



Features:

- Switched mode DC/DC converter
- Wide output range 0-144VDC
- Analog control by an external 0-5VDC (option)
- Power failure alarm output
- Master-slave connection

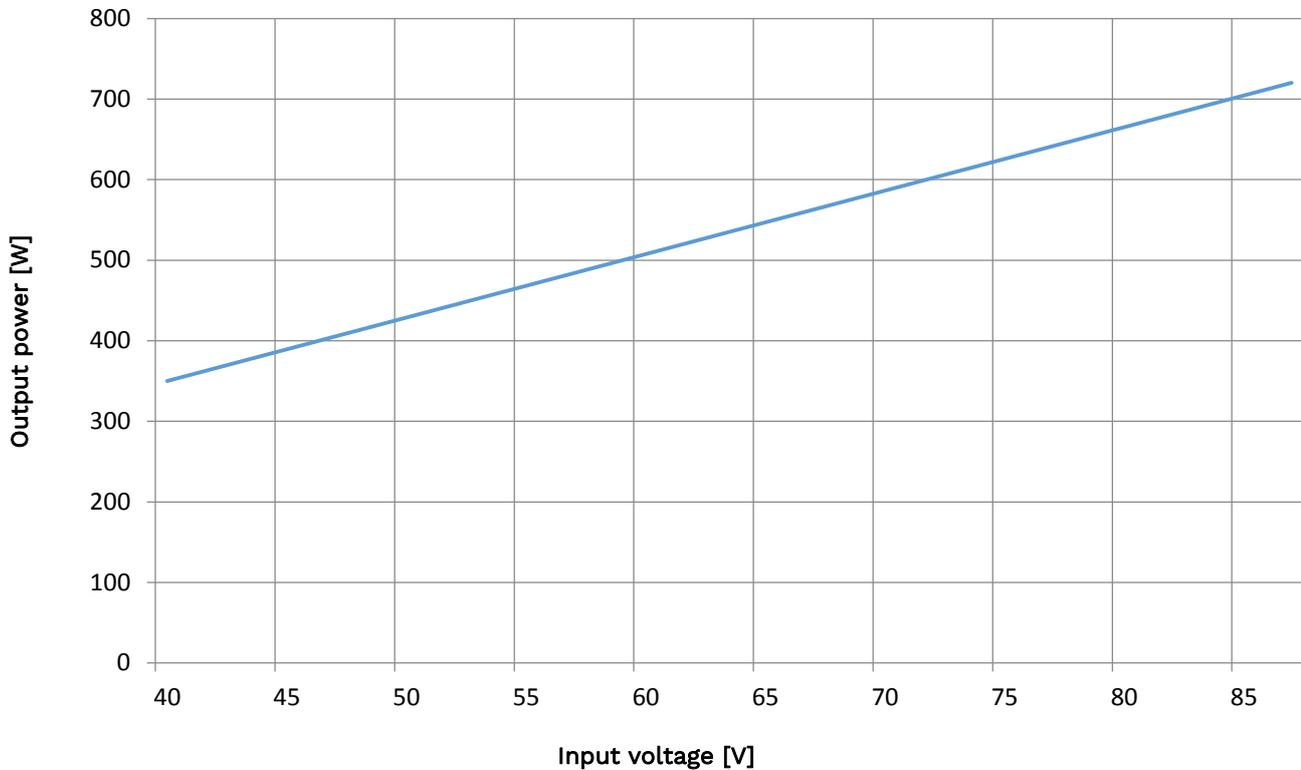
Description

The PF400-DD series are high power, lightweight, advanced DC/DC converter using modern switching technology. All units can be used as a power supply or constant voltage battery charger. The output voltage and output current can be adjusted from 0 to maximum value by a trimmer on the front panel, or by an optional 0-5V analog control.

Specifications

Input voltage	40...87V DC	
Input current	11 A	
Input fuse (inside the unit)	12A	
Line regulation	±0.1%	
Load regulation	±0.5%	
Output setting accuracy	±0.1%	
Output ripple	<50 mVrms	
Hold-up time	> 5 ms	
Status LED indicator	Orange: power OK	
Isolation	input-chassis	1500 VAC
	input-output	3750 VAC
	output-chassis	500 VAC
Approvals	All models CE marked	
Protection class	mechanical	IP20 metal enclosure
Dimensions	L x W x H	220 x 112 x 73 mm
Weight	1,55 kg	
Mounting	DIN-rail, wall, bench	
Cooling	Temperature controlled fan	
Operating temp range	-25°C ... +40°C	

Maximum power diagram



Converter models

Model	Input voltage range	Nominal output voltage	Voltage setting range	Nominal output current	Current setting range	Maximum Output Power ²
PF400-DD12 PF400-DD12-AI ¹	40-87Vdc	12VDC	0-18VDC	30A	0-30A	540
PF400-DD24 PF400-DD24-AI ¹	40-87Vdc	24VDC	0-36VDC	15A	0-30A	720
PF400-DD36 PF400-DD36-AI ¹	40-87Vdc	36VDC	0-54VDC	10A	0-20A	720
PF400-DD48 PF400-DD48-AI ¹	40-87Vdc	48VDC	0-72VDC	7.5A	0-15A	720
PF400-DD72 PF400-DD72-AI ¹	40-87Vdc	72VDC	0-108VDC	5A	0-10A	720
PF400-DD96 PF400-DD96-AI ¹	40-87Vdc	96VDC	0-144VDC	3A	0-7.5A	720

1. Cable sets with modular connectors are included: 1,5 m cable for analog control.
2. Output power depends on input voltage, see diagram above.

Customized versions on request

- Cyclic battery chargers or customized charging curves for all kind of batteries
- Sense models
- Power failure output relay
- IP44 enclosures, 19" enclosures

DC Input connection

The converter input cable is connected as follows:

- L negative or positive DC supply input
- N positive or negative DC supply input
- PE protective earth

Output voltage and current limit adjustment

Trimmer or analog control adjustable modules, type example PF400-DD24 or PF400-DD24-AI.

The output voltage and output current limit of the converter can be adjusted as follows:

- Trimmer adjustable models: with the multi-turn potentiometers accessible from the front panel.
- Analog controllable models by an external 0-5VDC voltage. See detailed description

Both voltage and current can be adjusted from zero to the maximum value. Maximum output power (see Maximum power diagram) is available within the adjustment range.

Overcurrent protection

The output of the converter is protected against overcurrents and short circuits by an automatic, self-resetting electronic current limiter.

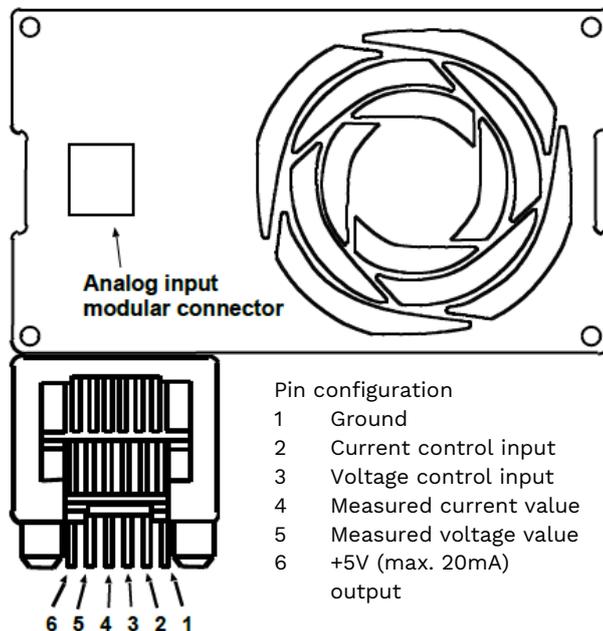
Controlling the analog card

All control voltages must be between 0 and +5V, Higher voltages are not allowed. The control logic is positive, so that a +5V control voltage gives a maximum value from the converter, while 0V means minimum output. As soon the control connector is unplugged from the modular connector, the converter is reset to the minimum output values.

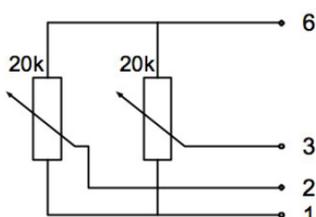
The measured values can be read from the measurement signals. The measured values are scaled equal to the target values. If the converter is set to the voltage reference, the measured value must be equal to the target. The same counts for the current control and its measured value. Measured signals (both together) can be loaded with max 20mA; otherwise proper operation cannot be guaranteed.

The modular connector is isolated from the input, output and enclosure of the converter. This enables the possibility to parallel or series connect several power supplies maintaining equal voltages. The number of connected devices is not limited. The 500V insulation voltage may, however, not be exceeded. This manual cannot be applied in case the connector of the analog card differs from a modular connector (9-pin D-connector).

In that case it is an incompatible analog controlled converter.



Pin configuration of the modular connector. The analog control card is connected via an AMP Modular 6 connector.



Connecting example using the internal +5Vdc supply and external potentiometers. The +5V can be used as a supply for external circuits. The circuit given to the left, lets the converter operate as a potentiometer controlled device.

It is important to keep in mind that the +5V output may not be loaded more than 20mA, otherwise proper operation cannot be guaranteed.