

Grid Meter

NJ Grid meter for power exchange

This meter can provide with comprehensive solutions for the grid-connected C&I metering applications

Key Benefits

- Bi-directional Metering
- Quadrant Measurement
- Power Quality Monitoring
- Site-Watch Instrumentation
- 3-Concurrent Communications



➤ Bi-directional Metering

For the PX application, the meter can provide with the uni-directional and bi-directional metering capabilities:

- Up to 8-metering channels
- Import, Export, & NET measured quantities
- Up to 6-self reads for revenue metering
- 4-tariff TOU metering

➤ Quadrant Measurement

With the user-configured measurement, the meter can measure and record energy and demand based on the vector-sum or scalar measurement.

- Q1/2/3/4 kW(h) and kvar(h)
- User-defined calculation of PF

➤ Power Quality Monitoring

With the PQM capability, the meter continually performs a complete diagnostics and analytics on the installed metering devices, service wiring, and load characteristics:

- Polarity, energy flow, cross phase
- Current imbalance, inactive phase current
- Voltage imbalance, under/over voltage
- Voltage & Ampere THD
- Neutral current

➤ Site-Watch Instrumentation

With instantaneous displays of metering values, utilities and their customers will be able to analyze electrical service at the moment of delivery:

- Per-phase value : kW, kvar, kVA, $V_{rms,r}$, $I_{rms,r}$, Angle, THD
- Graphical software tool : vector-diagram, trace-box

➤ Communications

The meter can provide the 3-different communication ways for in-site, local and remote data exchanges.

With the IEC 62056-21 optical port, the meter can be configured and read at an installation site.

- Up to 19,200-baud

For local and remote data exchange, the meter can provide with the RS-232 and RS-422/485 ports.

- Up to 38,400-baud for RS-232 & RS-422/485
- Multi-point network and up to 32-nodes for RS-485

➤ Load Profile Capacity

For the interval metering, the meter measures and records a user-defined interval data into a non-volatile memory:

- kW(h)/kvar(h)/kVA(h) with date & time stamp
- Up to 50-days for 8-channel/5-minutes
- Status event of an interval data : power fail, DR & etc.

➤ Self Diagnosis & Event Log

To ensure the reliable meter operation, the meter detects and indicates the faulty conditions. Also the meter records the event log into a non-volatile memory:

- Time adjustment, DR/SR/MDR, error-status, power failure/restore

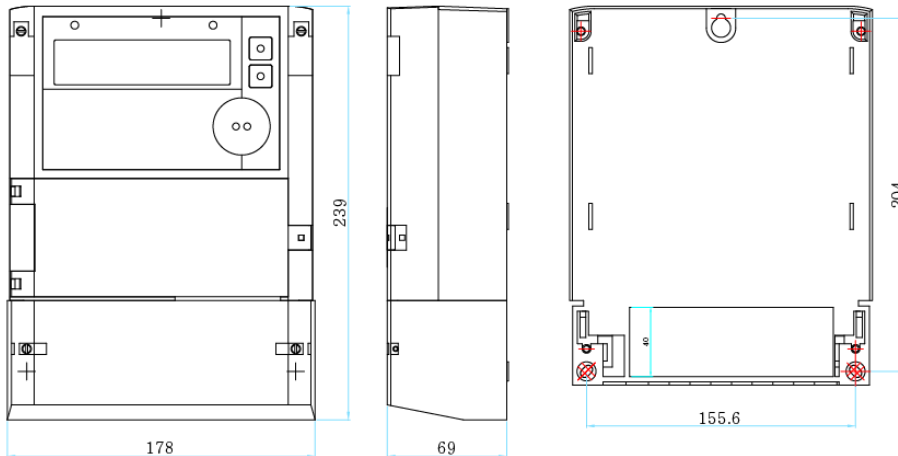
➤ External Output

The meter provides an external output which are the open collector & Opto-MOSFET and is programmable by user:

- Pulse output : kWh, kvarh, time switch (DC 24V/20mA)
- Control output : load control (AC 240V/90mA)

For Commercial & Industrial Customers in the Smart Grid Market, the NJ Grid Meter is waiting for your best choice...

◆ Dimensions :



◆ Specifications and Technical Data :

- Voltage 3x110/190V ($\pm 10\%$ of nominal voltage)
- Current 5(6)A
- Frequency 50Hz/60 Hz ($\pm 5\%$ tolerances)
- Temperature -25°C to $+55^{\circ}\text{C}$ (operating range)
- Humidity 0 to 100% (non-condensing)
- Power consumption Less than 2W
- Accuracy With full load and light load $\pm 0.5\%$ for kWh
With full load and light load $\pm 1.0\%$ for kvarh
- Starting current Conforms to the IEC requirements (less than 0.001In)
- Creep No more than 1 pulse per measured quantity
- Startup delay Less than 3 seconds from power application to pulse accumulation
- Clock Built-in real time clock with a backup battery
- Communication Optical communication up to 19200 baud
Remote communication up to 38400 baud
- Standards IEC 62052-11 *Electricity metering equipment (a.c.)-General requirements, tests and test conditions*
-Part 11: Metering equipment
IEC 62053-22 *Electricity metering equipment a.c.-Particular requirements*
-Part 22: Static meters for active energy (classes 0.2S and 0.5S)
IEC 62053-23 *Electricity metering equipment a.c.-Particular requirements*
-Part 23: Static meters for reactive energy (classes 2 and 3)



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