

# » CPS3-SVE-S300AC «



## 300W AC Power Supply for CompactPCI® Serial

- » Hot-plug and redundancy
- » Advanced monitoring I<sup>2</sup>C/PMBUS
- » Wide input range 90 – 264 VAC
- » Extended temperature, full rating
- » EMI EN55022 Class B, UL, cUL, DEMKO

## CPS3-SVE-S300AC

### 300W 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 12V output and 5V 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 I<sup>2</sup>C/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.

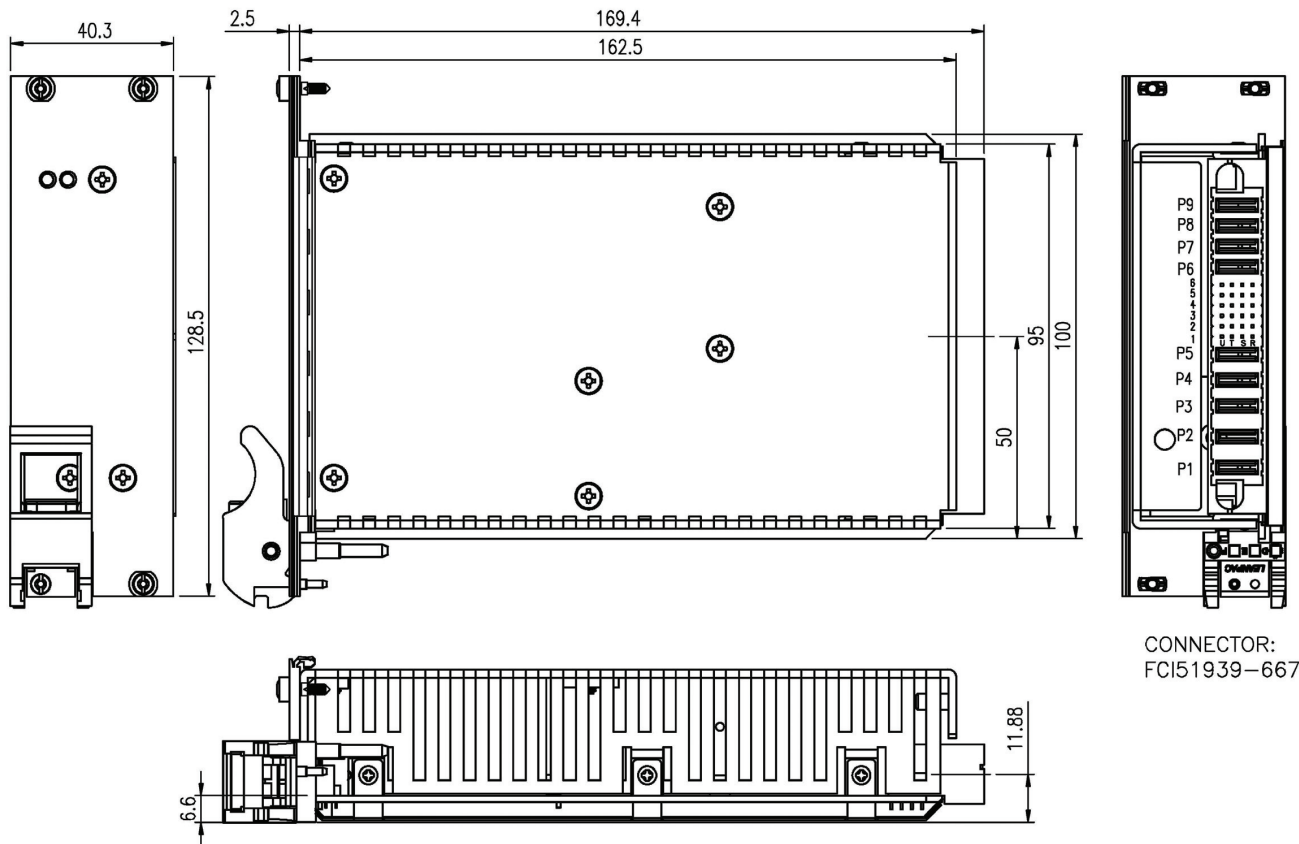


Figure: Mechanical dimensions, CPS3-SVE-S300AC

## Technical Information

NOTE: Preliminary version. Specification subject to change without notice.

**Mechanical**

Formfactor	3U 8HP Cassette
Mounting	Plug into power supply slot, to backplane mating connector
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
Dimension LxWxH	169.4 x 128.5 x 40.3 mm including face plate and connector
Weight	TBD

**Input**

AC Input Voltage	90 - 264 VAC
Input Frequency	50 - 440 Hz
EMI Filter	EN55022 Class B, FCC Part 15
Inrush Current	32A at 230 VAC
Input Current	1.3 A
Isolation	4242 VDC (input to output)
Leakage	<0.3mA

**Output and Regulation**

DC Output Power	Maximum continuous output power 300W full rating, with 20CFM fan cooling required
Output Voltage	12V
Auxiliary Supply	5V/2.5A
Hold Up Time	20 ms min.
Temperature Coefficient	+0.01% / °C
Long Term Stability	0.01% after 20 minutes warm-up
Output Current	0A min., 24A max.
Load Regulation	+1%
Line Regulation	+0.5%
Ripple&Noise	1% Pk to Pk
Transient Response	2% Maximum deviation; returns to initial conditions in 1 msec max.
Efficiency	90% (for 220 VAC)
Active PFC	0.99
Switching Frequency	134 KHz
ORing FET	Provided for redundant operation
Active Current Share (S2)	12V Output will current share within 5% when interconnected by a single wire
Passive Current Share	5V SBY droop type

**Protection and Control**

Overload Protection	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.
Overvoltage Protection	Set at 115% to 135%. Latching method (recycle AC to restart)
Short-circuit Protection	The units will withstand a continuous short without damage, it will automatically return to regulation upon removal of the short
Thermal Protection	Yes, built in thermal sensor to protect abnormal temperature conditions
Remote Sensing (R2/E3)	On 12V output only
PS_ON (F3)	Digital input: A logic low enables the main output, a low shall not source > 1 mA
Enable (R6)	Digital input: when driven high, main output is disabled, when low, main output state is as controlled by PS_ON
FAL/PWR_FAIL (U2)	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
DEG (U5)	Digital output, Open Collector, temperature warning signal. A TBD temperature will change signal state from Hi to Low or Low to Hi (programmable preferences)
PS Present (H3)	Digital Output, pulled low via 100 Ohm resistor
I <sup>2</sup> C / PMBUS	Monitors temperature, output voltage, and output current; connects to a serial NVRAM which is programmed with serial number, PMBUS Standard to allow monitoring of overall operation of power supply
LED Indicators	Bicolor LED: Green LED: all outputs operating within specifications, Red LED: power supply out of specification

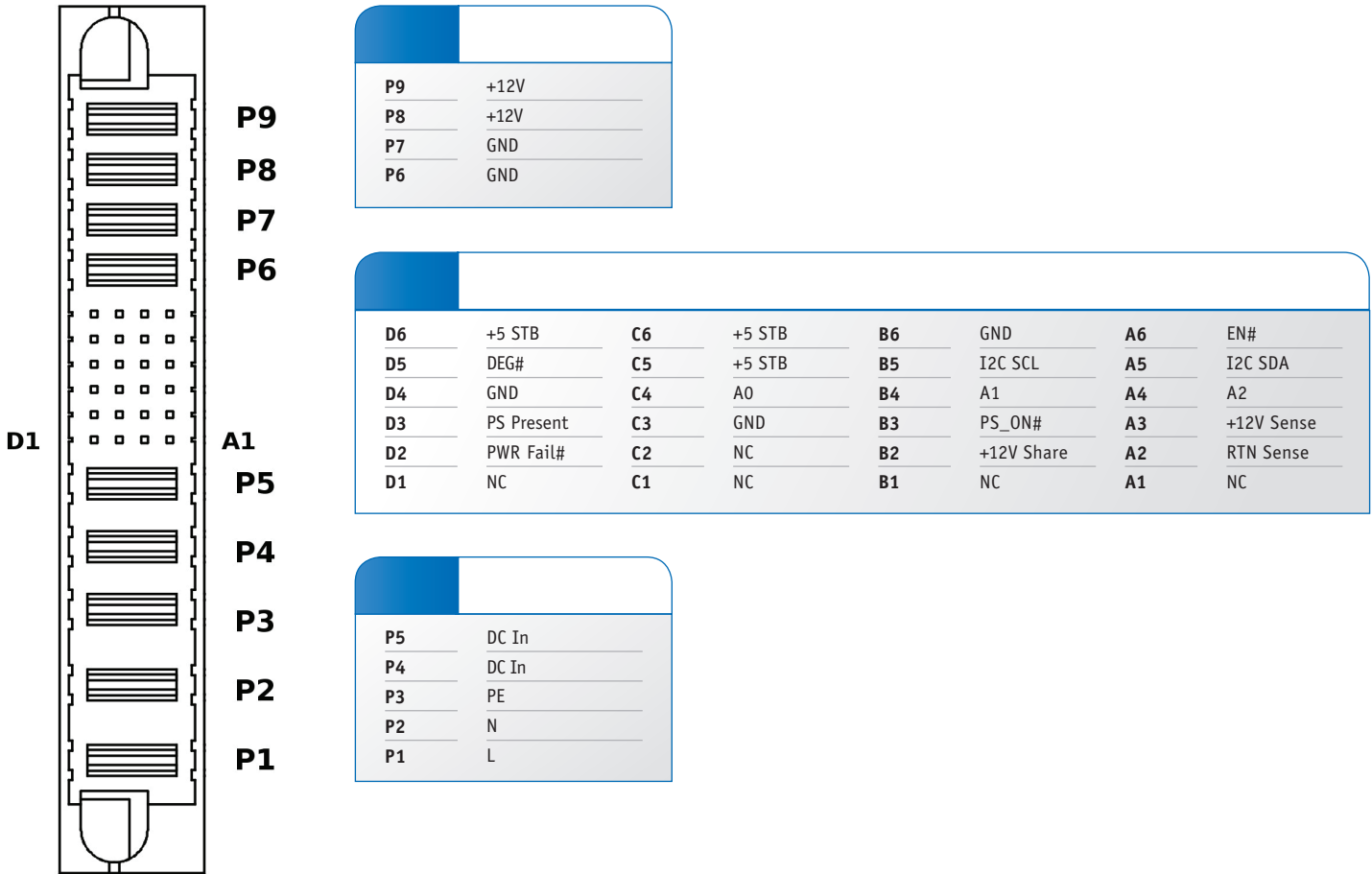
**Safety, Regulatory, and EMI**

Safety Agency Approvals	To be submitted: UL 60950-1 2nd Edition, UL508. CUL 60950-1 2nd Edition, UL508. DEMKO EN60950-1 2nd Edition; CE
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**Environmental**

Operating Temperature	-40°C to +70°C continuous duty, full rating
Storage Temperature	-40°C to +85°C
Humidity	Up to 95% non-condensing
Cooling	20CFM forced air cooling required

## Backplane connector scheme and pin assignment



## Ordering Information

## Article

CPS3-SVE-S300AC

Related product option: CPS3-BPP

Related product option:  
CP-MKIT-AC-IN

## Description

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.

3U CompactPCI® Serial Power Backplane, one slot backplane for the SSI-type power connector as specified for CompactPCI® Serial 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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