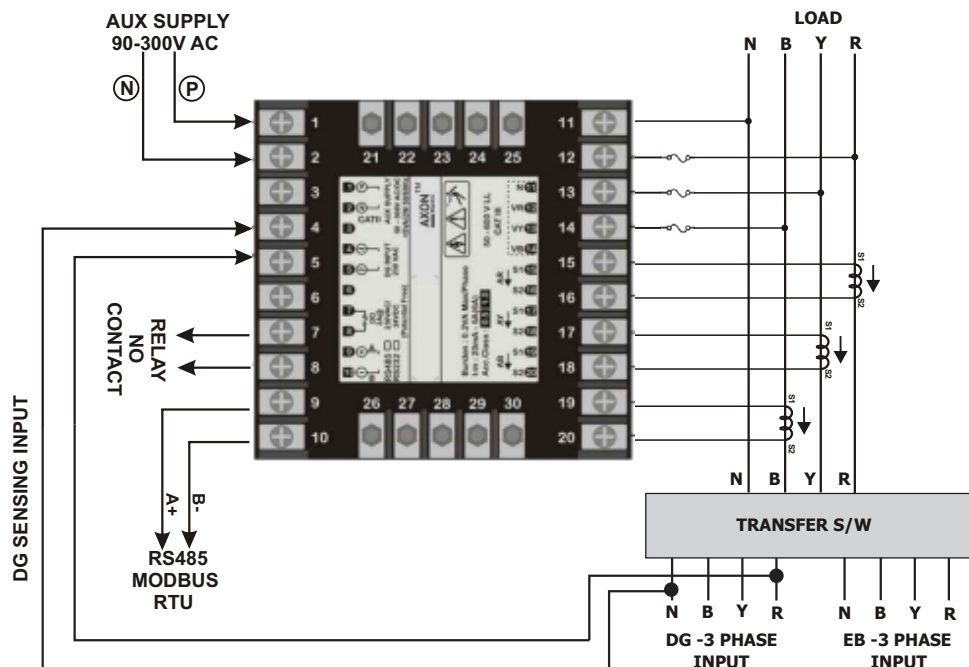
3P4W- STAR- SINGLE SOURCE CONNECTIONS
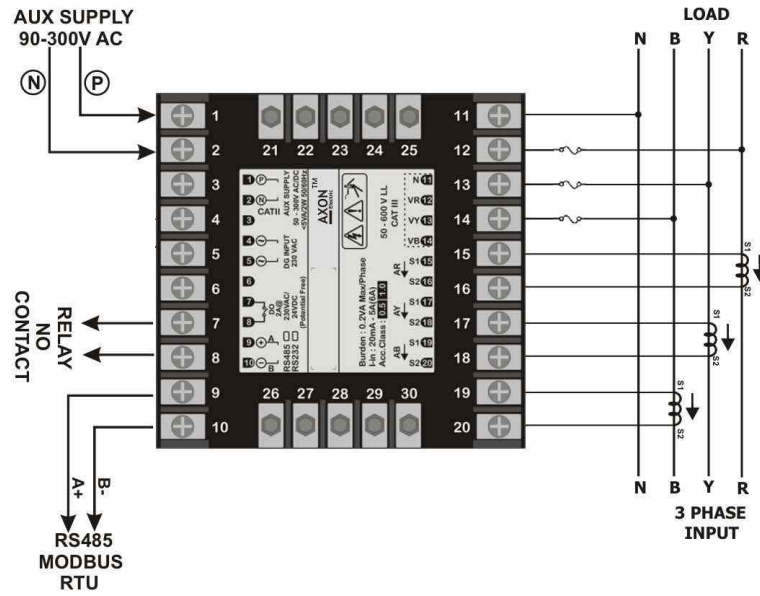
Powersystem description	Meter Setting Display	Symbol	Direct connect maximum(UL/IEC)	
			Installation categoryIII	Installation categoryII
Single-phase Line to Neutral	1P.Ln		≤277VL-N	≤347VL-N
Single-phase Line to Line	1P.LL		480VL-L	600VL-L
3-phase3-wire Delta Connection	StAr		480VL-L	600VL-L
3-phase4-wire Star Connection	dELtA		≤277VL-N/480 VL-L	≤347VL-N/600 VL-L

Displayoverview
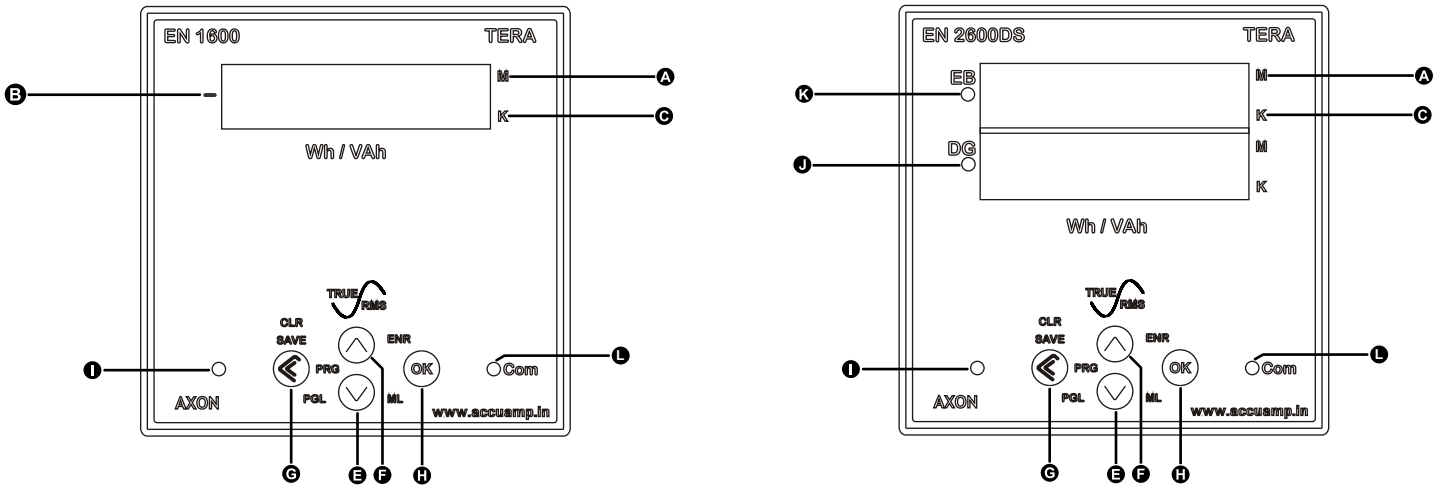
A	Mega Indicator	
B	Negative indicator	
C	Kilo Indicator	
D	LoRa SMA Antenna socket	
E	Navigation key	To navigate down
F	Navigation key	To navigate up
G	SET key	Menu Set key
H	OK	Enter key
I	Energy pulsing LED	
J	DG Input status indicator	
K	EB Input status indicator	
L	Serial Communication Indicator	

LEDindicators

Energy pulsing LED

Energy pulsing LED that can be configured for Energy pulsing.

This LED flashes at a rate proportional to the amount of energy consumed.

Serial communications LED

The serial communications LED blinks to indicate the meter's Modbus communications Status.

Kilo & Mega Indicator

Kilo "ON"   —   Parameter reading in Kilo.

Mega '"ON" —   Parameter reading in Mega.

Kilo and Mega both "ON" —   Parameter reading in Giga.

Minus Indicator

Minus "ON" —   Negative/Lag & Minus "OFF" —   Positive/Lead.

Parameters Display

EN 2600DS

| Page 1 | EB Total Active Energy | kWh | 000000 |
| | DG Total Active Energy | kWh | 000000 |

| Page 2 | Voltage Line to Line | V_{L-L} | PP0000 |
| | Voltage Line to neutral | V_{L-N} | Pn0000 |

| Page 3 | Avg Current | I | A 0000 |
| | Frequency | F | F..... |

| Page 4 | Total Active Power | W_{Total} | Y 0000 |
| | Avg Power Factor | pf | PF.... |

| Page 5 | Total Active Energy | kWh | Yh8888 |
| | (Running source) | | 000000 |

| Page 6 | Load Hour | Ld.h | Ldh888 |
| | | Hours | 888880 |

| Page 7 | On Hour | On.h | onh888 |
| | | Hours | 888880 |

| Page 8 | Power Interrupt Count | P.Int. | P.int.88 |
| | | | 888880 |

| Page 9 | Total Old Active Energy | kWh.o | Yho888 |
| | | | 000000 |

| Page 10 | Old Load Hour | Ld.h.o | Ldho |
| | | Hours | 000000 |

| Page 11 | Revolutions per minute | RPM | rPn8 |
| | | | 000000 |

EN 1600

| Page 1 | EB Total Active Energy | kWh | 000000 |

| Page 2 | Load Hour | Ld.h | 888880 |

| Page 3 | On Hour | On.h | 888880 |

| Page 4 | Power Interrupt Count | P.Int. | 888880 |

| Page 5 | Total Old Active Energy | kWh.o | 000000 |

| Page 6 | Old Load Hour | Ld.h.o | 000000 |

| Page 7 | Revolutions per minute | RPM | 000000 |

Button functions

The meter supports single press and combination press functions of the buttons.

Symbol	Description
▽	To navigate down the parameter list.
▽	To move cursor to the left. Press and hold for 2 seconds.
△	To navigate up the parameter list.
△	To move cursor to the right. Pressandholdfor2 seconds.
OK	To select a parameter.
▽ **+** △	Press and hold 3 secs simultaneously to enter in to or exit Setup page.
▽ **+** OK	Press and hold 3secs simultaneously and to enter in to clear page.

Display Parameters

Display	Parameter Description
8888Pn	Line to Neutral Voltage
8888PP	Line to Line Voltage
88888A	Average Current
88888F	Frequency
8888PF	Power Factor - : Leading PF, + : Lagging PF
8888Yt	Active Power total (Watt)
8888UA	Apparent Power total (VA)

Parameter display

Display	Parameter Description
Yh	Active Energy Total Received/Import(Wh)
UAh	Apparent Energy Total (Vah)
UArh	Reactive Energy Total Capacitive/Inductive (Varh)
Yh old.	Old Active Energy Total Received/Import(Wh) which is recently cleared
8888rY	Line to Line Voltage between R-phase and Y Phase
8888Yb	Line to Line Voltage between Y-phase and B Phase
8888br	Line to Line Voltage between B-phase and R Phase
8888Ur	R phase Line to Neutral Voltage
8888UY	Y phase Line to Neutral Voltage
8888Ub	B phase Line to Neutral Voltage
8888Ar	R phase Line Current
8888AY	Y phase Line Current
8888Ab	B phase Line Current
8888Yr	R phase Active Power(Wr)
8888YY	Y phase Active Power(WY)
8888Yb	B phase Active Power(Wb)
8888UA	R phase Apparent Power(VA-R)
8888UY	Y phase Apparent Power(VA-Y)
8888Ub	B phase Apparent Power(VA-B)

Display	Parameter Description
8r88	R phase Power Factor
8y88	Y phase Power Factor
8b88	B phase Power Factor
L d.h	Load Hour
L d.h.o	Load Hour Old (Which was cleared recently)
P.i nt.	Power Interrupts counts

Setup screen menus

1. Press and hold the "Left" and "OK" buttons simultaneously for 5seconds to enter Setup.

2. Enter password. Default password is **1000**.

3. Press OK.

4. Press the Up or Down button to select a parameter to edit.
   The selected parameter flashes the digit, value, or decimal point that is required to be set.

5. Increase or decrease the digit value, move the decimal point, or select a value from a pre-programmed list using the Up or Down button.

6. Press OK after making the required changes.

7. Press and hold the Up and Down buttons simultaneously for 2seconds to exit setup.

8. Select Yes to save your settings.
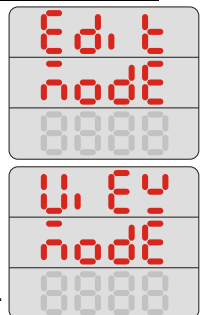
Display	Description	Range	Default
SyS. StAr	SyS. -> PowerSystem Configurations	StAr — 3 phase Star Connection dELt — 3 phase Delta Connection 1 PLL — 1 phase Line to Line 1 PLn — 1 phase Line to Neutral	StAr 3 phase Star Connection
Vt.Pr 415.0	Vt.Pr -> Primary Voltage(V$_{L-L}$)	0100V to 999000V AC	415.0 415.0V AC
Vt.SE 415.0	Vt.SE -> Secondary Voltage (V$_{L-L}$)	0100V to 999000V AC	415.0 415.0V AC
Ct.Pr 5.000	Ct.Pr -> CT Primary	1A to 32760A	5.000 5A

display	Description	Range	Default
Ct.SE / **5.000**	Ct.SE -> CT Secondary	1A to 32760A	**5.000** 5A
r.LoC / **no**	Rev.L -> Reverse lock	**no** No / **YES** Yes	**no** No
Ct.SE / **5.000**	VA.SL -> VA Selection	**UECtor** Vector / **A-tH** Arithmatic	Vector
	ALARM -> Alarm Parameter Selection	None **nonE** / **UA** VA / **nd** Md / **U** V / **Yh** Wh / **tHd** Thd / **A** A / **UAh** Vah / **PF** Pf / **Y** W / **UA-h** Varh / **F** F	None
	AL.Lt -> Alarm lower threshold	1 to 9999 k	100
	AL.Ht -> Alarm higher threshold	1 to 9999 k	200
	d.inP -> Digital Input setting	**no** No / **YES** Yes	No
E.SEL / **Yh**	E.SEL -> Display Energy Selection	**Yh** Wh / **UAh** Vah	**Yh** Wh
dU.id / **001**	DU.id -> Device id (Slave id)	1 to 247	**001** 1
bAUd / **38.40**	BAUd -> Baud Rate	**9600** 9600 bps / **1920** 19.20k (19200 bps) / **3840** 38.40k (38400 bps)	**38.40** 38.40k

display	Description	Range	Default
PrtY **nonE** **8888**	PrtY -> Parity	**nonE** None **odd** Odd **EUEn** Even	**nonE** None
nPoL. **04** **8888**	nPoL. -> Number of Poles	02 to 40	**04** 04
PASS **0000** **8888**	PASS -> Set New Password	0001 to 9999	**1000** 1000

Button functions in menu setup

Mode	Button	Function
Setup Menu	▽	To navigate to the next parameter Configuration screen.
	△	To navigate to the previous parameter Configuration screen.
	OK	Enter setup mode to configure the displayed Parameter value.
	▽ ✛ △	Press and hold the Up and Down buttons Simultaneously for 2seconds to enter Setup. Exit setup with the same button sequence.

Button functions in editing setup parameters

Mode	Button	Function
Setup Menu	▽	▪ Use to decrease the numeric value for the flashing digit. ▪ Use to view the next value from the list ▪ Use to move the decimal point to the left for the flashing decimal Point.
	△	▪ Use to increase the numeric value for the flashing digit. ▪ Use to view the previous value from the list ▪ Use to move the decimal point to the right for the Flashing decimal Point.
	Press and hold for 2seconds. ▽	Use to move the position of the cursor to left for the Flashing digit/Flashing Decimal Point.
	Press and hold for 2seconds. △	Use to move the position of the cursor to right for the Flashing digit/Flashing Decimal Point.
	OK	To select a parameter to edit the values. To select configured parameter values. To save the changes made to setup parameter.
	▽ ✛ △	Press and hold the Up and Down buttons Simultaneously for 2seconds to enter Setup. Exit setup with the same button sequence.

Clear Energy/Load Hour

Entering Clear screen

1. Press and hold the OK & Down buttons simultaneously for 3 seconds and release.

2. Enter Password using UP and Down buttons, Default password is **1000.**

3. Press OK to enter Password.

4. Press OK once again to select "Yes/No" selection.

5. Press the Down button to select "Yes".

6. Press OK.

Clear parameters

Resets the energy values. The meter supports reset of the following parameter values:

- Active energy-Import/Export
- Reactive energy-Import/Export
- Apparent energy-Import/Export
- Run Hour

Mode	Button	Function
Clear Screen	OK ✛ ▽	Press and hold OK and Down buttons for 3seconds and release to enter Clear.
	▽ △	Enter Password using UP and Down buttons, Default password is **1000.**
	OK	Press OK to enter Password.
	OK	Press OK once again to select "Yes/No" selection.
	▽	Press the Down button to select "Yes".
	OK	Press OK.

Old Energy/Load Hour parameters

| Yh old. | Old Total Active energy-Import -> Holds and display previous cleared Total Active Energy-Import value.

| LHr.old. | Old Total Load Hour -> Holds and display previous cleared Total Load Hour value.

Communications setup

RS-485 communication parameters

Meter supports RS-485 Modbus RTU protocol(Half-duplex)

Parameter	Values	Description
Address	1 to 255	Set the address for this device. The address must be Unique for each device in a communications loop.
Baud Rate	4800, 9600, 19200(19.20k), 38400(38.40k).	Select the speed for data transmission. The baudrate Must be the same for all devices in a communications loop.
Parity	None Even Odd	Select None if the parity bit is not used. The parity Setting must be the same for all devices in a Communications loop.
Stop bits	1	Stop bit is fixed internally to 1 always by default
Function	03	Read holding registers

IoT - LoRaWAN communication

LoRaWAN Communication
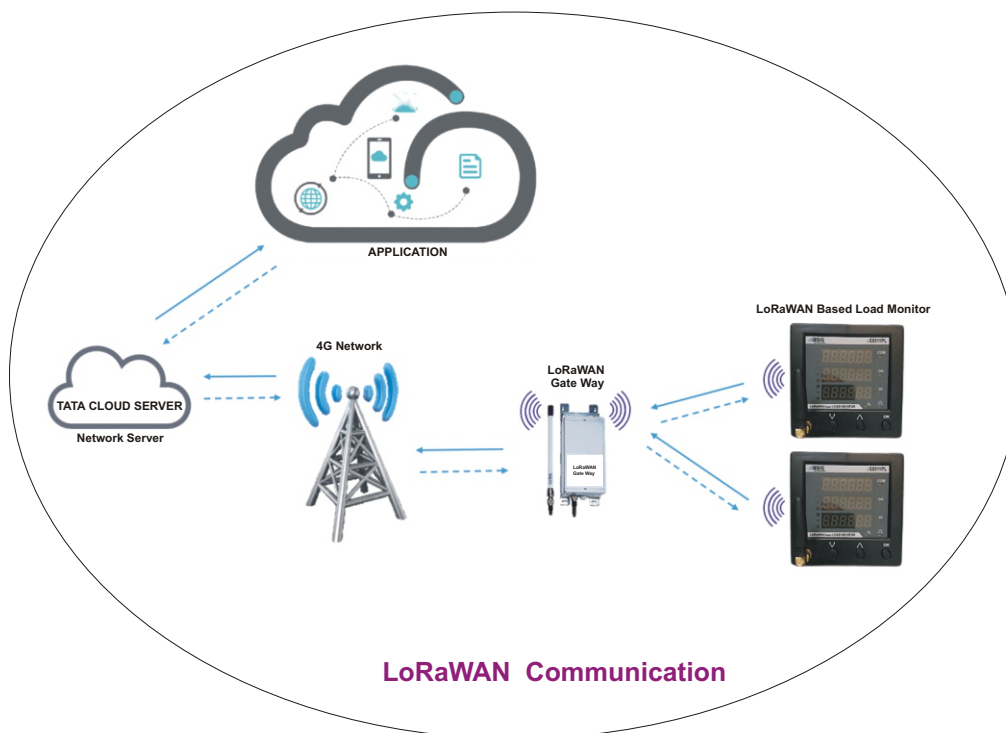
LoRaWAN network is typically set up in a star-of-stars topology, where gateways pick up the real time data payload broadcast by the our LoRaWAN based Load Monitor iLM8311PL and forward them over an Internet Protocol (IP) based network to a network server.

The network server is a software application running on one or more physical servers that possess a register of nodes and their associated owners.

The real time data payload was encrypted by the node with a key only known to the owner of the node. When the message arrives from the network server, the owner can decrypt and extract this payload.

Communications setup

This specific topology has some very interesting benefits. In a sufficiently dense LoraWAN network, a message transmitted by a node can be picked up by multiple gateways and forwarded to the network server.

The network server only forwards the first received valid message to its owner, but it also calculates the signal strength of the node for each gateway that has picked up the message. This allows the network server to select the best gateway in reach for a possible downlink to load monitor.

LoRaWAN Specifications	
Frequency	865 - 867 Mhz
Transmit Power	Up to 24dbm
Band Width	7.8 to 500KHz (configurable) - For LoRaWAN 125 KH.z
Bit Rate	Can support up to 5.5Kbps
Spreading Factor	SF7 - SF12 (Managed by LoRaWAN)
Sensitivity	Up to -125dBm
Antenna	Internal
Range	Up to 3 Kms

LoRa Payload Parameter's

Load Monitor Meter sends below parameters(Payload) at regular intervals as programmed by user

- Average Voltage Line to Line (VL-L)
- Average Voltage Line to Neutral(VL-N)
- Average Current(I_{Avg})
- Total Active Power(W)
- Total Apparent Power(VA)
- Total Reactive Power(VAr)
- Average Power Factor(pf)
- Frequency(Hz)
- Total Active Energy(Wh)
- Total Apparent Energy(VAh)
- Total Reactive Energy(VArh)
- Voltage Line to Line V-RY
- Voltage Line to Line V-YB
- Voltage Line to Line V-BR
- Current R Phase
- Current Y Phase
- Current B Phase
- Active Power R Phase
- Active Power Y Phase
- Active Power B Phase
- Power Factor R Phase
- Power Factor Y Phase
- Power Factor B Phase

Note : 1) For more details about LoRa setup refer Meter Payload details "LoRa Energy Meter 5.0" document.

2) Load Monitor meter setup parameters can be controlled remotely by downlink through application Software.

Application Software

Smart view Real time monitoring is a complete supervisory application software Package for power management applications.

The software collects all electrical parameters from the cloud server and organizes data presents it as meaningful, actionable information via an intuitive web interface.

Smart View collects all meter parameters from cloud server to provide:

- Real-time monitoring through a multi-user webportal
- Trend graphing and aggregation
- Power quality analysis and compliance monitoring
- Preconfigured and custom reporting

Specifications

The specifications contained in this section are subject to change without notice.

For installation and wiring information, refer to the meter installation sheet.

Mechanical characteristics

IP degree of protection(IEC60529-1)	Front display:IP51 Meter body:IP30(except terminals)
Panel thickness maximum	6.0mm(0.25in)maximum
Mounting position	Vertical
Display type	LED display-7Segment
Keypad	3 button
Front panel LED indicators	Green LED(heartbeat/serial communications activity) Red LED(energy pulse output)
Weight	~600gms
Dimensions WxHxD	96x96x73mm max

Electrical characteristics

Measurement accuracy

Current, Phase	±0.5% for Class1.0 and Class0.5
Voltage L-N, L-L	±0.5% for Class1.0 and Class0.5
Power Factor	±0.01 for Class1.0 and Class0.5
Power	Active power:±1% for Class1.0 and Class0.5 Reactive power:±1% for Class1.0 and Class0.5
Frequency	±0.05% for Class1.0 and Class0.5
Active Energy	Active Energy [2] Class1.0 asper IEC62053-21 Class0.5 [3] Asper 62053-22 Class0.2 [4]
Reactive Energy	Class1.0 as per IEC62053-24 for 5A nominal CT

Voltage inputs

VT primary	999 kV L-L max, starting voltage depends on VT ratio
V nominal	UL: 20-277VL-N / 35-480V L-L IEC: 20-347VL-N / 35-600V L-L
Measured V with full range	35 to 600 VAC L-L
Permanent over load	750 VAC L-L
Impedance	≥5MΩ
Frequency	50/60 Hz nominal ±5%
VA burden	<0.2VA at 240 VAC L-N

2. For 1A nominal CT, when I>0.150A. For 1A nominal CT, when I>0.500A under temperature influence
3. For 1ph 2W, when system voltage is ≥110V L-N
4. For 2ph 3W and 3ph 3W, when system voltage is ≥110V L-L. Not applicable for 1ph 2W configuration

Current inputs

CT ratings	Primary adjustable 1A to 32767A Secondary 1A or 5A I-nominal
Measured Amps with over range & Crest Factor	Starting current : 5mA Operating range : 50mA to 8.5A
Suppression current (to disregard Negligible load)	5mA to 99mA
Withstand	Continuous 12A ; 50A at 10sec/hr, 500A at 1sec/hr
Impedance	<0.3MΩ
Frequency	50/60 Hz nominal
VA Burden	<0.1VA at 6A

AC control power

Operating range	44 - 277 VAC ±10%
Burden	<6VA at 277 V L-N
Frequency range	45-65 Hz
Ride-through time	80ms typical at 120 VAC and maximum burden 100ms typical at 230 VAC and maximum burden 100ms typical at 277 VAC and maximum burden

DC control power

Operating range	44-277 VDC ±10%
Burden	<2W at 277 VDC
Ride-through time	50ms typical at 125 VDC and maximum burden

Displays update

Instantaneous	1s

Environmental characteristics

Operating temperature	-10°C to +60°C(14°Fto140°F)
Storage temperature	-25°C to +70°C(-13°Fto158°F)
Humidity rating	5% to 95% RH at 50°C(122°F)(non-condensing)
Pollution degree	2

Safety

Europe	CE, as per IEC61010-1Ed-3
US and Canada	CULus per UL61010-1 CAN/CSA-C22.2 No.61010-1, for 600VAC
Measurement category(Voltage and Current inputs)	CATIII up to 480V L-L CATII up to 600V L-L
Over voltage category(Control power)	CATIII up to 300V L-N
Dielectric	As per IEC/UL61010-1Ed-3