CENTRON® II

CENTRON C12.19 C2ST, C2SD, C2SL

The CENTRON II C12.19 Residential Meter is a solid-state singlephase meter that gives utilities the ability to connect and disconnect service remotely without a service call from field personnel.

The CENTRON platform for residential metering offers your utility the best in metering technology, proven to easily and affordably expand as your business needs change.

The service switch feature is designed for two-way communications. Mass deployments provide functionality that helps utilities improve safety, better detect fraud, lower field service costs and response times, improve credit management, and enable prepaid metering.

This ANSI C12.19 compliant residential solid-state meter utilizes the ANSI Tables protocol in a Demand (C2SD), a Time-of-Use (TOU) module with Demand (C2ST), and a Load Profile module with TOU and Demand (C2SL). This gives utilities the chance to collect and utilize more detailed information and better manage demand.

The CENTRON II C12.19 meter provides robust data storage capability to support time-of-use (TOU) pricing including critical peak pricing (CPP) capabilities. In addition, the meter supports load profile data and other data-intensive applications as well as smart grid requirements. Features include full two-way communication capabilities for offsite operation when used with OEM communications systems with a service-limiting remote disconnect and reconnect switch, as well as the ability to program or partially reconfigure the meter remotely.

This second-generation CENTRON meter has several functional improvements including greater overvoltage protection, less susceptibility to harmonics and high frequency noise, improved temperature withstand capability, and tapered terminals for easier insertion.

In addition to its accuracy of 0.3 percent, the CENTRON II meter delivers advanced voltage monitoring for power quality auditing and assurance.

FEATURES

Remote Disconnect

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

Demand

The C2SD module provides the ability to manage and record demand values over time.

Time-of-Use

The C2ST module provides the ability to offer different rates for energy consumption based on the seasonal/daily load, in addition to all of the features from the Demand module.

Load Profile

The C2SL module provides 144K RAM for up to seven channels of load profile data, in addition to all of the features from the Demand and Time-of-Use modules.

Bi-Directional Metering

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

Energy Quantities

» Watt hours (Wh): delivered, received, unidirectional, net

» Volt-ampere hours (VAh): delivered, received, net

» Volt-ampere reactive (VAR): delivered, received, net

Demand Measurement

» Max Watts Delivered, Received, Net, and Unidirectional

» Max VA Delivered, Received, and Lag

» Max VAR Delivered, Received, and Net

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

» Polycarbonate cover

» Optical tower

» Customer Interface Button

» Load side voltage (LSV) detection

» Measures to 15th harmonic

» Test LEDs

» Self-Read

Option Availability

» 200 A remote service switch

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 C12.19 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 status and profiling capability.

Tamper Detection

» Meter Removal

» Inversion

» Outage

» Unauthorized Access Attempt

Profiles

» Supports independent profiles:

- Load Profile – 7 channels and programmable to support 1, 5, 6, 10, 12, 15, 20, 30, or 60-minute intervals
- Voltage Profile – 2 channels and programmable to support 1, 5, 6, 10, 12, 15, 20, 30, or 60-minute intervals

Time of Use

» 8 rates plus Total

- 25-year DST Calendar
- 14 Holidays/Special Days

Technical Data

Meets applicable standards:

» ANSI C12.10 - 2004 (American National Standard for Electricity Meters - Code for Electricity Metering)

» ANSI C12.1 - 2008 (American National Standard for Electric Meters - Code for Electricity Metering)

» ANSI C12.20 - 2010 (American National Standard for Electricity Meters - 0.2 and 0.5 Accuracy Classes)

» ANSI C12.18 - 2006 (American National Standard - Protocol Specification for ANSI Type 2 Optical Port)

» ANSI/IEEE C62.41.1-2002 (Only sections referenced by ANSI C12 standards listed above)

» ANSI/IEEE C62.41.2-2002 (Only sections referenced by ANSI C12 standards listed above)

» ANSI/IEEE 62.45 - 2002 (Only sections referenced by ANSI C12 standards listed above)

» ANSI C12.19 - 2008 (American National Standard - Utility Industry End Device Data Tables)

» FCC CFR Title 47 Part 15.247, Subpart C

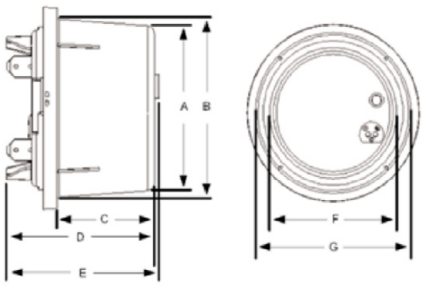
» Measurement Canada LMB-EG-07

» UL 2735 - UL Standard for Safety for Electricity Utilities

Reference Information

» CENTRON II Technical Reference Guide

» Information developer kits are available that outline standard processes and easy-to-use interfaces that are available for rapid OEM development



Dimensions

A	B	C	D	E	F	G
5.68"	6.3”	3.47”	5.27”	5.45”	5.68”	6.3”
14.4 cm	16 cm	8.8 cm	13.4 cm	13.8 cm	14.4 cm	16 cm

Product Availablity

Meter Version	Class	Volts	Form
C2SD, C2ST. C2SL	200	120V	1S*
C2SD, C2ST. C2SL	200	240V	2S*
C2SD, C2ST. C2SL	200	120V	12S/25S*
C2SD, C2ST. C2SL	320	240V	2S
*C2SDD, C2STD. C2SLD			

*Optional disconnect switch 200A

Specifications

Power Requirements	Voltage rating: 120-240 V (overvoltage capabilities up to 480 V) Operating voltage: ±20% (60 Hz) Frequency: 50 Hz, 60 Hz Operating range: ±3 Hz Battery voltage: 3.6 V nominal Battery operating range: 3.4 - 3.8 V
Operating Environment	Temperature: -40° to +85°C Humidity: 0% to 95% non-condensing
General Information	Demand interval lengths: Programmable from 1 to 60 minutes Demand calculation: Present, Previous, Cumulative, Continuous Cumulative, Projected, 5 Highest Peak Demand Energy calculation: Basic Wh and VAh Time: Line sync: Power line frequency Crystal sync: +0.01% @ 25°C; +0.025% over full temperature range Battery: +0.005%@25°C; +0.005% to -0.02% over full temp range
Display	Nine-digit liquid crystal display Annunciator height: 0.088” Six-digit data height: 0.4” Display duration: 1-15 seconds Three-digit code number height: 0.24” 3-segment electronic load indicator

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