CP3-SVE-M180AC

180 Watt M-Type AC Power Supply for CPCI Systems

- 19" plug-in module 12HP
- Autoranging 120 / 230 VAC
- 3.3 V, 5 V, +-12 V output for CompactPCI
- 0 °C - 70 °C free convection

POSSIBILITIES START HERE kontron S&T Group

CP3-SVE-M180AC

180 Watt M-Type AC 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.

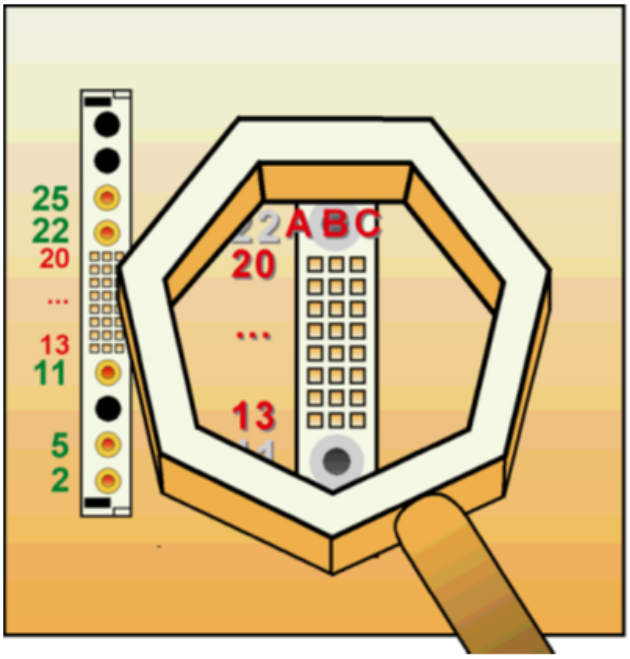
TECHNICAL INFORMATION

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	V_{US} = 99 V .. 138 V AC V_{EU} = 187 V .. 264 V AC Frequency: 50 Hz .. 60 Hz
VOLTAGE SWITCHING	Autoranging
OUTPUT VOLTAGES / CURRENTS	V_{o1} = +3.3 V at 14 A V_{o2} = +5.1 V at 20 A V_{o3} = +12 V at 2 A V_{o4} = -12 V at 1 A
OUTPUT POWER	180 W
COOLING	Free convection
REDUNDANT SUPPLY CAPABILITY	-
STATUS INDICATION	Separate LEDs for V_{o1} ... V_{o4}
SPECIAL FEATURE(S)	-

DIN M24/8 POWER SUPPLY CONNECTOR

The VEU and VUS 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	N/C (not connected)	C.13	N/C (not connected)
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	OVL
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 5V operation of your equipment it is necessary that on the backplane 5VL is connected to 5VF and 0VL to 0VF. Kontron systems provide this configuration by default. The maximum voltage compensation is 0.25V per line.

ATTENTION!
Multiple range Power Supplies are not intended for use in unreliable power networks. The power supplies are in danger to switch into a wrong voltage range and cause technical defects.

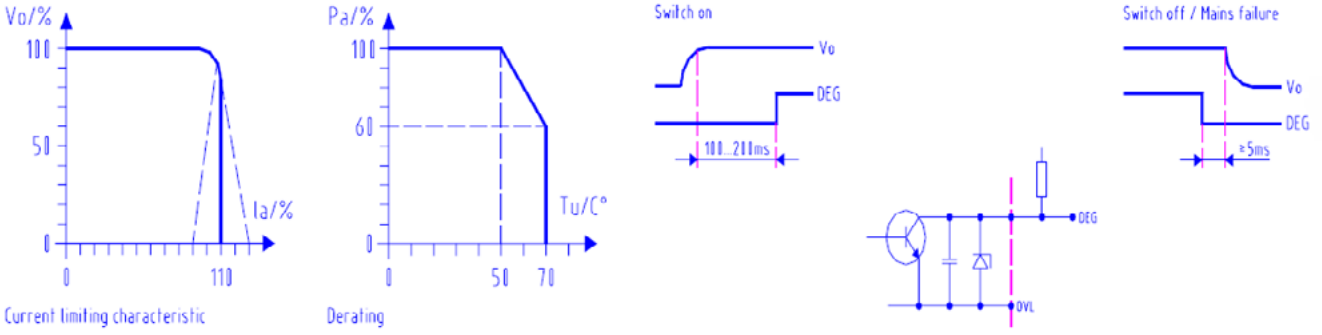
ELECTRICAL SPECIFICATIONS

INPUT

INPUT VOLTAGE	V_{US} = 99 V .. 138 V AC V_{EU} = 187 V .. 264 V AC Frequency: 50 Hz .. 60 Hz
VOLTAGE SWITCHING	Autoranging
EFFICIENCY	typical 82 %
INRUSH CURRENT LIMITATION	typical ≤ 15 A_{peak} (cold state), typical ≤ 20 A_{peak} (hot state)
FUSE	6.3 AT

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



// 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}
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. 200% of IRated for V_{o3} Typ. 140 % of IRated for V_{o4} Effective for all outputs, outputs short-circuit proof, max. 10 min.
OVER TEMPERATURE PROTECTION	Switches off when inside temperature becomes too high, switches on again with hysteresis
MAINS BUFFERING	> 20 ms at 100 % load
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)
PERMITTED OFF/ON CYCLE TIME	≥ 2s
EMC	
INTERFERENCE SUPPRESSION/ IMMUNITY	N 61000-6-2:2005/AC:2005 (generic standard for industrial environments) EN 61000-6-1:2007 (generic standard for residential environments) 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 (generic standard for industrial environments) EN 61000-6-3:2007 +A1:2011/AC:2012 (generic standard for residential env.) EN 5032:2012/AC:2013 Interference transmission depends on assembly
CONFORMITY	
MANUFACTURER	MGV Stromversorgungs GmbH, 81737 Munich, Bayerwaldstr. 27, Germany EU Declaration of Conformity is issued under the sole responsibility of the manufacturer
SAFETY	EN 62368-1:2014 IEC 62368-1:2014 (Second Edition) Audio/video, information and communication technology equipment - Part 1: Safety requirements CSA NRTL/C / UL 1950 / CSA 22.2-950
ENVIRONMENT	
OPERATING TEMPERATURE	0 °C to + 70 °C with free convection
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-M180AC	3U CPCI-Power Supply, 180 W, 120/230 VAC, 3.3 V/14 A, 5 V/20 A, +12V/2A, -12 V/ 1 A. Connection by M-Connector to CPCI backplane. 12 HP width, frontpanel with status LED

GLOBAL HEADQUARTERS

Kontron Europe GmbH

Gutenbergstraße 2
85737 Ismaning, Germany
Tel.: + 49 821 4086-0
Fax: + 49 821 4086-111
info@kontron.com

www.kontron.com