POWERNET

DATASHEET / USER MANUAL

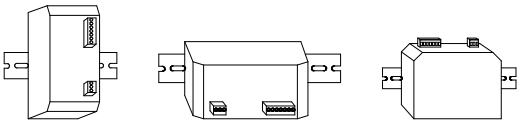
DDC4960

DC/DC Converter for DIN-RAIL

MAIN SPECIFICATIONS:

Nominal input 110VDC
Nominal output 24VDC/5A
Galvanically isolated
Floating input and output
Operating temperature –40…+55ºC
Output adjustable 20.5…27.5VDC
Power fail alarm
DIN-rail mounting
Dimensions: 66 x 148 x 113 mm

FREE INSTALLATION CHOICE
Movable DIN-rail fasteners



Minimum space in DIN-rail | Narrow space | Low installation space

TECHNICAL SPECIFICATION

INPUT			
Voltage		Nominal input	110VDC
		Input range	85 ... 150VDC
Efficiency		U_{in} = 110V, P_{out} = P_{nom}	>87%
Safety			according to IEC 950, Class I
Isolation			
	input / ground		1500VAC RMS 50Hz, 1min
	input / output		2000VAC RMS 50Hz, 1min
	output / ground		500VDC
EMC			
	Emission	EN61000-6-4	EN 55022A
	Immunity	EN61000-6-2	EN 61000-4-2 Electrostatic Discharge
			EN 61000-4-4 Fast Transients
			EN 61000-4-5 Surge
Protection			
	inrush current		limited by NTC, I < 24A
	over voltage		VDR 275V
	input current		Fuse T6,3A
	wrong polarity		Serial diode

Sales & R&D Martinkyläntie 43, FI-01720 VANTAA, Tel. +358 10 2890 700
E-mail marketing@powernet.fi, service@powernet.fi
Internet www.powernet.fi

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OUTPUT 24VDC 5A

Voltage U_{outnom}		24,0VDC
Setting accuracy		+/- 0,5%
Adjust Range		20,5…27,5V (front panel)
Ripple voltage U_{outrms}	f = 20Hz...300kHz	15mV
Load regulation	I_{out} = 0,5A...5A	+/- 0,5 %
Line regulation	U_{in} = 85...150VDC	+/- 0,1 %
Temperature coefficient		< 0,02%/°C
Current I_{outnom}		5A
Current I_{outmax}	peak current	7A

Note: Unit is not protected against continuous overload between I_{outnom} ... I_{outmax}

Current limit	> 7A
Short Circuit Current	< 9A

MECHANICAL

DIN-rail mounting
Can be installed both horizontally and vertically (3 different installation choices)

Dimensions	66 x 148 x 113mm (W x H x D)
Weight	0,8 kg
Enclosure	Steel / Aluminum cabinet, IP20

CONNECTORS

Input — 3-pole PCB mounting terminal block, R 7.62mm

1	PE
2	+
3	-

Output — 7-pole PCB mounting terminal block, R 5.08mm

1	OUTPUT -
2	OUTPUT +
3	Unused
4	Unused
5	ALARM, NC
6	ALARM, NO
7	ALARM, COM

ENVIRONMENTAL

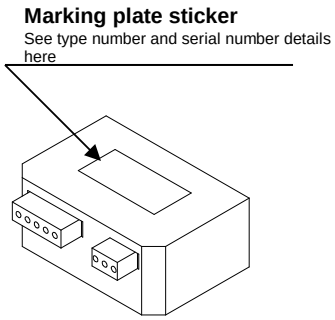
Temperature range	Storage	-40°C...+65 °C
	Operation	-40°C...+55 °C, full output power
Humidity		85% RH IEC68-2-30
Cooling		Natural convection
Vibration & shocks		ETS 300 019-2-4, class 4M5

INDICATIONS

Power OK	green led

ALARMS

Power Fail	Open and closing relay, low output voltage; Relay 24VDC/0.3A or 30VAC/0.5A



INTENDED USE

The power supply shall only be installed and put into operation by qualified personnel.

This power supply is designed for building purposes in an enclosure and is intended to be used in industrial and telecom applications.

SAFETY PRECAUTIONS

Do not use the unit without proper earth connection (Protective Earth). Turn power off from DC input wires before working with the power supply.

Units are intended to be used as permanently connected equipment. Readily accessible disconnection device shall be incorporated in building installation wiring.

WARNING!

Dangerous voltages, capable of causing death, are present in this equipment. Do not remove the cover. No operator serviceable parts inside. Refer servicing to qualified service personnel.

OUTPUT VOLTAGE ADJUSTMENT

The output voltage of the module can be adjusted with the multi-turn potentiometer located on the front panel. Nominal output current is available within the full voltage adjustment range.

OUTPUT OVERCURRENT PROTECTION

Automatic, self-resetting electronic current limiting is included.

Unit is short circuit proof as long as the short circuit current is higher than the current limit in the unit.

Unit is not overload proof. There is no protection against overload 5-7A (load more than nominal, but less than current limit). Continuous overload in this range may break the unit.

LED

A green LED indicates that the output of the module is healthy.

ALARM RELAY

The potential free alarm output indicates if the output of the unit is healthy. Alarm relay contacts, both normally open and normally closed, are presented on the unit connector. If the output is healthy, the NO and COM pins are short circuited. If the unit fails the relay contacts will changeover and NC and COM pins will be short circuited. Word ”normal” in relay pins means that mode when relay is not energized.

SERIES / PARALLEL CONNECTION

Reserve 2cm space on both sides for proper cooling.

Series operation: Up to 500V total voltage.

Parallel operation is not recommended, because the unit is designed to supply peak current up to 7A and it is not protected against continuous over load between 5A and 7A. Unit can stand continuously nominal 5A current. Current limit starts to work when current is more than 7A. Continuous current higher than 5A may occur in parallel connection. If units are connected in parallel, it is in user’s responsibility to arrange such load sharing that continuous current of one unit will not exceed 5A. Units have passive load sharing (load sharing depends how equally units are adjusted and resistance in output cables).