

Consert® *Tru* Load Device Controller Data Sheet



Part Numbers:

- CDCZ24S-3.1 (No Relay)
- CDCZ24RS-NC-3.1 (Relay)
- CDCZ24RS-NO-3.1 (Relay)

Overview:

Utilizing standards-based hardware and hardware interfaces to ensure universal connectivity, the Consert® *Tru* Load Device Controller measures metrology data of devices of up to 50 amps of service for HVACs and 30 or 40 amps of service for electric water heaters, and pool pumps in compliance with ANSI C12.1 accuracy requirements. This real-time empirical data collection is aggregated and delivered to the Consert *Tru* Smart Energy Gateway via the onboard ZigBee® wireless radio communications. Offering a new level of intelligence and control at the device level, the Consert Load Device Controller when paired with the Smart Energy Gateway empowers homeowners and small businesses to participate in cost saving activities overseen by their utilities that help both parties benefit economically and environmentally.

Features and Benefits

- True load management:
 - Real-time data collection
 - Real-time data reporting
 - Empirical power measurement compliant with ANSI C12.1 accuracy requirements
 - Absolute device management by utility and its customers
- Rated to 50 AMPS without a relay (CDCZ24S 3.1)
- Rated to 40 AMPS/2HP (CDCZ24RS-NO-3.1) with a relay
- Rated to 30 AMPS/1.5 HP (CDCZ24RS-NC-3.1) with a relay
- Firmware over-the-air upgradeable
- Wireless ZigBee® 1.0 SEP upgradable to 2.0
- Controls HVACs, heat pumps, hot water heaters, pool pumps, and other high consumption electrical equipment
- Status and error LEDs

Power Measurement

- Power Measurement compliant with ANSI C12.1 accuracy requirements
- Measured Values:
 - RMS Voltage
 - RMS Current
 - Apparent Power
 - Reactive Power
 - Accumulative Energy
 - Load Duty Cycle
- Supports wide-band (line harmonics) and narrow-band (no harmonic) measurements



Human Interface

Externally visible diagnostic status LEDs

Environment

- Industrial temperature rated parts (-40°C to +85°C)
- Assembled device controller temperature range -40° C to +65° C
- UL916 rated enclosure; UL50 and UL50E ratings pending

Electrical

- Wide voltage range support - 120-240 VAC

Security

- Rain-tight enclosure with plastic padlock seal for tamper detection
- Chip security
- Secure two-way communications

Communications

- ZigBee® SEP 1.x upgradable to 2.0

Regulatory Information

- FCC ID: YJ4CMGYZCDCZ31
- Certified to UL916
- Complies with Part 15 of the FCC Rules.
- USA-Federal Communications Commission (FCC)
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Cautions:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- **Exposure to Radio Frequency Radiation.**

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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The Consert solution is covered by U.S. Pat. No. 7,715,951 and other U.S. and international patents pending. A list of patents and published patent applications relating to the Consert solution may be found at www.consert.com.

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