

## CSG-24V2A415A1 (Master)

### CLG-24V2A4 15A1 (Link)

The Server Technology® Smart POPS 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® and POPS® technology provides accurate measurement of current (billing-grade), voltage, active power, apparent power, power factor, crest factor, and accumulated energy at the input and at each output. 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 Smart POPS "Master" PDU can be connected to a Smart POPS "Link" PDUs to extend the network access to the redundant or secondary power feed.

## 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.



### 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 POPS"



### Per-Outlet Power Sensing

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



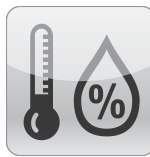
### High Retention Locking Outlets

Receptacles have high retention and are compatible with P-Lock type power cords.



### 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.



### Temperature/Humidity Monitoring

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



### 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.



### Flexible Mounting

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

## Inputs

Input Voltage (V):	208
Input Plug:	IEC C20 200-240V Inlet
Input Current (A):	20
Input Current Rated (A):	16
Input Power Capacity (kW):	3.3
<i>Requires PTCORD-L1, -L2, -L3, or -L4</i>	

## Outputs

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

## Branch Circuit Protection

UL489 Compliant 2-pole, 20A trip circuit breakers, two (2) branch, rating: ≤ 16A, 5 kAIC Interrupt Rating

## Physical

Dimensions: 61.0in tall x 1.75in wide x 3.5in deep [1550mm x 45mm x 89mm]

## Environmental

**Operating Environment:** 32°F to 122°F / 0°C to 50°C | 8%RH to 90%RH non-condensing | 6,500ft/2km elevation

**Storage Environment:** -40°F to 185°F / -40°C to 85°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  
Energy =  $\pm 1\%$  at 0.1 kilowatt-hour resolution

## Output Measurement Accuracy

GUI Current =  $\pm 1\%$  at 0.01 amp resolution (above 0.15 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  
Energy =  $\pm 1\%$  at 1 watt-hour resolution

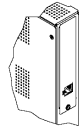
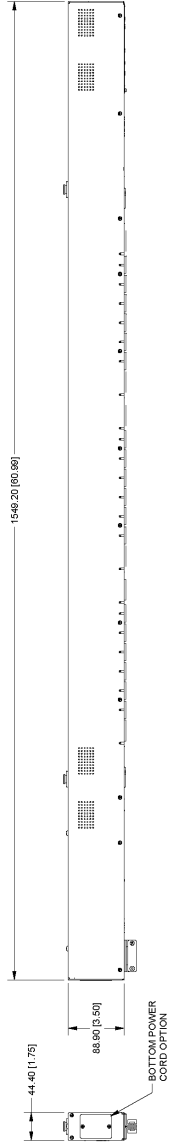
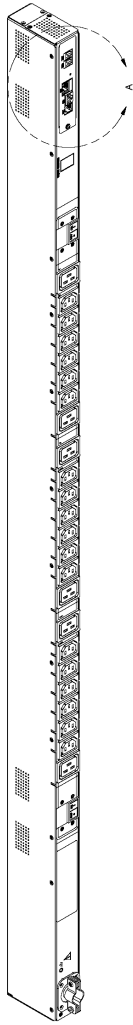
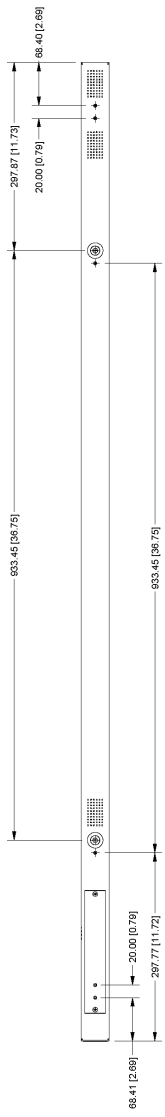
# Optional Accessories

EMTH-2-10 Combination Temperature/Humidity Probe, 10ft (3m)  
EMCU-1-1C Environmental Monitor adding:  
- Two (2) EMTH-2-10 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)

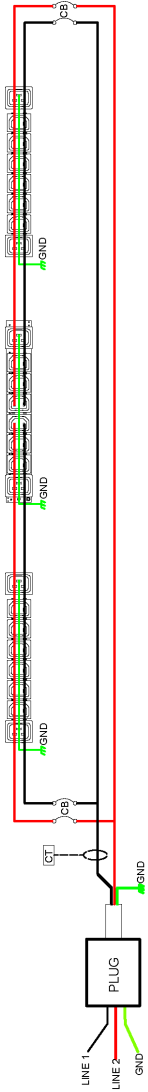
KIT-SUS-01 StartUp Stick™ for rapid configuration  
Mounting Brackets  
- Buttons (KIT-0020) included for tool-less mounting (see diagram)  
- See the Mounting Bracket Guide for further suggestions  
- Custom mounting options available. Contact your local Server Technology representative

Cable Retention Devices for non-locking cords  
- EZip  
- Cable Sleeve

# Drawings



DETAIL A  
SCALE 1/4.5  
LINKED UNIT



## 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](http://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.

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