CP3-SVE-P200DC-24V

200 W CompactPCI® P47-Type DC Power Supply

- 18 V...36 V DC input
- PICMG® 2.11 compliant
- 4 outputs
- Hot swap and redundant use
- Extended temperature

POSSIBILITIES START HERE kontron S&T Group

CP3-SVE-P200DC-24V

200 W CompactPCI® P47-Type DC Power Supply

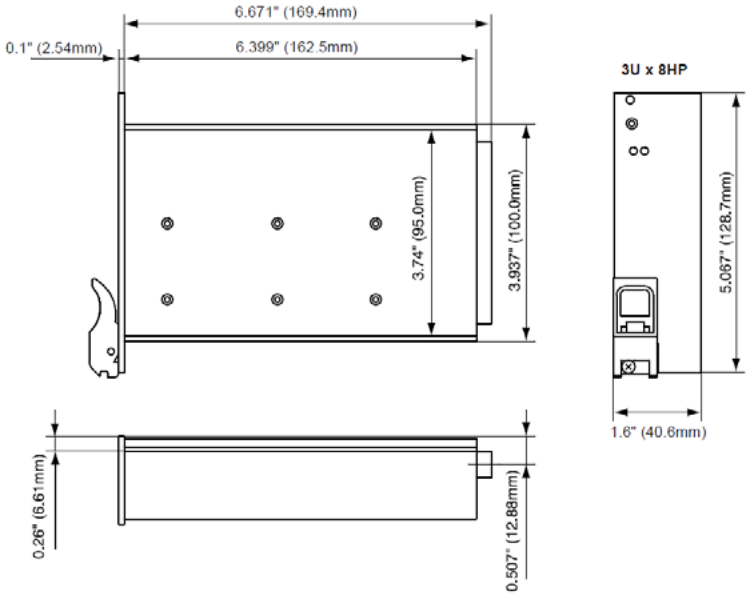
The product description provided with this data sheet is regarded as part of the general Kontron CPCI Power Supply manual ID 24139. For further information, in particular general details as well as disclaimer, safety and warranty statements, refer to the CPCI Power Supply Manual.

This power supply is designed for use with standard CPCI systems as well for integration in electronic or electrical enclosures, e.g. Kontron's 19" racks.

TECHNICAL INFORMATION

FORM FACTOR	3U
FRONT PANEL SIZE	40.6 mm x 128.7 mm
MECHANICS	19" rack
PLUG-IN COMPATIBILITY	yes
POWER SUPPLY CONNECTOR	Positronic 47-pin connector
INPUT VOLTAGE	18 .. 36 V DC
VOLTAGE SWITCHING	Widerange
OUTPUT VOLTAGES / CURRENTS	V1 = +5 V at 25 A V2 = +3.3 V at 36 A V3 = +12 V at 3 A V4 = -12 V at 0.5 A
OUTPUT POWER	200 W with 250 LFM forced-air cooling
COOLING	250 LFM forced-air cooling (ca. 1.3 m/s)
REDUNDANT SUPPLY CAPABILITY	Always
STATUS INDICATION	LED's for input good and power fail
SPECIAL FEATURE(S)	-

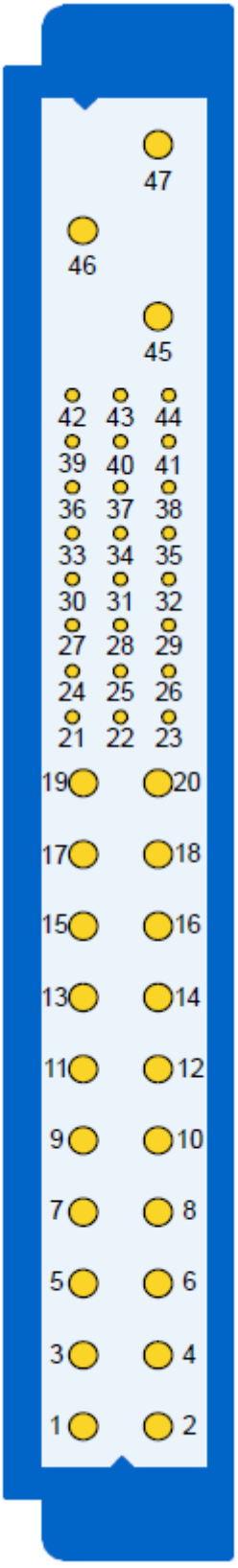
DIMENSIONS



POWER SUPPLY CONNECTOR

The DC input voltage to the power supply unit and the V1 ... V4 output voltages from the power supply unit to the backplane are connected via a 47-pin Positronic male power supply connector. For the pinouts of the Positronic P-47 power supply connector please refer to the following table.

PIN	SIGNAL NAME	DESCRIPTION
1-4	V1	V1 OUTPUT (+5 V)
5-12	RTN	V1 and V2 RETURN
13-18	V2	V2 OUTPUT (+3.3 V)
19	RTN	V3 RETURN
20	V3	V3 OUTPUT (+12 V)
21	V4	V4 OUTPUT (-12 V)
22	RTN	SIGNAL RETURN
23	RESERVED	RESERVED
24	RTN	V4 RETURN
25	GA0	GA Bit 0
26	RESERVED	RESERVED
27	EN#	ENABLE
28	GA1	GA BIT 1
29	NC	NOT CONNECTED
30	V1 SENSE	V1 REMOTE SENSE
31	GA2	GA BIT 2
32	NC	NOT CONNECTED
33	V2 SENSE	V2 REMOTE SENSE
34	S RTN	SENSE RETURN
35	V1 SHARE	V1 CURRENT SHARE
36	V3 SENSE	NOT USED
37	IPMB_SCL	Res. f. SM Bus
38	DEG#	DEGRADE SIGNAL
39	INH#	INHIBIT
40	IPMB_SDA	RES. F. SM BUS
41	V2 SHARE	V2 CURRENT SHARE
42	FAL#	FAIL SIGNAL
43	IPMB_PWR	RES. F. SM BUS
44	V3 SHARE	V3 CURRENT SHARE
45	CGND	CHASSIS GROUND
46	+DCIN	+ DC Input
47	-DCIN	- DC Input



// Orientation of the Positronic P-47 Power Supply Connector

INSTALLATION

Thanks to its plug-in compatibility this P-type power supply unit allows for an easy installation, by which the power supply unit's male Positronic 47-pin power connector is inserted into the backplane's mating female connector without the need of any intermediate adaptation.

WARNING!

If this type of power supply is removed for any reason from an operating system, do not reinstall immediately. Wait 1 to 2 minutes before reinstalling. Failure to comply with this may result in an Output Failure indication on the power supply. This is due to an internal protection feature of the power supply which requires time to cool down before the power supply is put back into operation.

ELECTRICAL SPECIFICATION

INPUT	
INPUT VOLTAGE	18 .. 36 VDC continuous input range
HOLD-UP TIME	None
INRUSH CURRENT	16 A max. @ 24 VDC
INPUT PROTECTION	Non-user serviceable, internally-located input line fuse
INRUSH SURGE CURRENT	20 A Internally limited by thermistor and electronic switch
OPERATING FREQUENCY	125 .. 145 kHz Switching frequency of main output transformer

OUTPUT	
EFFICIENCY	>= 81 % at full rated load, 24 VDC input
MINIMUM LOAD; V1, V2, V3	required to maintain regulation with no load on V4: NONE
MINIMUM LOAD, V3	required to maintain regulation on V4: NONE
RIPPLE AND NOISE	At full load, 20 MHz bandwidth: See Regulation Table
OUTPUT POWER	200 W at 250 LFM forced-air cooling (ca. 1.3 m/s)
OVERSHOOT / UNDERSHOOT	No overshooting / undershooting of output voltage at turn-on
REGULATION	See Regulation table. Varies by output. Total regulation includes: line changes over the specified input range, changes in load starting at 50 % load and changing to 100 % load.
TURN-ON DELAY	150 ms required for initial output voltage stabilization
INITIAL SETTING ACCURACY	+- 1 %

REGULATION	
ADJUSTMENT RANGE	N/A
LINE REGULATION	0.5 % for V1, V2, V3, V4
LOAD REGULATION	1 % for V1, V2, 4 % for V3, V4
RIPPLE & NOISE	V1 and V2: <60 mV_{PP}, V3 and V4: <120 mV_{PP}

PROTECTION AND CONTROL	
OVERVOLTAGE PROTECTION	110 .. 130 $\%_{Vnom}$ latch style overvoltage protection (V1, V2, V3)
OVERLOAD PROTECTION	Fully protected against output overload and short circuit. Automatic recovery upon removal of overload condition. 135 % nax for C1, V2, 150 % max for V3, V4
OVER TEMPERATURE PROTECTION	System shutdown due to excessive internal temperature, automatic reset.
POWER FAIL (FAL#)	TTL compatible signal, open collector active low signal. Indicates any output below 90 % of specified rate..
CURRENT SHARE	10 % Accuracy of shared current with up to 6 parallel units of the same type of power supply. Single wire current share on V1, V2 for 50 % to 100 % load
REMOTE SENSE	On V1, V2: 200 mV max voltage compensation for cable losses
INHIBIT (INH#)	TTL-compatible signal inhibited with GND or TTL "0"
ENABLE (EN#)	Contact closure to external ground to start unit. On shortest pin (last make, first break)
OVERTEMPERATURE WARNING (DEG#)	Open collector active low 10 °C before power supply shut down.
FRONT PANEL LED STATUS INDICATORS	Input OK (Green), Output Failure (Red). In redundant setups, Output Failure may also indicate that there is no main power input to the power supply

ELECTRICAL SPECIFICATION

EMC / EMI	
DIELECTRIC WITHSTAND VOLTAGE	1500 VDC Input to Output
ELECTROMAGNETIC INTERFERENCE	EN55032 / CISPR 32 Class B
ESD SUSCEPTIBILITY	8 kV per EN61000-4-2, level 4
RADIATED SUSCEPTIBILITY	10 V/m per EN61000-4-3, level 3
EFT/BURST	+-2 kV per EN61000-4-4, level 3
INPUT SURGE	1 kV Line to Line, 2kV Line to Ground, per EN61000-4-5, level 3
CONDUCTED DISTURBANCE	3 V per EN61000-4-6, level 2

SAFETY	
	UL 60950, IEC 62368-1, EN 62368-1

ENVIRONMENT	
ALTITUDE	Operation 6K ft, Non operation 40K ft
OPERATING TEMPERATURE	At 100 % load: -20 .. +55 °C with 250 LFM forced-air cooling At 50 % load: -20 .. +70 °C, derate linearly above 50 °C by 2.5 % per °C
STORAGE TEMPERATURE	-40 .. +85 °C
RELATIVE HUMIDITY	5 .. 93 % non-condensing
SHOCK	20 GPK Peak acceleration
VIBRATION	1.9 GRMS Random vibration, 10 Hz to 500 kHz, 3 axis
MTBF	300,000 hours per Bellcore standard B332 Gb 30 °C

WARNING!

Adequate thermal cooling of the power supply must be ensured. Therefore do not obstruct or hinder cooling air circulation or heat conduction within the power supply or surrounding equipment.

Failure to comply with this warning may result in damage to your equipment.

NUCLEAR AND MEDICAL APPLICATIONS

These products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS

The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

ORDERING INFORMATION

ARTICLE	DESCRIPTION
CP3-SVE-P200AC-24V	CPCI-Power Supply, 3U, 200 W, 18-36 VDC, 3.3 V/36 A, 5 V/25 A, +12V/3,0 A, -12 V/0,5 A. With Positronic47 connector. Pinout as in PICMG 2.11. 8 HP width, frontpanel with status LED.

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