

Smart Grid Meter

NJ Smart Meter, Ready for AMI & DR

This meter can provide with integrated scalable & secured solutions for AMI and DR applications

Key Benefits

- Advanced Smart Metering
- Scalable Recording Capacity
- Power Quality Monitoring
- Multi-port Communications
- Push & Poll Data Exchange
- Advanced Security



➤ Advanced Smart Metering

For the smart metering application, the meter provides with the bi-directional/quadrant/per-phase metering capabilities:

- Up to 9-configurable metering channels
- Import, Export, NET & SUM measured quantities
- Up to 12-self reads for revenue metering
- 8-tariff TOU metering and CPP/RTP support

➤ Load Profile Capacity

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

- kW(h)/kvar(h)/kVA(h) with date & time stamp
- Up to 75-days for 16-channel/15-minutes
- Status event flags of an interval data

➤ Power Quality Monitoring

With the PQM capability, the meter continually performs a complete diagnostics and analytics on the site:

- Per-phase value : kW, kvar, kVA, V_{rms} , I_{rms} , Angle, THD
- Graphical software tool : vector-diagram, trace-box
- Voltage & Ampere THD, 21st harmonic analysis
- Sag & Swell with waveform capture, neutral current

For the measurement profile, the meter provides with the large-scale memory to record the values of min/max/average

- Up to 35-days for 8-channel/15-minutes

➤ Firmware Update

For upgrading the meter's functions and metrology, the meter can provide with the firmware update, locally and remotely (OIML D.31 conformant)

➤ Communications

The meter can provide up to 4-different communication ways for local and remote data exchanges. The meter can provide with the RS485 & RS422 ports for the local and remote communication:

- Up to 921,600-baud & simultaneous communication
- Also, the meter provides with the multi-expansion port like RS232 & pluggable modem units:
- Up to 115,200-baud & simultaneous communication
- For the meter-reading, the meter can communicate with the high-end system like PUSH and On-Demand mode.

➤ Self Diagnosis & Event Log

To ensure the reliable meter operation, the meter detects and indicates the faulty conditions. Also, the meter can record the event log into the non-volatile memory and send the alarm to the high-end system.

For the OMS, the meter can send the power outage event to high-end system with its battery-power.

➤ Expandable Module

The meter provides with max. 12-external outputs which are the type of open-collector and configurable by user:

- Pulse output : kWh, kvarh, time switch (DC 24V/20mA)
- Basic : 6-channels (optional 6-channels)

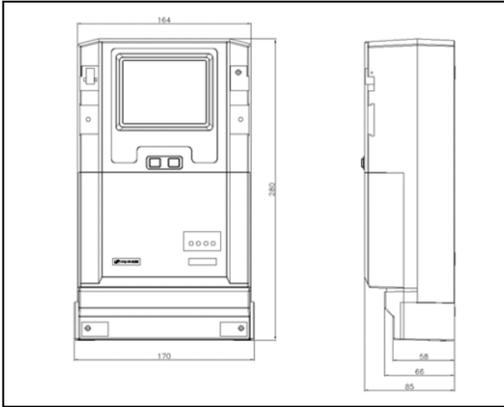
➤ Security

For the data security, the meter can provide with the security functions:

- AES-GCM-128 & ARIA-GCM-128
- Electronic sealing device (SIM card, OIML D.31)

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

◆ Dimensions : NJ34-102-OWP, NJ34-105-OWP



◆ Specifications and Technical Data : NJ34-102-OWP, NJ34-105-OWP

- Voltage 3x110/190V, 3x63.5/110V ($\pm 20\%$ of nominal voltage)
- Current 5(6)A
- Frequency 50Hz/60 Hz ($\pm 5\%$ tolerances)
- Temperature -40°C to $+70^{\circ}\text{C}$ (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, $\pm 0.2\%$ for kWh
With full load and light load $\pm 1.0\%$ for kvarh, $\pm 0.5\%$ for kvarh
With full load and light load $\pm 1.0\%$ for kvarh, $\pm 0.5\%$ for kVAh
- 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 (5-ppm per day)
- Communication Local communication 3-port, up to 115200 bps
Remote communication 1-port, up to 921600 bps
- 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 62053-24 *Electricity metering equipment a.c.-Particular requirements*
-Part 23: Static meters for reactive energy (classes 0.5S, 1S and 1)
IEC 62056-21 *Electricity metering-Data exchange for meter reading, tariff and load control*
-Part 21: Direct local exchange
IEC 62056-42 *Physical layer services and procedures for connection oriented asynchronous data exchange*
IEC 62056-46 *Data Link Layer using HDLC-protocol*
IEC 62056-53 *COSEM Application Layer*
IEC 62056-61 *OBIS Object Identification System*
IEC 62056-62 *Interface Objects*



12, Gimhae-daero 2635beon-gil, Gimhae-si, Gyeongsangnam-do, Republic of Korea

TEL +82-55-326-9001 FAX +82-55-326-9004

www.namjun.com