

CP3-SVE-M120DC



120 Watt M-Type Power Supply for CPCI Systems

- ▶ 8.5 V...36 V DC input voltage
- ▶ 3.3 V, 5 V, +12 V output for CompactPCI
- ▶ Free convection cooling
- ▶ Extended temperature option

POSSIBILITIES START HERE

CP3-SVE-M120DC

120 Watt M-Type DC Power Supply for CPCI Systems

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, 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.

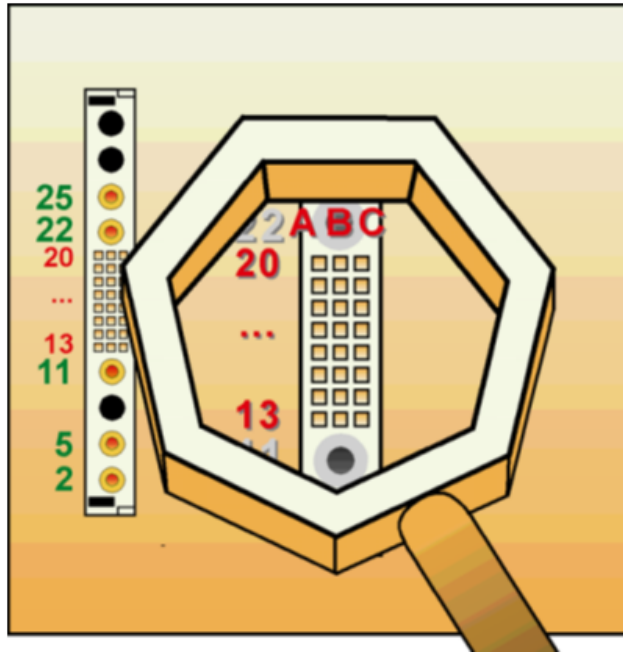
▶ TECHNICAL INFORMATION

FORM FACTOR	3U
FRONT PANEL SIZE	60.96 x 133.35 mm
HEIGHT OF POWER SUPPLY UNIT	3 U (100 mm)
WIDTH OF POWER SUPPLY UNIT	12 HP (60.5 mm)
DEPTH OF POWER SUPPLY UNIT	171.93 mm (without connector and handle)
MECHANICS	19" rack
PLUG-IN COMPATIBILITY	Yes
POWER SUPPLY CONNECTOR	DIN M24/8 connector
INPUT VOLTAGE	8.5 V..36 V
OUTPUT VOLTAGES / CURRENTS	V_{o1} = +3.3 V at 14 A V_{o2} = +5.1 V at 14 A V_{o3} = +12 V at 2 A V_{o4} = -12 V at 1 A
OUTPUT POWER	120 W
COOLING	Free convection
REDUNDANT SUPPLY CAPABILITY	-
STATUS INDICATION	Separate LEDs for V_{o1} ... V_{o4}
SPECIAL FEATURE(S)	Option for E1 heat-resistance (-20 °C/+70 °C)

► DIN M24/8 POWER SUPPLY CONNECTOR

The DC input voltages to the power supply unit and the Vo1...Vo4 output voltages from the power supply unit to the backplane are connected via a 32-pole DIN 24/8 male power supply connector.

For the pinouts of the DIN M24/8 power supply connector please refer to the following table.



// Orientation of the DIN M24/8 Power Supply Connector

PIN	FUNCTION	PIN	FUNCTION
2	L1 (live connection)	B.17	+3.3 VL
5	N (neutral)	B.18	+3.3 VL
11	PE (earth protection)	B.19	+12 VL
A.13	INT (internally connected)	B.20	-12 VL
A.14	INH	C.13	EN
A.15	INT (internally connected)	C.14	DEG
A.16	OVF	C.15	INT (internally connected)
A.17	+5 VF	C.16	+3.3 VL
A.18	+3.3 VL	C.17	+3.3 VL
A.19	+12 VL	C.18	+3.3 VL
A.20	-12 VL	C.19	+12 VL
B.13	+3.3 VL	C.20	-12 VL
B.14	+3.3 VL	22	+5 VL
B.15	+3.3 VL	25	OVV
B.16	+3.3 VL		

► INSTALLATION

Thanks to its plug-in compatibility this DIN M-type power supply unit allows for an easy installation, by which the power supply unit's male DIN M24/8 power connector is inserted into the backplane's mating female connector without the need of any intermediate adaptation.

WARNING!

To ensure a safe 5 V operation of your equipment it is necessary that on the backplane 5 VL is connected to 5 VF and 0 VL to 0 VF. PEP systems provide this configuration by default. The maximum voltage compensation is 0.25 V per line.

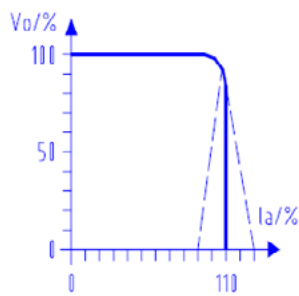
► ELECTRICAL SPECIFICATIONS

INPUT

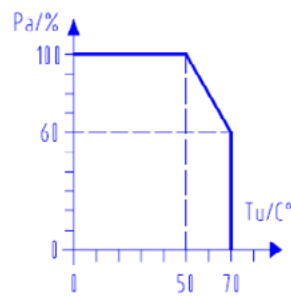
INPUT VOLTAGE	8.5 V..36 V DC
EFFICIENCY	typical 80 %
INRUSH CURRENT LIMITATION	typical $\leq 35 A_{peak}$ (cold state), typical $\leq 60 A_{peak}$ (hot state)
FUSE	25 A

OUTPUT

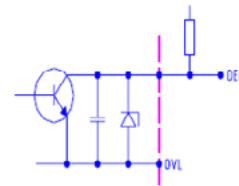
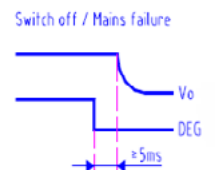
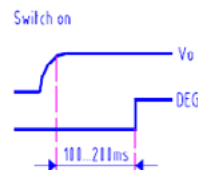
ADJUSTMENT RANGE V_{o1}, V_{o2}	+ - 5 %
STATUS INDICATION	Green LED's for $V_{o1}, V_{o2}, V_{o3}, V_{o4}$
NOISE VOLTAGE	Typ. 50mV _{pp} (band width 20 MHz)
RIPPLE	$V_{o1}, V_{o2} < 50mV_{pp}, V_{o3}, V_{o4} < 30mV_{pp}$
TEMPERATURE COEFFICIENT	0.025 % / K
SWITCH ON / OFF PERFORMANCE	No overshooting of V_o (soft-start)
RISE-DELAY TIME	< 0.5 s
RUN-UP TIME	≤ 50 ms



Current limiting characteristic



Derating



// Output Power Diagrams

▶ ELECTRICAL SPECIFICATION

REGULATION

LINE REGULATION	< 0.2 % for V_{o1} , V_{o2} < 0.5 % for V_{o3} , V_{o4}
LOAD REGULATION	< 0.1 % for V_{o1} * < 0.1 % for V_{o2} < 5.0 % for V_{o3} , V_{o4} * <1 % with redundancy
RESPONSE TIME	< 0.5 ms at I_o 20..80 %

PROTECTION AND CONTROL

OVERVOLTAGE PROTECTION	125 % ± 5 % for V_{o1} , V_{o2} 125 % ± 10 % for V_{o3} , V_{o4} Automatic repetition
CURRENT LIMITATION	Typ. 110 % of IRated for V_{o1} , V_{o2} Typ. 140 % of IRated for V_{o3} , V_{o4} Effective for all outputs, outputs short-circuit proof
OVER TEMPERATURE PROTECTION	Switches off if inside temperature becomes too high, restart with hysteresis
SIGNAL DEG (DERATE)	Open-collector, $I_{max} = 48$ mA Low during start-up of V_o , high 100-200 ms after start-up of V_o , low ≥ 5 ms before break-down of V_o (mains failure/switch-off with EN/INH)
INPUT EN (ENABLE)	Power is ON only with EN low (TTL)
INPUT INH (INHIBIT)	Power always OFF with INH low (TTL)

▶ REGULATORY, EMI, ENVIRONMENT

CONFORMITY

MANUFACTURER	MGV Stromversorgungs GmbH, 81737 Munich, Germany EU Declaration of Conformity is issued under the sole responsibility of the manufacturer, with the provision of the following European Directives: 2014/30/EU Electromagnetic Compatibility Directive 2011/65/EU RoHS Directive amended with 2015/863/EU
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EMC/EMI

INTERFERENCE SUPPRESSION/ IMMUNITY	EN 61000-6-2:2005/AC:2005 EN 61000-6-1:2007 EN 50082-2: 1992 EN 61000-4-2: Intensity 4 EN 61000-4-3: Noise level 10V/m EN 61000-4-4: Intensity 4 EN 61000-4-5: Intensity 3 EN 61000-4-11 VDE (with switch-off and re-start)
INTERFERENCE EMISSION	EN 61000-6-4:2007 +A1:2011 EN 61000-6-3:2007 +A1:2011/AC:2012 EN 50081-1:1992 EN 55011/EN 55022: ClassB, Interference transmission depends on assembly

ENVIRONMENT

OPERATING TEMPERATURE	0 °C to + 70 °C with free convection -25 °C to +75 °C (option)
DERATING	2.0 % / °K at +50 °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.

▶ ORDERING INFORMATION

ARTICLE	DESCRIPTION
CP3-SVE-M120DC-E1	120 W DC/DC PSU for 3U CompactPCI systems. In: 8.5-36 VDC, Out:+3.3 V/14 A,+5 V/20 A,+12 V/2 A,-12 V/1 A, Direct M-Connector to backplane 12 HP/3 U frontpanel, status LED, Temperature range -20 °C to +75 °C, ruggedized

▶ GLOBAL HEADQUARTERS

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