

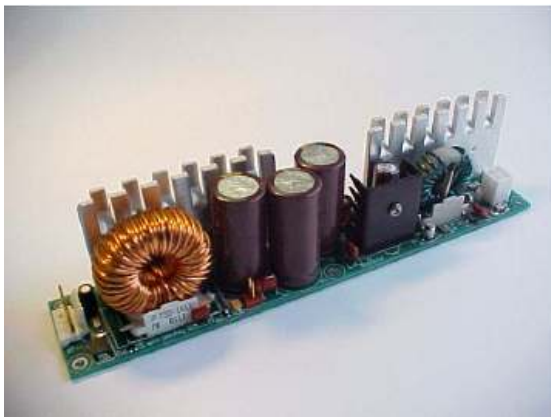
PRONTOflow-DC series

DC Power Regulator Board

Features

- Dual power inputs
- Accepts wide input voltage range and generates regulated 48VDC
- Diode OR'ed input lines for dual supply operation
- Input power protection fuses for each power line
- Inrush current suppression for hot-swap
- Input filter to minimize conducted noise
- Switching mode buck-boost regulation for output voltage
- Output voltage adjustable (via PWM signal) from 24V to 48V continuously
- Output voltage fuse protection
- Output filter to minimize switching noise emission
- Small size; Ideal for 1U applications
- Designed to operate over wide temperature ranges
- Low voltage shutdown

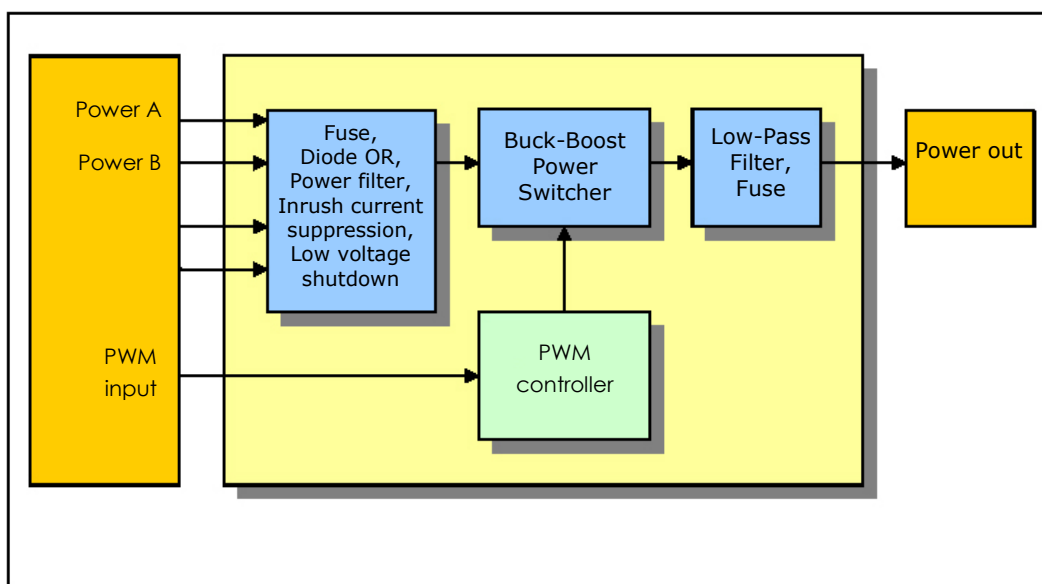
About PRONTOflow



The PRONTOflow POWER-DC is an off-the-shelf power regulator board designed to be used with PRONTOflow CONTROL, CONTROL-LT and MONITOR boards for power conditioning and speed control of DC fans. This power board is designed for use in a 1U or larger fan tray and can power up to nine high performance fans.

The input power is polarity and fuse protected. An in-rush current suppression circuit enables hot-plug-in. A wide input voltage of 36 to 72VDC is regulated to a steady 48VDC. PWM signal may be used to further regulate the output voltage for speed control of 3-wire fans. Input and output filters minimize conducted noise back to the power source and emitted switching noise.

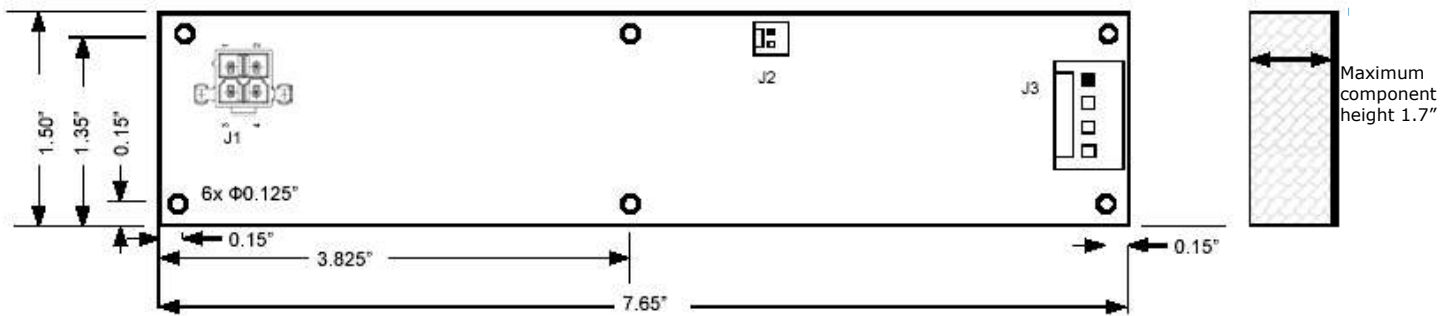
Functional Block Diagram



Electrical Specifications

Parameter	Condition	Min	Typ	Max	Units
Input Voltage	Standard	36	48	72	VDC
Reverse Input Voltage		-	-	100	VDC
In-rush Current	Initial power application @ 48Vin	-	0.5	1.0	ADC
Start Current	Nine 48V fans	-	9.0	-	ADC
Continuous Input Current	Full @ 48Vin	-	-	3.7	ADC
	Full load, 36V input, still air	-	-	5.0	ADC
Output Voltage	Full load, with adjustment	24.0	48.	52.5	VDC
Output current	Full load	-	-	2.8	ADC
Output Power	-	-	-	140	WDC
Efficiency	Initial power application @ 48Vin	82.0	83.0	85.0	%

Mechanical Dimensions



Electrical Connections

J1: Power Connector.
Molex: 39-28-9048

Pin#	Signal
1	+ POWER A
2	- POWER A
3	+ POWER B
4	- POWER B

J2: PWM switch.
Molex: 22-11-2022

Pin#	Signal
1	PWM+
2	PWM-

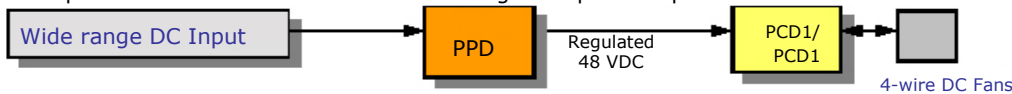
PWM switch is a signal that controls the voltage output from CONTROL, CONTROL-LT or MONITOR boards. Typically used with 3-wire fans for speed control.

J3: Power Connector.
Molex: 26-61-4040

Pin#	Signal
1	V-OUT+
2	V-OUT+
3	V-OUT+
4	V-OUT+

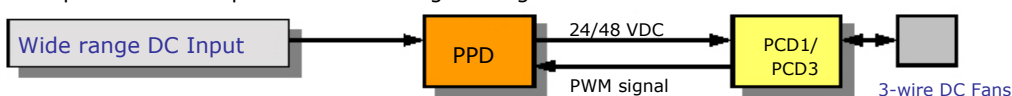
Typical Applications

Multiple 4-wire fans under constant fan voltage and precise speed control



J3: Power output Connector,
Molex: 26-61-4040

Multiple 3-wire fan speed control through voltage control



Four 3-wire fan speed monitoring and high/low speed control

