

P-3-48

Power Block Module

Owners Guide

(These instructions are intended for use by a technician familiar with electronic products)

- 48VDC set, 48-56VDC adjustable
- 3 Amps maximum output current
- Short circuit / Over load / Over voltage protection
- 110 / 220 VAC input switch selectable
- UL and TUV Approved and manufactured to ISO 9001 Quality Assurance, and EMC tested.
- RoHS and PFOS Compliant
- MTBF of 244KHrs min., MIL-HDBK-217F (25°C)
- High efficiency, long life, and high reliability
- 3 year warranty



DESCRIPTION

The P-3-48 is an adjustable single output voltage power supply set for 48VDC output. These modules also come with three layers of protection short circuit, over load, and over voltage protection. These units are UL and TUV approved, meet EMC standards, and are RoHS and PFOS compliant. The P-3-48 is designed for high efficiency, long life, and high reliability.

SPECIFICATIONS

Output Voltage	48VDC set, 48-56VDC adjustable
Output Voltage Tolerance	+/- 1 %
Output current, max.....	3 Amps
Maximum Power, continuous	158.4 Watts
Maximum ripple and noise	200 mV p-p max
Input voltage range.....	88 to 132 VAC or 176 to 264 VAC Selected By Switch
Input frequency range	47 to 63 Hz
Maximum AC current.....	3 Amps/115 VAC; 2 Amps/230 VAC
Typical Efficiency.....	87 %
Max inrush current (typ)	40 Amps
Short Circuit protection.....	Recovers automatically when fault is removed
Overload Protection (operates)	105-150 % of Rated output power
Line Regulation	+/- 0.5 %
Load Regulation	+/- 0.5 %
Cooling	Free Air Convection
Working Temperature range	-13 F to +158 F (-25 C to +70 C)
Storage Temperature	-40 F to +185 F (-40 C to +85 C)
Withstand Voltage	3.0 KV I/P-O/P, 1.5KV I/P-FG
(Continued).....	0.5 KV O/P-FG
Dimensions	7.83" L x 3.86" W x 1.5" H (199mm L x 98mm W x 38mm H)
Weight.....	1.35 lbs, nominal

INSTALLATION WARNING

The individual user should take care to determine, prior to use or installation, whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, DuraComm makes no representation or warranty as to the merchantability, suitability or fitness of these units for any specific application.

DO NOT block any of the cooling vents on the sides and always allow adequate ventilation by not installing the unit inside tightly closed spaces. Physical mounting position is not critical but the cooling vents must not be blocked.

Make certain the input voltage switch is set to the correct voltage BEFORE applying AC power to the module(s).

INSTALLATION NOTES

The outputs are NOT referenced to the chassis. The Modular System can be used either positive or negative ground. Using a short jumper, run the jumper from the FG terminal to the -V or +V terminal, as desired.

CONDUCTOR PRETREATMENT

All kinds of copper conductors can be clamped without treatment. DO NOT solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

RECOMMENDED COPPER WIRE SIZE FOR CURRENT CAPACITY

(Insulated Wire, Single Conductor in free air)

<u>Current Level in Amperes</u>	<u>Wire Size</u>
<7 AMPERES	20 AWG Up to 5 feet 18 AWG Up to 10 feet
14 AMPERES	18 AWG Up to 5 feet 16 AWG Up to 10 feet
20 AMPERES	16 AWG Up to 5 feet 14 AWG Up to 10 feet
30 AMPERES	14 AWG Up to 5 feet 12 AWG Up to 10 feet
40 AMPERES	12 AWG Up to 5 feet 10 AWG Up to 10 feet
50 AMPERES	10 AWG Up to 5 feet 8 AWG Up to 10 feet
70 AMPERES	8 AWG Up to 5 feet 6 AWG Up to 10 feet
100 AMPERES	6 AWG Up to 5 feet 4 AWG Up to 10 feet

LIMITED WARRANTY

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship, when in normal use and service for a period of three years from the date of purchase, from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty, will be warranted for the remainder of the original warranty period, only, and will not extend into a new three year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with manufacture, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties which the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

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