FOR DEMO ONLY

CL200 220V 3W TYPE LIBRA TA30 Kh1.0

WASION

CA 0.5
FM2S
60Hz
CHINA 12/09

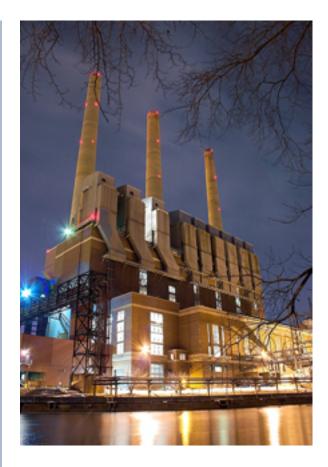00 000 163

WATTHOUR METER
SUPERVISED BY JULONG

ENGINEERED FOR TODAY'S POWER INDUSTRY

The PPLN-10709 Meter is the perfect solution for utilities looking to adapt to the changing power industry environment in the Philippines. As a postpaid meter, the PPLN-10709 is AMR capable thru a Concentrator communicating to the Meter Data Management System back-end via Symstream's GSM transmission technology. Communication between the meter and the concentrator is achieved using Power Line Carrier modems thus eliminating the need for additional wiring for communications. The PPLN-10709 directly plugs into the ANSI base of existing ANSI meters. From a flat rate meter operating on a 24 hour period, it can be programmed Over-the-air (OTA) for Time-of-use (TOU) operation with up to six periods and four TOU tariffs. Thus, utilities can deploy the meters with current flat rate billing and migrate all of their customers at the same time to TOU billing through the Meter Management System.
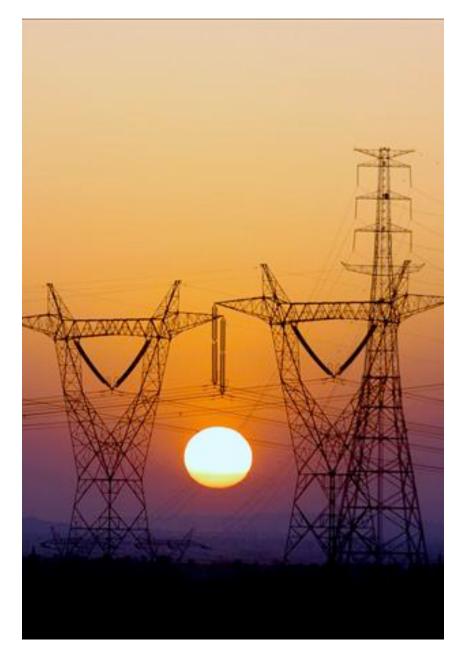
FEATURES

1. Easy to install and ideal for new deployments as well as retrofitting of existing socket type meters
2. Available in Forms 1S and 2S.
3. Meter provides valuable information to help consumers effectively manage and budget their electricity consumption. Information displayed includes the following:
   b. Current Consumption into the period (Peak/Off Peak kwhrs if TOU is enabled).
   c. Previous period consumption (Peak/Off Peak kwhrs if TOU is enabled).
   d. Time and date.
   e. Remaining balance (for prepaid; negative balance for postpaid).
   f. LED warning for low balance (for prepaid)
   g. Rate Code (Peak or Off Peak, to represent distinct TOU tariffs) to allow customers to know the current TOU rate being applied at that instant.
4. Time-of-Use (TOU) ready with up to 6 periods and 4 tariff codes with configurable billing reset.
5. High surge withstand capability for areas prone to lightning or other line surges.
6. Meets ANSI C12-1 standards for performance
7. Power Line Carrier (PLC) communications between meter and concentrator. Each meter can act as a repeater of the PLC data from distant downstream meters.
8. Maximum current up to 200A (Form 2S) with integrated disconnected switch that can be controlled remotely and/or by software.
9. Automatic, periodic configurable billing self-reads.
10. Secure and Reliable survey files in non-volatile memory.
11. Large-character LCD information auto-scrolling display, display items can be configured by the distribution utility
12. Displays remain operative in event of supply failure

Data Concentrator

DATA SECURITY

The use of Symstream's patented data transmission technology offers unparalleled security because of the symbolic nature of the data transmission, the standard GSM security and the fact that each data transmission uses its own dedicated voice channel. These aspects make it very difficult to decode Symstream data transmissions, unlike GPRS which is based on bits and bytes and uses a shared wireless channel.

Power Line Carrier (PLC) transmission between meters and concentrator are likewise encrypted. Derating of electricity credits (in prepaid mode) is done on the back-end servers to eliminate the possibility of hacking into the meters. Meters report consumption data every 30 minutes and the server calculates remaining credits for display on the meter LCD. The prepaid servers issue the disconnect command to the meter if electricity credits go below set thresholds.
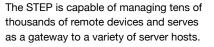

SYMSTREAM SOCKETMODEM

Each concentrator is equipped with a Socketmodem incorporating Symstream's proprietary voice channel communications protocol. The voice channel is the most widely rolled out GSM channel in the Philippines, assuring availability of data connectivity wherever local GSM operators operate.
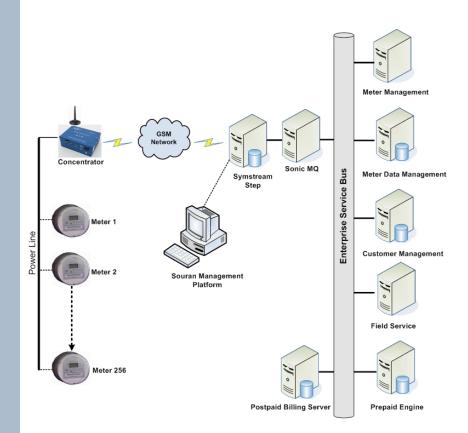
SOURAN MANAGEMENT PLATFORM

Provides configuration, performance, alarm management and diagnostic functions. Remote modems are configured and managed by the Symstream Transaction Event Processor (STEP) which incorporates the complementary SouranTM management platform function.

The STEP is capable of managing tens of thousands of remote devices and serves as a gateway to a variety of server hosts.

END-TO-END INTEGRATION VIA ENTERPRISE SERVICE BUS (ESB)

To integrate old and new, service-oriented architecture (SOA) needs an infrastructure that can connect any IT resource, whatever its technology or wherever it is deployed. To be flexible, it needs an infrastructure that can easily combine and re-assemble services to meet changing requirements without disruption. And to be dependable, it needs an infrastructure that is robust and secure. This infrastructure is the enterprise service bus (ESB).

XESI uses the ESB to connect applications and servers from various partners and customers. Thus, DU's wishing to use existing Postpaid Billing Applications may do so, ensuring maximum use of existing IT investments. Using ESB, we can simply "push" meter reading data to the Postpaid Billing System. As the customer base grows, we can easily scale up the ESB to accommodate more applications and/or servers in a resilient and robust architecture, ensuring 24/7 system uptime and reliability

A FULL SUITE OF SOLUTIONS

Distribution Utilities wishing to implement a Prepaid Metering Solution will normally have to contend with the cost of deploying new Prepaid Meters. Should the customer wish to switch back to Postpaid, normally a meter change is once again needed. Our metering solution allows the DU to manage customers switching from Postpaid to Prepaid and vice versa by simply using our back-end software solutions. The DU only has to make a one time investment on our meters. No need to change to a different meter each time. The DU's investment in meters is therefore, secure.

Furthermore, DU's instantly have access to our back-end software solutions on an ASP model, removing the need for high capital investments for software back-ends. We take care of all the nitty gritty when it comes to the Prepaid System. Should the DU wish it, we can connect their existing Postpaid System to the Meter Management System as well.

FLEXIBILITY

FLAT RATE to TOU to PREPAID TOU

Switching between flat rate to TOU is a simple software command from the Meter Management System. Furthermore, customers can migrate from postpaid to prepaid by simply applying with their distribution utility. Once the customer has complied

with all the requirements, the utility will simply tag the customer's account as a prepaid account on the Meter Management System together with the effectivity time and date.

Customers can buy prepaid loads via eLoad or scratch cards, similar to Telco airtime loading processes.

TECHNICAL SPECIFICATIONS

Applicable Standards
• Complies with ANSI C12.1, C12.10, C12.18, C12.19, C12.20, C37.90.1, C62.45, FCC Part 15,Subclass C

Communication
• Symstream communication protocol to Servers; Power Line Carrier for Concentrator to Meter communications

Accuracy
• 0.5 Accuracy Class, ANSI C12.20

Class
• Class 100 (1S), Class 200 (2S)

Form
• Form 1S, 2S

Temperature, specified operating range
• -25°C to 75°C

Timing
• Real-time clock accuracy to +/- 0.5 seconds per day

Type of Display
• UV Resistant back-lit LCD

Nominal voltage
• 220V, voltage range -20% to +20%

Frequency
• Nominal 60Hz +/- 3%

Load Disconnect Switch
• Maximum 100A (Form 1S) or 200A (Form 2S), remote (software) disconnect and reconnect

Power Consumption
• <2 Watts (with AMR module)

Technical Specifications subject to change without prior notice.

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