

# CENTRON® II

## Gen™5 CENTRON II

Itron introduces the Gen5 CENTRON II, compatible with the Itron Gen5 industrial IoT (IIoT) network. This solid-state single-phase residential electricity meter offers unparalleled digital accuracy and reliability as well as advanced AMI functionality to support your business needs today and tomorrow - all in a cost-effective package.

This proven solid-state residential meter leverages the proven CENTRON platform, offering your utility the best in metering technology today, with the flexibility to grow with you as your business needs change.

The CENTRON II meter is designed to leverage IIoT communications on Itron's Gen5 mesh network. Leverage this solution for AMI deployments to provide greater functionality for advanced applications that help utilities lower field service costs, improve credit management and enable services like prepaid metering.

This residential solid-state meter utilizes the ANSI Tables protocol in a Demand, Time-of- Use (TOU), and Load Profile, giving utilities

the ability to collect and utilize more detailed information and better manage demand.

The CENTRON II meter provides robust data storage capability to support (TOU) pricing including Critical Peak Pricing (CPP) capabilities. In addition, the meter supports load profile data, voltage profile, and Instrumentation profile along with other data-intensive applications. Leverage Itron's network capabilities to enable advanced features such as service-limiting with remote disconnect and remote meter programming, enabling lower operational costs, increase customer satisfaction and increased safety.



## Delivering on the Promise of Industrial IoT for Smart Grid

Leading utilities and cities have delivered breakthroughs in operational efficiency, customer service and environmental sustainability by relying on Itron's secure, reliable two-way connectivity to critical infrastructure. Itron's Gen5 network technology extends the benefits of a multi-application IIoT network to a broad range of performance-intensive services.

Itron's networks deliver proven, self-forming, self-healing network capabilities to devices requiring high data throughout and low latency response. Adaptive communications dynamically optimize data rates to maximize speed or extend range as needed by the environment. Itron's networks and devices are designed to leverage edge computing to support innovative applications and services both today and tomorrow.

### FEATURES

#### Remote Disconnect

Optional 200 amp remote disconnect switch is integral to the meter assembly and provides compact, non-discriminatory meter profile

#### Load Profile

The C2SL/D provides 144K RAM for up to seven channels of load profile data

#### Voltage Profile

The C2SL/D provides 144K RAM for up to two channels of profile data with Max/Min instantaneous voltage/interval and Max/Min and Average voltage/interval as a percent of nominal voltage. Events and alarms time and date stamped upon occurrence.

#### Instrumentation Profile

The meter provides 144K RAM for up to 12 channels of profile data for Voltage, Current, temperature and Instantaneous values

#### Temperature Monitoring

Two user configurable temperature thresholds with event log and alarming

#### Bi-Directional Metering

Capable of measuring and displaying delivered, received, net, and unidirectional energy (kWh), kVAh, or VAh delivered, received, and lag

#### Non-volatile Memory

All programming, register, TOU and load profile data are stored in the EEPROM during a power outage. A battery maintains only the clock circuitry during a power outage

#### Standard Features

- » Electronic LCD display (Normal, Alternate and Test)
- » Time-of-Use
- » Optical tower
- » Customer Interface Button / Alt Display Scroll
- » Test LED
- » Demand, Voltage and Load Profile Interval lengths programmable from 1 to 60 minutes

### Product Availability

Meter Version	Class	Volts	Form
C2SL, C2SLDINS	200	120V	1S*
C2SL, C2SLDINS	200	240V	2S*
CN2S/CN2SLDINS	200	120V	12S/25S*
C2SL	320	240V	2S

\*Optional disconnect switch 200A

### Specifications

Power Requirements	Voltage rating: 120-240 V (overvoltage capabilities up to 480V for form 2S) Operating voltage: $\pm 20\%$ (60 Hz) Frequency: 50Hz, 60 Hz Operating range: $\pm 3$ Hz Battery voltage: 3.6 V nominal
Operating Environment	Temperature: $-40^{\circ}$ to $+85^{\circ}\text{C}$ Humidity: 0% to 95% non-condensing
Peak Demand Energy calculation	Wh and VAh
Line sync	Power line frequency
Crystal sync	$+0.01\%$ @ $25^{\circ}\text{C}$ ; $+0.025\%$ over full temperature range
Battery	$+0.005\%$ @ $25^{\circ}\text{C}$ ; $+0.005\%$ to $-0.02\%$ over full temp range
<b>Nine-digit liquid crystal display</b>	
Annunciator height	0.088"
Six-digit data height	0.4"
Display duration	1-15 seconds
Three-digit code number height	0.24"
<b>3-segment electronic load indicator</b>	

- » Demand calculations: Present, Previous, Cumulative, Continuous Cumulative, Projected UL 2735 approved (July, 2019)
- » Energy, Demand, TOU, temperature, LP voltage and instrumentation profile values tamper alarms

#### OPTION AVAILABILITY

- » Integrated, low-profile 200A remote service switch
- » Demand reset button
- » ZigBee for Home Area Network
- » Extended Last Gasp 25 or 75 seconds (75 seconds - July, 2019) (25 seconds - November, 2019)

#### OPTICAL PORT COMMUNICATION

- » Each module can be programmed to communicate at 28800, 19200, 14400 or 9600 baud through the optical tower
- » The optical port can also be disabled/enabled remotely via the head end system

#### VOLTAGE MEASUREMENT

- » On board voltage measurement allows for end of line voltage monitoring and residential voltage profiling for troubleshooting and diagnostics

The CENTRON II meter supports the measurement of average voltage data, instantaneous voltages and tracks minimum/maximum voltages during each interval up to three phases. The interval data for each phase is compared with the configured

thresholds at each EOI. Events are recorded for the first interval when a threshold is exceeded, when it returns to normal, and when it is exceeded again. To minimize recording excessive events, only one event is recorded when multiple successive intervals exceed thresholds.

#### TEMPERATURE MEASUREMENT

Internal temperature monitoring in centigrade from the metrology every 1 second. This can be used for local device temperature monitoring and profiling capability.

- » Technical Data Meets applicable standards:
  - » ANSI C12.10 - 2004
  - » ANSI C12.1 - 2008
  - » ANSI C12.20 - 2010
  - » ANSI/IEEE C62.41.1-2002
  - » ANSI/IEEE C62.41.2-2002
  - » ANSI/IEEE 62.45 - 2002
  - » ANSI C12.18 - 2006
  - » ANSI C12.19 - 2008
  - » FCC CFR Title 47 Part 15.247, Subpart C
  - » Measurement Canada LMB-EG-07
  - » Measurement Canada S-E-06
  - » NEMA SG-AMI -2009 Requirements For Smart Meter Upgradeability

#### REFERENCE INFORMATION

- » Gen5 CENTRON II Technical Reference Guide
- » Electricity Price Bulletin
- » Hardware Specification Form
- » PC-PRO+®Advanced 9.87 User's Manual



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