

Server Technology Technical Data Sheet

PRO2™ Switched CDU®

STV-4502: 20-30A 208V 3-phase input with
(24)C13 and (6)C19 outlets



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The Server Technology® PRO2 Switched CDU provides control of outlet power and 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 PRO2 Switched "Master" CDU can be connected to as many as three PRO2 Switched "Link" CDUs to extend the network access to the redundant or secondary power feed without the risks of a daisy chain linking configuration.



Server Technology
Quality Rack Power Solutions

Features



Network Monitoring

The PRO2 hot-swappable network card provides for HTTP(S), SSH, Telnet, SNMP, (S)FTP, SMTP, Syslog, LDAP(S), RS-232 serial, and more.



Branch Current Monitoring

PRO2 monitors current at each breaker branch and provides SNMP-based alerts and emails on high usage that risks a tripped circuit.



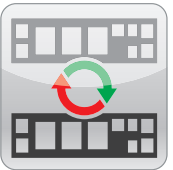
Star Multi-Linking

PRO2 provides the ability to link up to four power circuits using one IP address. Primary link provides backup power to network card.



Branch Circuit Protection

PRO2 meets the UL and IEC 60950-1 requirement for branch circuit protection through use of UL489 rated magnetic-hydraulic circuit breakers.



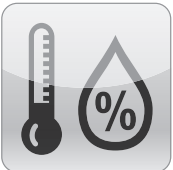
Hot-Swap Network Card

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



ST Eye Bluetooth Ready

The best CDU LCD is the one in your hand. Attach the ST Eye™ Bluetooth module to PRO2 for access to power data and system settings.



Temperature/Humidity Monitoring

PRO2 Master and Link units each support two external 10' (3m) T/H probes. Receive SNMP-based alerts and email notifications.



High Retention Locking Outlets

PRO2 receptacles have high retention and are compatible with Server Technology's LockedIn™ power cords (sold separately).



Outlet Control

On PRO2 Switched CDUs, cycle power to individual outlets or groups of outlets to reboot servers. Or, power off unused receptacles.



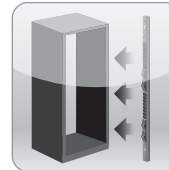
Power Pivot™

The 90 degree rotatable power cord allows for standardized deployment at any facility no matter where power must be routed.



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.



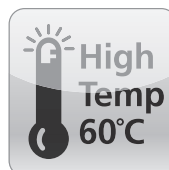
Flexible Mounting

PRO2 includes standard button mounts along with provisions for custom mounting brackets (contact Server Technology for details).



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.



High Temperature Rating

This product has been tested and approved for safe and reliable operation in 60°C (140°F) data center environments.



Color Identification

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



Cisco EnergyWise¹ Compliant

PRO2 meets the requirements set forth by Cisco System, Inc. for its EnergyWise program for monitoring of device energy.

Specifications

North America

Master CDU	Link CDU	Input Plug	Input Current	Input Voltage	Rated Power
STV-4502D	SEV-4502D	NEMA L15-20P, 10ft, 4-C, 12AWG	≤ 16A (20 peak)	208V, L-L, 50/60Hz	5764W @208V
STV-4502E	SEV-4502E	NEMA L15-30P, 10ft, 4-C, 10AWG	≤ 24A (30 peak)	208V, L-L, 50/60Hz	8646W @208V
STV-4502L	SEV-4502L	NEMA L21-20P, 10ft, 5-C, 12AWG	≤ 16A (20 peak)	120/208V, L-L, 50/60Hz	5764W @208V
STV-4502M	SEV-4502M	NEMA L21-30P, 10ft, 5-C, 10AWG	≤ 24A (30 peak)	120/208V, L-L, 50/60Hz	8646W @208V

Input measurement accuracy

- LED Current = ± 10% 0.1 amp (1.0 – 9.9amps) and 1 amp (>9.9amps) resolution
- GUI Current = ± 1% at 0.01 amp resolution (above 0.5 amp)
- Voltage = ± 1% at 0.1 volt resolution (nominal ± 10%)
- Active Power = ± 1% at 1 watt resolution
- Apparent Power = ± 1% at 1 volt-amp resolution
- Power Factor = ± 3% at 0.01 resolution
- Crest Factor = ± 10% at 0.1 resolution
- Energy = ± 1% at 0.1 kilowatt-hour resolution

Output measurement accuracy

- Current = ± 1% at 0.01 amp resolution (above 0.5 amp)
- Voltage = ± 1% at 0.1 volt resolution (nominal +/-10%)
- Active Power = ± 1% at 1 watt resolution
- Apparent Power = ± 1% at 1 volt-amp resolution
- Power Factor = ± 3% at 0.01 resolution
- Crest Factor = ± 10% at 0.1 resolution
- Energy = ± 1% at 1 watt-hour resolution

Branch measurement accuracy

- Current = ± 3% at 0.01 amp resolution (above 0.5 amp)

Branch Circuit Protection

- UL489 compliant 2-pole, 20A trip circuit breakers, Three (3) branches, Rating: ≤ 16A @208

Specifications Cont.

Physical/Environmental

- Dimensions: 69.00" (1753 mm) tall x 2.19" (56 mm) wide x 2.25" (57 mm) deep | Weight: 25 lbs (11.4 kg)
- Shipping Dimensions: 73" x 7" x 3" (186 cm x 18 cm x 8 cm) | Weight: 26 lbs (11.8 kg)
- Highlight Color: Choose Black, White, Red, Green, Blue, Yellow
- Operating Environment: 32°F to 140°F / 0°C to 60°C | 8%RH to 90%RH non-condensing | 6,500ft/2000m 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 and 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 CDU}
- Web-browser GUI and command-line-interface (CLI): HTTP/HTTPS, SSLv3/TLSv1, SSHv2, Telnet, SNMPv2c and v3 (GET, SET, Traps), IPv4 and IPv6, LDAPv3/LDAPS, TACACS+, RADIUS, FTP/SFTP

Certifications

- cTUVus Mark to UL 60950-1:2007 and CAN/CSA 22.2 No. 60950-1-07 + A1:2011
- EMC to EN 55022 Class A, EN 55024, CISPR 22 Class A
- FCC Class A, Part 15
- RoHS/WEEE

Optional Accessories

- EMTH-1-1 Combination Temperature/Humidity Probe, 10ft (3m)
- EMCU-1-1B Environmental Monitor adding:
 - 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)
- 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 Ready²



- 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
 - Wire Bails

Specifications Cont.

- Device / Output LockedIn™ Power Cords
- UL Rated

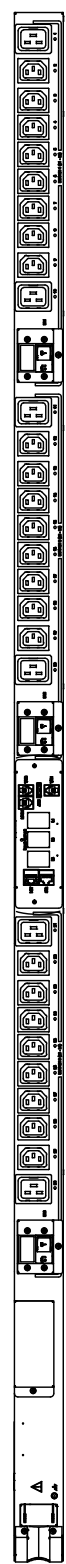
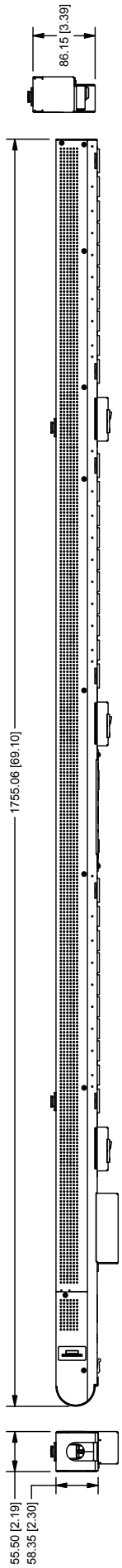
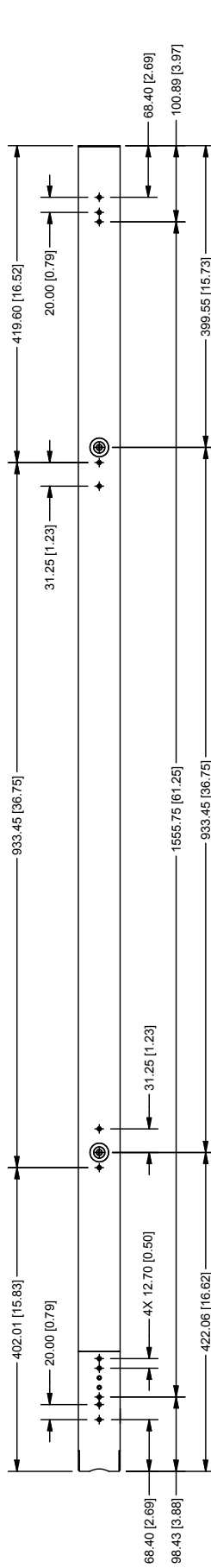
Part Number	Plug	Receptacle	Length	Color
CAB-S1413-CA	C14	C13	1.5 ft (0.45 m)	Black
CAB-S1413-FA(FR)	C14	C13	3.0 ft (0.9 m)	Black (Red)
CAB-S1413-NA(NR)	C14	C13	6.0 ft (1.8 m)	Black (Red)
CAB-S1413-WA	C14	C13	10.0 ft (3 m)	Black
CAB-S1419-FA	C14	C19	3.0 ft (0.9 m)	Black
CAB-S1419-NA	C14	C19	6.0 ft (1.8 m)	Black
CAB-S2013-CA	C20	C13	1.5 ft (0.45 m)	Black
CAB-S2013-FA	C20	C13	3.0 ft (0.9 m)	Black
CAB-S2013-NA	C20	C13	6.0 ft (1.8 m)	Black
CAB-S2019-CA	C20	C19	1.5 ft (0.45 m)	Black
CAB-S2019-FA(FR)	C20	C19	3.0 ft (0.9 m)	Black (Red)
CAB-S2019-NA(NR)	C20	C19	6.0 ft (1.8 m)	Black (Red)

- VDE Rated

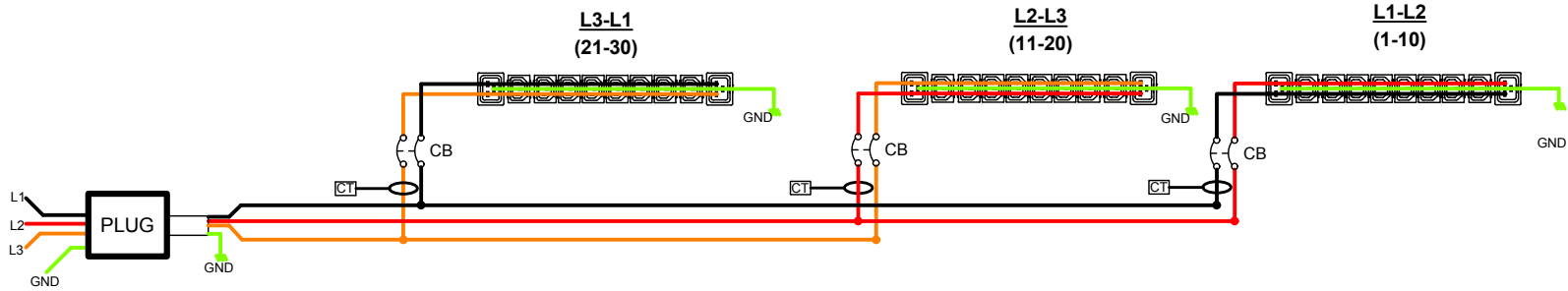
Part Number	Plug	Receptacle	Length	Color
CAB-S1413-CV	C14	C13	0.5 m (20 in)	Black
CAB-S1413-GV(GS)	C14	C13	1.0 m (39 in)	Black (Red)
CAB-S1413-PV(PS)	C14	C13	2.0 m (78 in)	Black (Red)
CAB-S2013-GV	C14	C13	1.0 m (39 in)	Black
CAB-S2013-PV	C14	C13	2.0 m (78 in)	Black
CAB-S2019-CV	C14	C19	0.5 m (20 in)	Black
CAB-S2019-GV(GS)	C20	C19	1.0 m (39 in)	Black (Red)
CAB-S2019-PV(PS)	C20	C19	2.0 m (78 in)	Black (Red)

- Additional sizes may be available. Contact your local Server Technology representative.

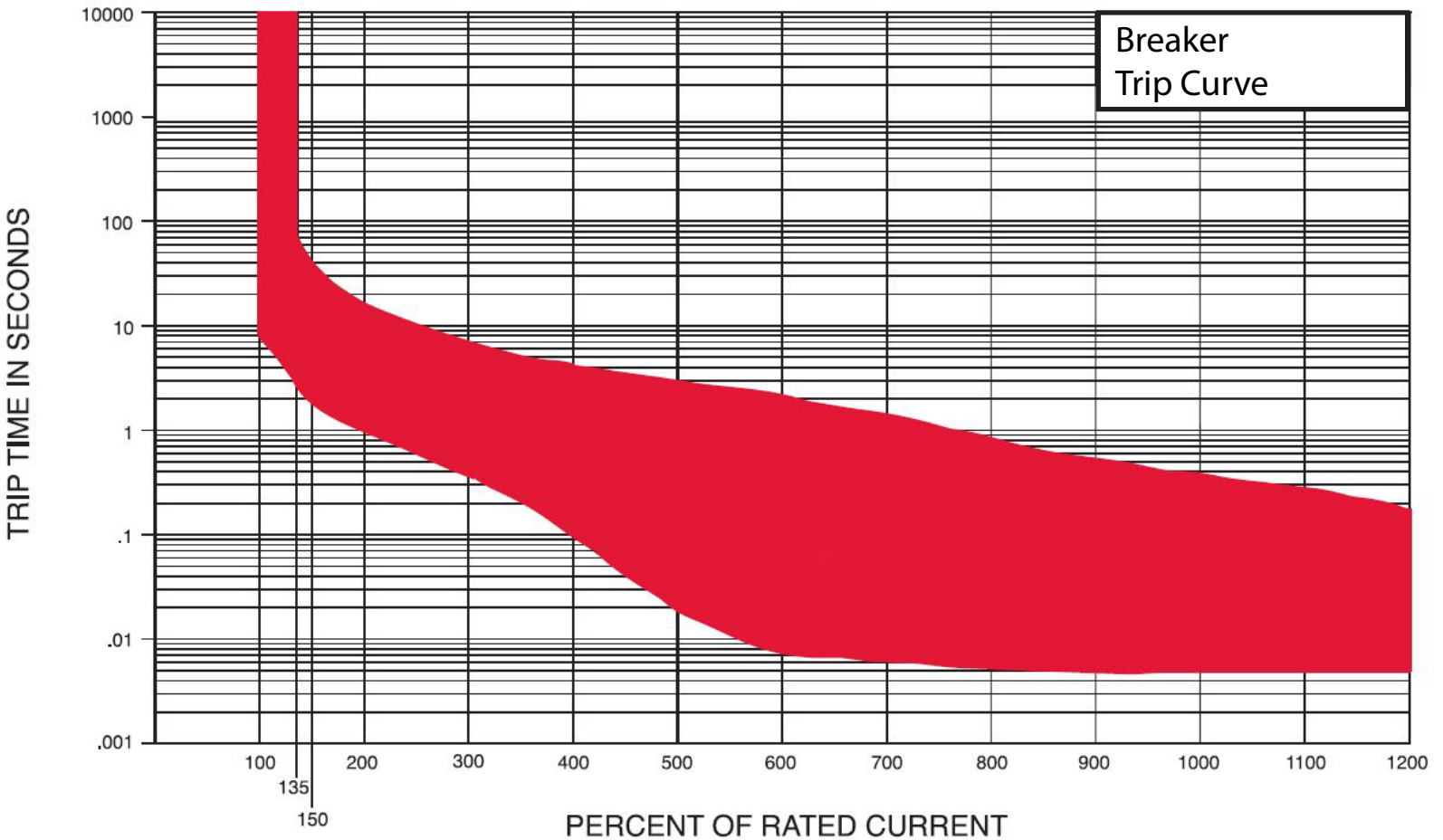
Dimensional Specifications



Wiring and Breaker Trip Curve



Part Number	Expansion	Certification	Input	Output	Outlet Type and Ratings	Branch Circuit Rating
Master	Expansion	Rating Standard	Rating	Input Type	Total Output Rating	Rating
C2W30VA-DBLE2SE2 (STV-4502D)	C2X30VA-DBLE2SE2 (SEV-4502D)	cTUVus and/or cULus	208V 3P+PE, 50/60Hz; 16A	NEMA L15-20P	208V, 50/60Hz; <= 27.7A	IEC 60320: 6xC19 <= 16A each, 24xC13 <= 12A each 3 branches, each <= 16A
C2W30VA-DCLE2SE2 (STV-4502E)	C2X30VA-DCLE2SE2 (SEV-4502E)	cTUVus and/or cULus	208V 3P+PE, 50/60Hz; 24A	NEMA L15-30P	208V, 50/60Hz; <= 41.5A	IEC 60320: 6xC19 <= 16A each, 24xC13 <= 12A each 3 branches, each <= 16A
C2W30VA-YBLE2SE2 (STV-4502L)	C2X30VA-YBLE2SE2 (SEV-4502L)	cTUVus and/or cULus	120/208V 3P+N+PE, 50/60Hz; 16A	NEMA L21-20P	208V, 50/60Hz; <= 27.7A	IEC 60320: 6xC19 <= 16A each, 24xC13 <= 12A each 3 branches, each <= 16A
C2W30VA-YCLE2SE2 (STV-4502M)	C2X30VA-YCLE2SE2 (SEV-4502M)	cTUVus and/or cULus	120/208V 3P+N+PE, 50/60Hz; 24A	NEMA L21-30P	208V, 50/60Hz; <= 41.5A	IEC 60320: 6xC19 <= 16A each, 24xC13 <= 12A each 3 branches, each <= 16A



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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