

CPS3-SVE-S300AC



300 W AC POWER SUPPLY FOR CompactPCI® SERIAL

- ▶ Hot-plug and redundancy
- ▶ Advanced monitoring I²C/PMBUS
- ▶ Wide input range 90 – 264 VAC
- ▶ Extended temperature, full rating
- ▶ EMI EN55022 Class B, UL, cUL, DEMKO

POSSIBILITIES START HERE



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300 W AC POWER SUPPLY FOR CompactPCI® SERIAL

Flexible usage

The 300 Watt power supply CPS3-SVE-S300AC is flexible for many operational conditions. It has a wide input range of 90-264 VAC, and operates under extended temperature from -40 °C to +70 °C at full rating. It provides 12 V output and 5 V standby as defined for CompactPCI® Serial.

Advanced feature set for high system reliability

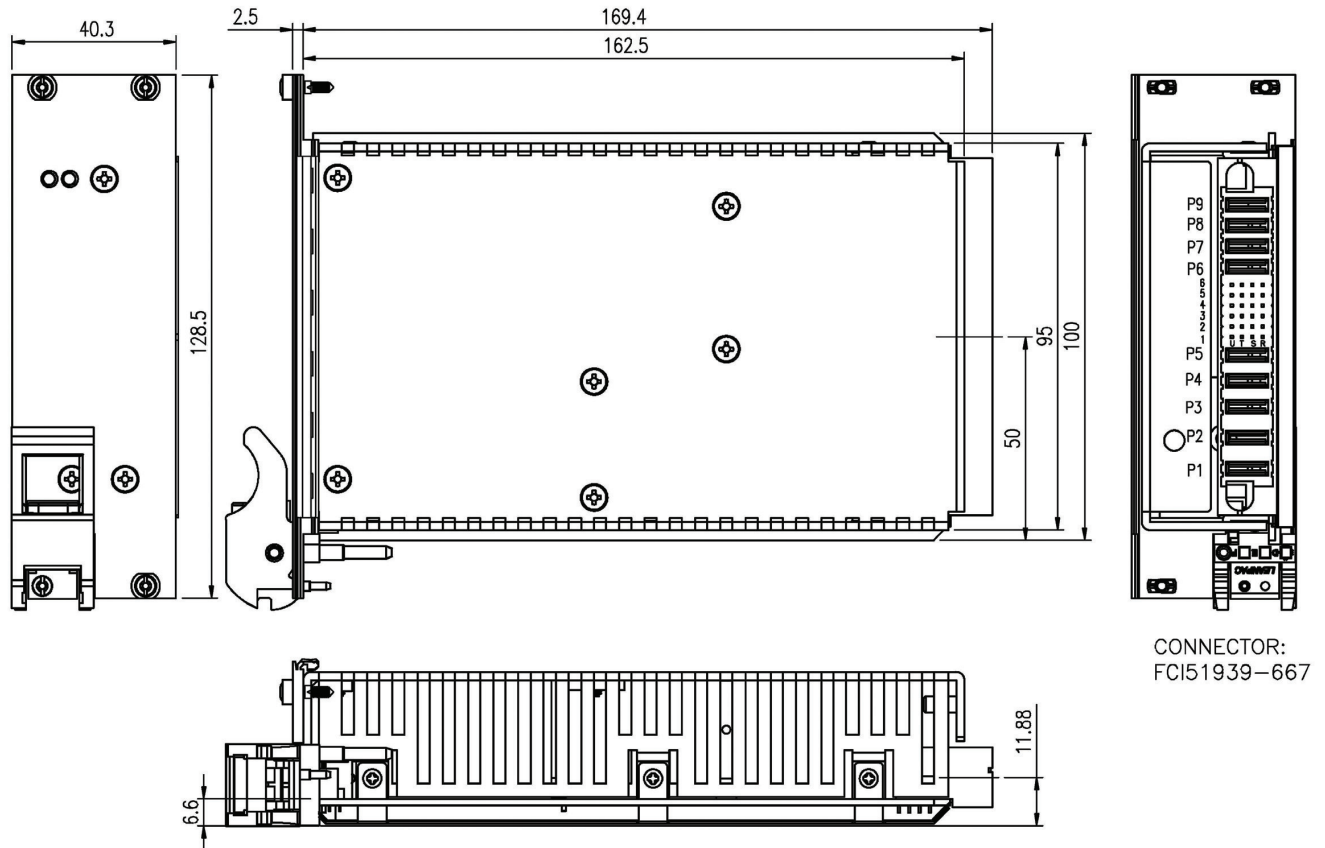
The CPS3-SVE-S300AC provides the full feature set as recommended by the CompactPCI® Serial community. This includes the specification of the power supply rear connector. Redundancy and hot-plug, several protection and regulation features, advanced monitoring functions via I²C/PMBUS as well as its hold-up time make the power supply a reliable backbone of every CompactPCI® Serial platform.

Easy system integration and field maintenance

Integration by hot-plug from the frontside to a backplane connector - no cabling, no power down of redundant systems - this makes the application more reliable and maintenance in the field an easy matter.

Mating backplane connector and AC input

The respective mating connector is required on the system backplane. This can be provided either as part of the CompactPCI® Serial backplane, or by a one-slot power backplane which is connected to the CompactPCI® Serial backplane. CP-MKIT-AC-IN is the related AC Input Kit and Integration Service for any integrated card cage requested from Kontron, suitable for CPS-SVE-S300AC or any other AC power supply.

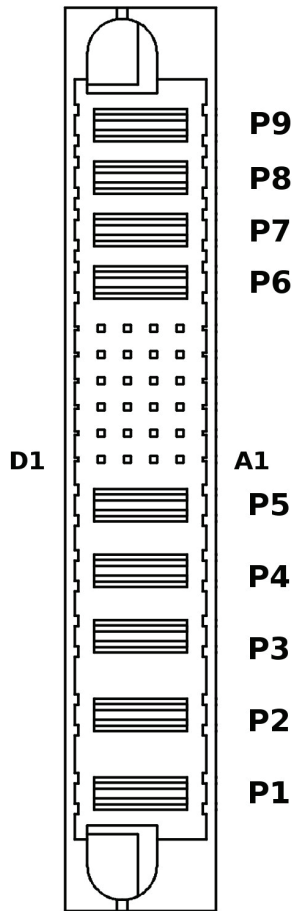


// Figure: Mechanical dimensions, CPS3-SVE-S300AC

► TECHNICAL INFORMATION

| | | |
|-----------------------------|--|---|
| MECHANICAL | <p>FORMFACTOR MOUNTING CONNECTOR</p> <p>DIMENSION L x W x H WEIGHT</p> | <p>3U 8HP Cassette</p> <p>Plug into power supply slot, to backplane mating connector SSI-type connector (FCI 51939-667 or identical). The mating connector is either included in the CompactPCI® Serial backplane, or available with a one-slot power backplane to be mounted into the chassis and connected to the CompactPCI® Serial backplane. Reference of the mating connector: Power Backplane CPS3-BPP</p> <p>169.4 x 128.5 x 40.3 mm including face plate and connector</p> <p>tbd.</p> |
| INPUT | <p>AC INPUT VOLTAGE</p> <p>INPUT FREQUENCY</p> <p>EMI FILTER</p> <p>INRUSH CURRENT</p> <p>INPUT CURRENT</p> <p>ISOLATION</p> <p>LEAKAGE</p> | <p>90 - 264 VAC</p> <p>50 - 60 Hz</p> <p>EN55022 Class B, FCC Part 15</p> <p>32 A at 230 VAC</p> <p>1.3 A</p> <p>4242 VDC (input to output)</p> <p><0.3 mA</p> |
| OUTPUT AND REGULATION | <p>DC OUTPUT POWER</p> <p>OUTPUT VOLTAGE</p> <p>AUXILIARY SUPPLY</p> <p>HOLD UP TIME</p> <p>TEMPERATURE COEFFICIENT</p> <p>LONG TERM STABILITY</p> <p>OUTPUT CURRENT</p> <p>LOAD REGULATION</p> <p>LINE REGULATION</p> <p>RIPPLE&NOISE</p> <p>TRANSIENT RESPONSE</p> <p>EFFICIENCY</p> <p>ACTIVE PFC</p> <p>SWITCHING FREQUENCY</p> <p>ORing FET</p> <p>ACTIVE CURRENT SHARE (S2)</p> <p>PASSIVE CURRENT SHARE</p> | <p>Maximum continuous output power 300 W full rating, with 20CFM fan cooling required</p> <p>12 V</p> <p>5 V/2.5 A</p> <p>20 ms min.</p> <p>+/-0.01 % / °C</p> <p>0.01 % after 20 minutes warm-up</p> <p>0 A min., 24 A max.</p> <p>+/-1 %</p> <p>+/-0.5 %</p> <p>1 % Pk to Pk</p> <p>2 % Maximum deviation; returns to initial conditions in 1 msec max.</p> <p>90 % (for 220 VAC)</p> <p>0.99</p> <p>134 KHz</p> <p>Provided for redundant operation</p> <p>12 V Output will current share within 5 % when interconnected by a single wire</p> <p>5 V SBY droop type</p> |
| PROTECTION AND CONTROL | <p>OVERLOAD PROTECTION</p> <p>OVERVOLTAGE PROTECTION</p> <p>SHORT-CIRCUIT PROTECTION</p> <p>THERMAL PROTECTION</p> <p>REMOTE SENSING (R2/E3)</p> <p>PS_ON (F3)</p> <p>ENABLE (R6)</p> <p>FAL/PWR_FAIL (U2)</p> <p>DEG (U5)</p> <p>PS PRESENT (H3)</p> <p>I²C / PMBUS</p> <p>LED INDICATORS</p> | <p>The feature will reduce the output voltage to a safe dissipation level when the output power rating exceeds 125% of maximum rated power. The unit will automatically return to regulation upon removal of the overload.</p> <p>Set at 115% to 135%. Latching method (recycle AC to restart)</p> <p>The units will withstand a continuous short without damage, it will automatically return to regulation upon removal of the short</p> <p>Yes, built in thermal sensor to protect abnormal temperature conditions</p> <p>On 12 V output only</p> <p>Digital input: A logic low enables the main output, a low shall not source > 1 mA</p> <p>Digital input: when driven high, main output is disabled, when low, main output state is as controlled by PS_ON</p> <p>Digital output, Open Collector, driven high when outputs are in regulation. It will go low minimum 1 ms prior to output going out of regulation</p> <p>Digital output, Open Collector, temperature warning signal.</p> <p>A TBD temperature will change signal state from Hi to Low or Low to Hi (programmable preferences)</p> <p>Digital Output, pulled low via 100 Ohm resistor</p> <p>Monitors temperature, output voltage, and output current; connects to a serial NVRAM which is programmed with serial number, PMBUS</p> <p>Standard to allow monitoring of overall operation of power supply</p> <p>Bicolor LED: Green LED: all outputs operating within specifications, Red LED: power supply out of specification</p> |
| SAFETY, REGULATORY, AND EMI | SAFETY AGENCY APPROVALS | <p>UL/CUL: 60950-1:2005 (2nd Ed); Am 1:2009. DEMKO: EN 60950-1:2006, EN 60950-1:2006/A11:2009 and A12:2010 and A12:2011</p> |
| ENVIRONMENTAL | <p>OPERATING TEMPERATURE</p> <p>STORAGE TEMPERATURE</p> <p>HUMIDITY</p> <p>COOLING</p> | <p>-40 °C to +70 °C continuous duty, full rating</p> <p>-40 °C to +85 °C</p> <p>Up to 95 % non-condensing</p> <p>20CFM forced air cooling required</p> |

► BACKPLANE CONNECTOR SCHEME AND PIN ASSIGNMENT



| | |
|----|-------|
| P9 | +12 V |
| P8 | +12 V |
| P7 | GND |
| P6 | GND |

| | | | | | | | |
|----|------------|----|--------|----|-------------|----|-------------|
| D6 | +5 STB | C6 | +5 STB | B6 | GND | A6 | EN# |
| D5 | DEG# | C5 | +5 STB | B5 | I2C SCL | A5 | I2C SDAA2 |
| D4 | GND | C4 | A0 | B4 | A1 | A4 | A2 |
| D3 | PS Present | C3 | GND | B3 | PS_ON# | A3 | +12 V Sense |
| D2 | PWR Fail# | C2 | NC | B2 | +12 V Share | A2 | RTN Sense |
| D1 | NC | C1 | NC | B1 | NC | A1 | NC |

| | |
|----|-------|
| P5 | DC In |
| P4 | DC In |
| P3 | PE |
| P2 | N |
| P1 | L |

► ORDERING INFORMATION

| ARTICLE | DESCRIPTION |
|--|--|
| CPS3-SVE-S300AC | CompactPCI® Serial Power Supply 3U 8HP, 300W, 90-264 VAC, nominal voltage /max current: +12V/24A, 5VSB/2.5A. Operating -40 °C to 70 °C full load. Hold-up time min 20ms. Supports hot-plug and redundant operation. Monitoring and control functions (I²C/PMBUS). Frontpanel with bicolor status LED. Forced air cooling required. |
| RELATED PRODUCT OPTION: CPS3-BPP | 3U CompactPCI® Serial Power Backplane, one slot backplane for the SSI-type power connector as specified for CompactPCI® Serial |
| RELATED PRODUCT OPTION: CP-MKIT-AC-IN | AC Input Mounting Kit and Rack Integration Service for 3U CPCI and CPCI-Serial. AC Input Kit 8HP, front or rear side. Integration and connecting of PSU and backplane. System drawing mandatory! |

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