

# C1S13CS-0ABA152 (Master)

#### C1L13CS-0ABA152 (Link)

The Server Technology® PRO1 Smart PDU provides local LED input current monitoring, allowing IT personnel to determine safe levels of loading on a per-phase basis while installing equipment into the rack/cabinet. The integral PIPS® technology provides billing-grade accurate measurement of current, voltage, active power, apparent power, power factor, crest factor, and accumulated energy at the input. These power data points, along with temperature and humidity measurements (provided via optional probes), are accessible through the built-in Web and CLI interfaces as well as through SNMP. The PRO1 Smart "Master" PDU can be connected to as many as three (with optional module) PRO1 Smart "Link" PDU to extend the network access to the redundant or secondary power feed without the risks of a daisy chain linking configuration.

# **Key Features**



#### **Network Monitoring**

Gain access to valuable data through connections including HTTP(S), SSH, Telnet, SNMP, (S)FTP, SMTP, Syslog, LDAP(S), RS-232 serial, and more.



#### **Hot-Swap Network Card**

Network access is ensured when power is lost to the Master unit with backup power provided by the primary link unit.



#### Star Multi-Linking

Provides the ability to link up to four power circuits using one IP address. Primary link provides backup power to network card.



#### Temperature/Humidity Monitoring

Master and Link units each support two external 10' (3m) T/H probes. Receive SNMP-based alerts and email notifications.



#### **Auto-Flip Current Display**

Easy-to-read LEDs display current per phase to help prevent overloads and simplify three-phase load balancing in high-density cabinets. "Smart"



### Per-Inlet Power Sensing

Meets ANSI C12.1 for billing-grade accuracy of Current per phase. PIPS includes voltage, active power, apparent power, power factor, and energy.



### **Branch Circuit Protection**

This PDU meets the UL and IEC 60950-1 requirement for branch circuit protection through use of UL489 rated magnetic-hydraulic circuit breakers or UL248 fuses.



### **High Density Outlet Technology**

The highest outlet density available in a network connected PDU. Meets IEC C13 and C19 specifications, plus high native retention and UL94V-0 flame rating.



#### **High Temperature Rating**

This product has been tested and approved for safe and reliable operation in 60 °C data center environments.



### Flexible Mounting

Includes standard button mounts along with provisions for custom mounting brackets (contact Server Technology for details).



### **Color Identification**

Choose from six colors to designate circuits for rack PDUs in the data center. Color options include Blue, Red, Green, White, Yellow, and Black.



### Cisco EnergyWise<sup>1</sup> Compliant

Meets the requirements set forth by Cisco Systems, Inc. for its EnergyWise program for monitoring of device energy.

# **Inputs**

Input Voltage (V):	208
Input Plug:	IEC C20 100-240V Inlet
Input Current (A):	20
Input Current Rated (A):	16
Input Power Capacity (kW):	3.3
Requires PTCORD-L1, -L2, -L3, -L4, -L5, -L6, or -L7	

# **Outputs**

Connector	Rating
(11) x IEC 60320/C13	North American Rating: ≤ 12A @208V L-L (15A Peak) Global Rating: ≤ 10A @230V L-N
(2) x IEC 60320/C19	North American Rating: ≤ 16A @208V L-L (20A Peak) Global Rating: ≤ 16A @230V L-N

### **Branch Circuit Protection**

UL498 Compliant 2-pole, 20A trip circuit breakers, two (2) branch, rating: ≤ 16A, 5 kAlC Interrupt Rating

# **Physical**

Dimensions: 37.25in tall x 1.75in wide x 2.25in deep [947mm x 45mm x 58mm]

## **Environmental**

Operating Environment:  $32^{\circ}F$  to  $140^{\circ}F / 0^{\circ}C$  to  $60^{\circ}C | 8\%RH$  to 90%RH non-condensing | 6,500ft/2km elevation Storage Environment:  $-40^{\circ}F$  to  $185^{\circ}F / -40^{\circ}C$  to  $85^{\circ}C | 8\%RH$  to 90%RH non-condensing | 50,000ft/15km elevation Quiescent / Unloaded Power Draw: < 10W for all configurations

# **Communications & Security**

10/100 Mbps Ethernet (RJ-45 connector), RS-232 serial (RJ-45 connector)

Two (2) temperature/humidity sensor inputs (4P4C), Link port (RJ-12) - {also on Link PDU}

Web-browser GUI and command-line interface (CLI): HTTP/HTTPS, TLSv1.2, SSHv2, Telnet, SNMPv2c and v3 (GET, SET, Traps), IPv4 and IPv6, LDAPv3/LDAPS, TACACS+, RADIUS, FTP/SFTP

### Certifications

#### North American:

cTUVus Mark to UL 60950-1:2007 R10.14 CAN/CSA-C22.2 No. 60950-1-07+A1:2011+A2:2014 FCC Part 15 Subpart B Sections 15.107 and 15.109, Class A

#### Global:

TUV T-Mark to EN 60950-1:2006+A11+A1+A12+A2
EMC to EN55024 (2010) and EN55032 (2012)
CE Compliant
RoHS, European Hazardous Materials Directive (Recast) 2011/65/EU
WEEE Compliant

# **Measurement Accuracy**

### **Input Measurement Accuracy:**

LED Current =  $\pm$  10% at 0.1 amp (0.3 - 9.9 amps) and 1 amp (> 9.9 amps) resolution GUI Current =  $\pm$  1% at 0.01 amp resolution (above 0.25 amp) Voltage =  $\pm$  1% at 0.1 volt resolution (nominal  $\pm$  10%) Active Power =  $\pm$  1% at 1 watt resolution Apparent Power =  $\pm$  1% at 1 volt-amp resolution Power Factor =  $\pm$  3% at 0.01 resolution Crest Factor =  $\pm$  10% at 0.1 resolution

### **Optional Accessories**

EMTH-1-1 Combination Temperature/Humidity Probe, 10ft (3m)

EMCU-1-1B Environmental Monitor adding:

Energy = ± 1% at 0.1 kilowatt-hour resolution

- Two (2) EMTH-1-1 temperature/humidity ports (one probe included)
- One (1) EMWS-1-1 water sensor port (probe sold separately)
- Four (4) dry contact (NO/NC) monitoring points
- One (1) 8-bit analog-to-digital converter (0 to 5VDC)

KIT-STEYE-01 or -10 provides access to key metrics through Bluetooth

KIT-SUS-01 StartUp Stick™ for rapid configuration

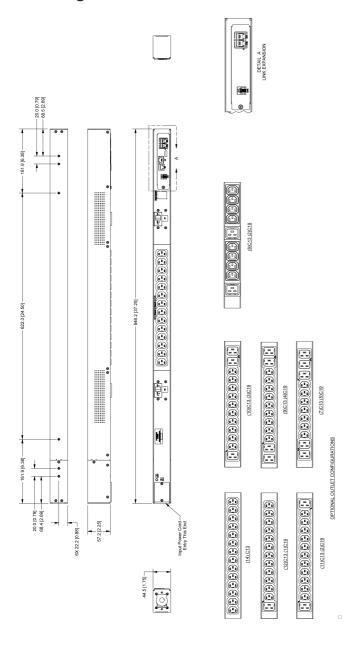
SPM (Sentry® Power Manager):

- Monitor and manage multiple PDUs from a single point
- Monitor and manage alarm conditions
- Create reports and trends on stored data
- Analyze power usage per phase
- Optional appliance or virtual version
- Vmware Ready<sup>2</sup>

### Mounting Brackets

- Buttons (KIT-0020) included for tool-less mounting (see diagram)
- See the Mounting Bracket Guide for further suggestions
- Custom mounting options available. Contact your local Server Technology representative Cable Retention Devices for non-locking cords
- EZip
- Cable Sleeve

# **Drawings**



### **Additional Information**

**Warranty:** Server Technology offers a standard 2-year limited parts & labor warranty. Extended support is available at the time of purchase. See the Support Options on the website, or contact your local Server Technology representative for more information.

Patents: Information on Server Technology patents is available on the website at:

www.servertech.com/products/patents

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- <sup>3</sup> "Global" models are typically for use in countries outside of North America. Contact your Server Technology representative for more information about which models are appropriate for your application.

This datasheet was generated on: 5-Jan-2018

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#### **North America Headquarters**

1040 Sandhill Road Reno, Nevada 89521 1-775-284-2000 Tel 1-800-835-1515 Toll Free 1-775-284-2065 Fax sales@servertech.com www.servertech.com www.servertechblog.com

### Int'l West Headquarters

Fountain Court

2 Victoria Square Victoria Street St. Albans AL1 3TF United Kingdom +44 (0) 1727 884676 Tel +44 (0) 1727 220815 Fax salesint@servertech.com

#### Int'l Central Headquarters

10th + 11th Floor Westhafen Tower Westhafenplatz 1 60327 Frankfurt Germany +49 697 1045 6205 Tel +49 697 1045 6450 Fax salesint@servertech.com

### Int'l East Headquarters

Level 43, AIA Tower 183 Electric Road, North Point, Hong Kong +852 3975 1828 Tel +852 3975 1800 Fax salesint@servertech.com

#### Int'l Mid-East Headquarters

RMZ Infinity 1st floor Tower D Municipal No. 3 Old Madras Road Benniganahalli Village Krishnarajpuram Hobli Bangalore, 560016 India +91 99022 44534 Tel salesint@servertech.com









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