



POWER QUALITY METER

Multifunction Meter | Demand Controller | Load Manager | Import Export | Harmonics | Power Quality | Digital/Analog Input or Output

HIGH-END MULTIFUNCTION METER FOR COMPREHENSIVE ENERGY MANAGEMENT!

Primary function of Elmeasure iM8000 is linked to M2M software platform via TCP/IP protocols to enable remote monitoring of the device. Device to server MQTT link can be through Ethernet & display's all the electrical parameters on webpage as well as TFT display. All meter configurations can be done from webpage and TFT Display.

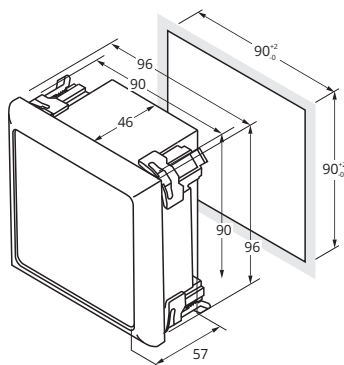
Unique Features :

- Sag & Swell** with timestamp & 10 waveform storage.
- Real-time THD & Individual harmonics** (upto 63rd harmonics) with value & graph in the display & web browser.
- Data storage** upto 14GB.
- Real-time FFT waveform** for individual phase both current & voltage in the web browser.
- Integrated web server** for configuration & data.
- Demand parameters** (W, VA, VAR,) with Date & timestamp for Maximum Demand.
- TOD option** for Energy & Demand upto 8 slots.
- Graphical Energy Report** - Hourly, Daily & Monthly.
- Direct cloud connectivity** - Ethernet.
- Data push** in 5 sec. (ETH).
- Diagnostic page.**
- Phasor diagram** for voltage & current.
- Pictorial representation** of all 3 Phases simultaneous (Voltage & Current) in terms of sinusoidal waveforms.
- High-resolution display** with capacitive touch.
- Individual phase energy** for import & export with 1-second update.
- High / Low recording** VLL, VLN, A, Hz, W, VA, PF, VAR value storage with time stamp.
- Real-time waveform** for all the voltage & current can be displayed simultaneously on meter & web browser

Features :

- Displays all the electrical parameters & waveforms on Webpage and TFT Display.
- 100% LIFO data recovery.
- Gateway IP, user name & password can be changed to default IP (192.168.5.175), username (elmeasure) & password (elmeasure) from holding hardware reset key for 10 seconds.
- Real time SD card status & memory space indication
- One touch recovery
- LED Indication for easy setup & trouble shooting
- Web browser for debug, configuration, setup & information on Device brief description.
- Configurable account based secure access - required login name & password for login
- Online setting changes (reboot is not required)
- Mobile data service network signal strength
- Color code indication for device & network connection
- Gateway statistic for remote diagnosis & troubleshooting
- Online debug status
- Built in RTC with configurable option
- DHCP (obtain an IP address automatically) or Static IP
- Configurable broker IP Address, port number, Quality of services
- Easy switch of Ethernet communication interface
- Secured Data transfer over MQTT with user authentication for connection & data transfer
- Multi-client Connection
- No Gateway ID conflict in wildcard topic enable
- Full device parameter logging.
- Transaction ID based data logging, publish & recovery.
- Transaction ID based message acknowledgement & auto retry/ recovery
- Options to disable live, log & recovery.
- Suitable for EMS application & Monitors all electrical data.
- Configurable UART Baud rate, all meter configurations through Webpage.
- Electrically isolated communication ports.

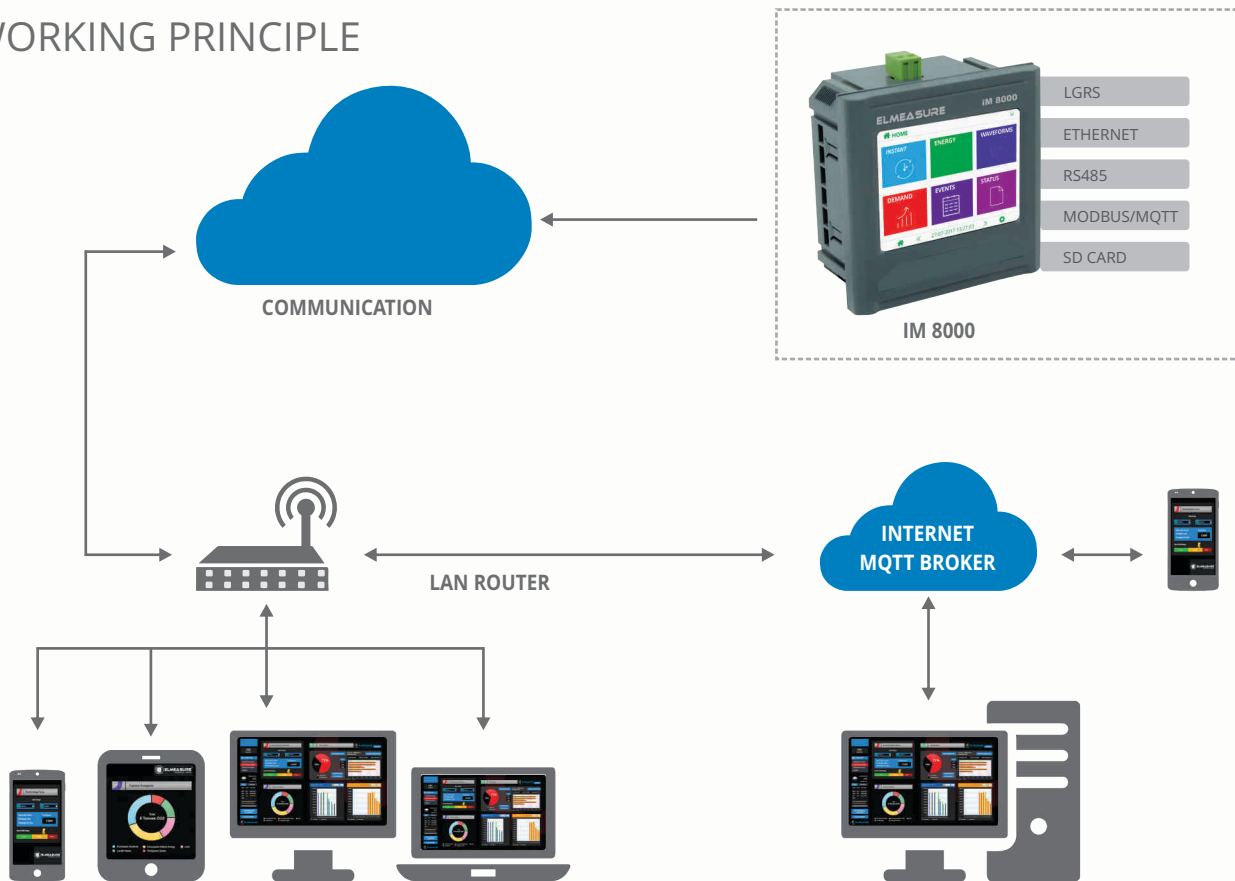
Mechanical Specification:



Multiplication factor for counter based energy mode

Full Scale in Watts : $\sqrt{3} \times V_{Pri} \times A_{Pri} / 1000$	0.4k to 4.0k	4.01k to 40k	40.1k to 400k	400.1k to 4000k	4M to 40 M	40 M to 400 M	400M to 4000M
Multiplication Factor:	0.01	0.1	1.0	10	100	1000	10000
Unit of display	kWh			MWh		GWh	

WORKING PRINCIPLE



SOFTWARE SCREENS



Technical Specification:

Specification	Description
Accuracy:	Class 1 (Default) IEC 62053-21, Class 0.5S IEC 62053-22 (Option)
Sensing/ Measurement:	True RMS, 1 Sec update time, 4 Quadrant Power & Energy.
Input Voltage:	4 Voltage inputs (V1, V2, V3, VN); Programmable 110 or 415V LL Nominal (Range 50 – 550V LL); Primary programmable up to 999 kV. Burden: 0.2VA Max.per phase
Input Current:	Current inputs (A1, A2, A3) 50mA - 6A (Field configurable 1A or 5A). Primary programmable up to 99kA. Overload: 10A max continuous, 50A max for 3s Burden: 0.2VA Max, per phase.
Aux-Supply (control power):	80 – 300V AC / DC Burden: 5VA Max
Display type:	Touch Screen
Communication RS485 interface:	Parity: <i>Odd, Even, None (Preferred Even)</i> Baud rate: 9600 bps to 115200 bps. (Preferred 9600 bps). Isolation: 2000 volts AC isolation for 1 minute between communication and other circuits.
Weight:	Unpacked: 400gms, Packed: 500gms
Torque	1 N-m
Wire gauge	11 AWG