

DSK03003

19" 6U 12TE

Made in Germany

**300 Watts 3 Outs Redundant DC-DC Converter 19" front end
DC-Input 18..28.8Vdc or 75...120Vdc**

Short Specification:

- 19 Inch 3U Norm Front End Slide-in-Unit
- Aluminium housing
- Up to 85% efficiency
- -20°C...+50°C full output power
- Free air convection
- Galvanic insulated
- Continuous short circuit protected
- Overload & low voltage protected
- Soft start & auto recovery
- For over temperature: controlled Hitech Fan from EBM-Papst
- DC-Input protection
- Minimum load = 0A
- Hold up time >30ms
- Switching frequency typ. 100KHz
- EMI/EMS EN61000-6-2,3, EN55022 class B
- PFC EN61000-3-2 class A
- cUL60950/16950 IEC(EN)60950-1
- H15M DIN61612 connector
- 24 hours burn in test
- High reliability, shock & vibration resistant



Current Share Bus

Power Management



In accordance with IEC60950-1

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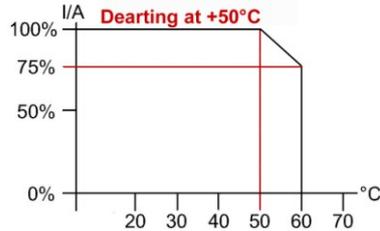
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(Subject to alterations. This product is not designed to be used in applications such as life support systems wherein a failure or malfunction could result in injury or death)

DC-Input Ranges	Version A=18...28.8Vdc Version B= 75...120Vdc					
DC-Input Ratings	24Vdc < 15.4A , 100Vdc <3.3A					
Rated DC-Voltage	U1 +5V	U2 +12V	U3 -12V	U1 +5V	U2 +15V	U3 -15V
Adjustment Range	4,8...5,5V	11,4...12,6V	11,4...12,6V	4,8...5,5V	14,3...15,7V	14,3...15,7V
Rated DC-Current	30.0/35.0A*	8.0A	1.5A	30.0/35.0A*	6.5A	1.2A
Ripple [mVpp] ^{230Vac}	50 (20Mhz)	60 (20Mhz)	60 (20Mhz)	50 (20Mhz)	60 (20Mhz)	60 (20Mhz)
Sensing for 5Vdc	5V sense \pm 0.3V line compensation on each 5V-line (+ and - to GND)					

Order code DSK03003.Voltages.Input-Version Example: DSK03003.5.12.12.A (neutral front panel is included)

Tolerance	U1,2,3 \pm 1%
Stability at Load Switch	< \pm 0.5% 10-100%, 100-10%
Ripple & Noise	U1 < 50mV; U2,3 < 150mV
Minimum Load	0A
Efficiency (in average over all outputs)	Up to 85%
Overload Protection	1,17x I _{rated} , auto recovery
Over Voltage Protection	125% of U _{out} , auto recovery
Short Circuit Protection	Continuous
Temperature Control	Yes, controlled fan convection
Hold Up Time	-
Inrush Current	-
Softstart	500ms typ.
Cooling	Combined Free Air & Forced
Ambiance Temp.	- 20°C ... +60°C
Storage Temperature	- 40°C ... +85°C
EMI	EN55022 class B / EN61000-3-2
EMS	EN61000-6-2,3
Safety	cUL60950/1950 (IEC)EN60950-1
Safety class 1(A)	VDE0805, VDE0100
Air & Surface Leakage Paths	> 8mm
Input/Output	Galvanic insulated
DC-Fail Signal	Relay galvanic insulated
MTBF at full load	300000h
Dimensions (HxWxD)	6U 12TE DIN41494
Weight	1200g
Connectors	2x H15M DIN61612

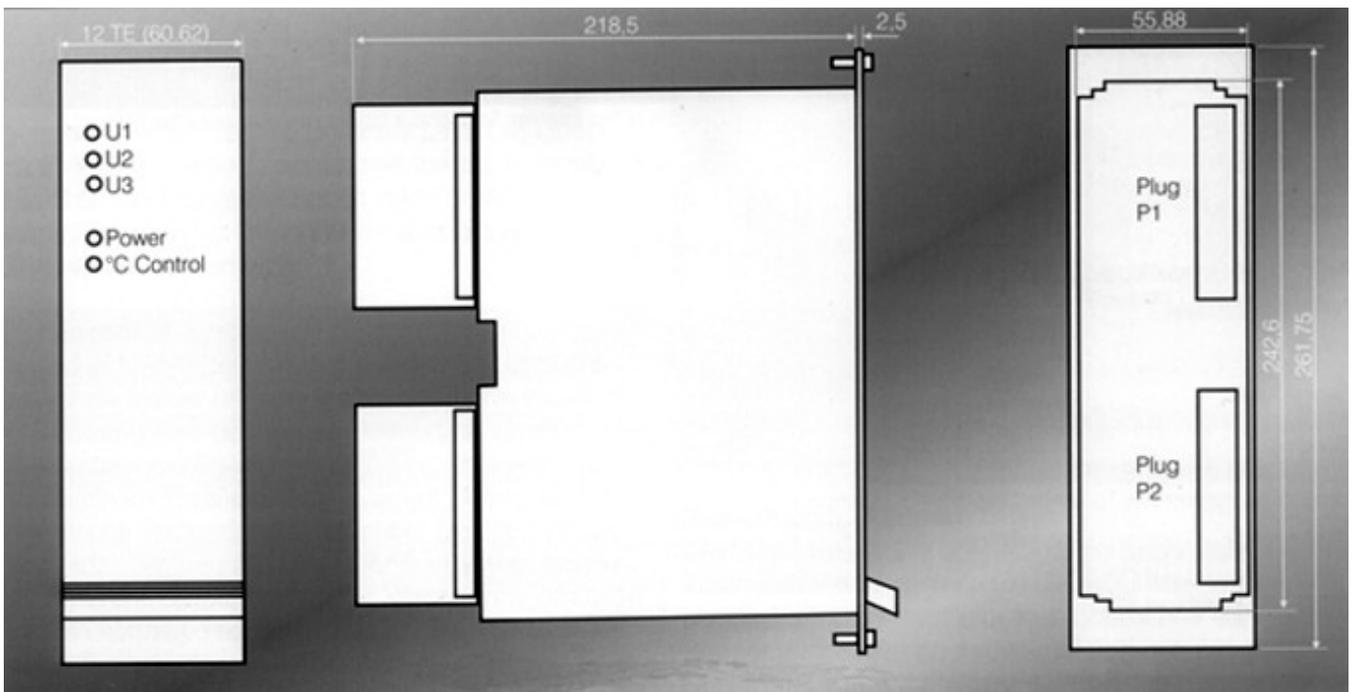


H15M DIN61612 Plug1

- 6,8,10,12 = U1
- 28,30 = U2
- 16 = U3
- 18,20,22,24,26 = COM
- 4 = U1 Sense +
- 14 = U1 Sense -

H15M DIN61612 Plug2

- 28,30 = DC-Input +
- 24,26 = DC-Input -
- 32 = GND
- 6 = Error Relay
- 8 = Error Relay
- 10 = CSB U1
- 14 = CSB U2



Redundant Operation Mode

The DSK power supply series has a special design for parallel and redundant operation modes with diode decoupling each single output. Each 19"-power module is featured with a control unit and with a supervisor circuit. There is no affect any output if one or all of the redundant operating outputs of the partner unit have a brake down. The leaving outputs take over the whole load immediately without any output voltage drop downs. The front panel power-LEDs show operation conditions. Failures are reported to the H15M DIN61612 connectors (galvanic insulated contacts).

Hot Swap System (live insertion)

Using the redundant operation mode the Hot-Swap ability becomes more and more relevant for advanced applications in the professional automation field. The **Hot-Swap** and the Camtec **CSB-technology** aware the user to swap the DSK-Series under full load without provoking any supply leakage to the system. This allows system revisions without the need of shut down.

Camtec CSB-technology (Current Share Bus)

The Camtec CSB-Technology is a very useful feature to increase the power supply lifetime and of course to make a real & controlled redundant operation mode available. The **Current Share Bus (CSB)** is able to separate all loads absolute symmetrically. Using the CSB the power supplies communicate all along how many power each of it has to deliver. This advanced design even considers the aging of all used parts of the DSK-Series so that the result will be all constant after years and years. What is more our CSB-design allows to create a real hot swap compatibility: removing a DSK03003 in a redundant system under full load you will cause no voltage leakage at all. The reaction time of the CSB is so fast and so precise that it will hinder from all drop downs.



Temperature Control

The DSK-Series owns an active temperature control. It operates an EBM-Papst™ fan under extreme conditions and it can shut down the power supply to prevent damages to the connected system. Built in auto recovery restarts the DSK03003 when the temperature returns to regular conditions. The DSK guarantees you to operate up to +60°C (plus some good additional headroom what is likely to our caring engineering).

Voltage Control & DC-o.k.-Message

All of the DSK-outputs are controlled from each other independently. If one or more of the DSK-outputs will be affected by any faults an error-message-relay reacts. Errors are protected: short-cut, over-/low voltage, excess temperature. Of course the error-message-relay is galvanic insulated. If the error is cleared up the relay will open again and the power supply will auto recover at all affected outputs.