

PRODUCT SPECIFICATION

1/2 bridge (100 kHz)

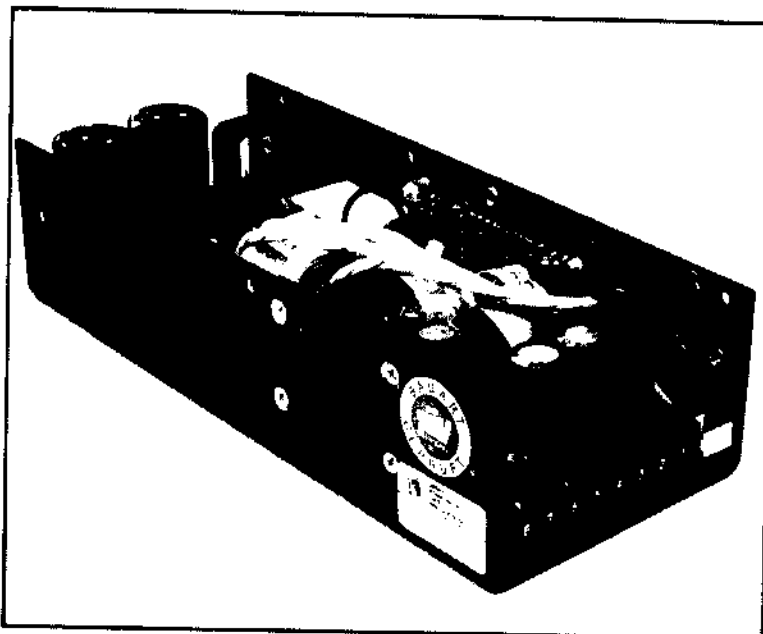
QPR with DC/DC converter

**DC to DC
QP4 Series**

Multiple Output Switching
Power Supplies

Features

- UL Recognized to UL 1012 and 478 ‡
- CSA Certified to C 22.2 No. 220 - M1986 and EB1402 ‡
- TUV Licensed to IEC 380 and 950 and VDE 0806 Class 1 SELV in process‡
- Fully compliant with FCC and VDE (Level A) standards for EMI
- 42 to 60 VDC input
- All outputs fully regulated
- Accommodates high-peak disk drive requirements
- 0° - 50° C operating ambient
- DC input safety provisions:
 - transient input voltage protected
 - input surge current limited
- DC output safety provisions:
 - complete overload protection
 - overvoltage protected
 - reverse voltage protected
 - remote/internal sensing for Output 1
 - low noise outputs



Available Outputs

225/250 Watts Up to 3 Outputs

Standard Output Voltage Combination	Output 1*			Output 2			Output 3		
	Volts	Rated Amps	Peak Amps	Volts	Rated Amps	Peak Amps	Volts	Rated Amps	Peak Amps
A	5	40	45	12	2.5	3	12	6	10
B	5	40	45	12	4.0	6	12	4	6
C	5	40	45	5	2.5	3	12	6	10
D	5	40	45	5	4.0	6	12	4	6
E	5	40	45	24	2.5	3	12	6	10
F	5	40	45	24	4.0	6	12	4	6
G	5	40	45	12	2.5	3	24	6	10
H	5	40	45	5	2.5	3	24	6	10
I	5	40	45	5	4.0	6	24	4	6
J	5	40	45	12	2.5	3	5	6	10
K	5	40	45	24	2.5	3	5	6	10

*Rated Amps = 30A for convection cooling

- Available options include:
 - remote on/off control
 - thermal shutdown control
 - safety/EMI shield cover

Total (sum) of rated DC output power, maximum:
 Convection cooling only 225 Watts
 Forced-air cooling (25 CFM) 250 Watts
 Peak power (10 sec) 275 Watts

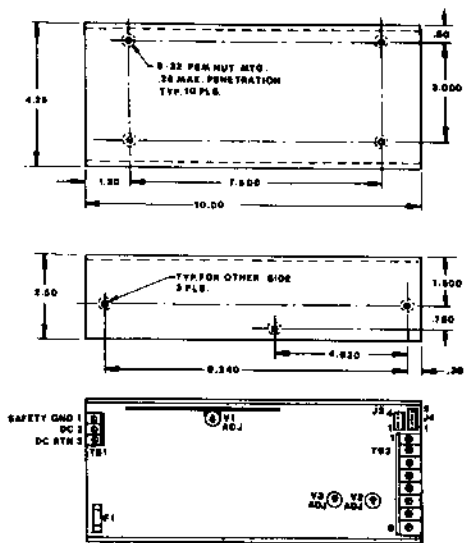
- Other output combinations are also available; consult factory
- All outputs have independent returns

‡Most models; consult factory



QP4 Series

Outline/Mounting/Interface



Fan Drive Header (J3) AMP M7A-100 (Locking)

- 1 Output 1 Sense (+)
- 2 Output 3 (+)
- 3 Output 1 Sense (-)
- 4 Output 3 Rtn

Control Header (J4) AMP M7A-100 (Locking)

- 1 Control Rtn
- 2 LED Drive (.005A to Output)
- 3 Nu-Pin Pulled
- 4 Remote On/Off Rtn
- 4 Remote On/Off

DC Output Term. Block (TB1)

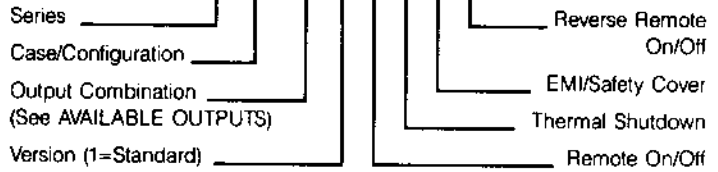
- 1 Output 1 (+)
- 2 Output 1 (+)
- 3 Output 1 Rtn
- 4 Output 1 Rtn
- 5 Output 2 (+)
- 6 Output 2 Rtn
- 7 Output 3 (+)
- 8 Output 3 Rtn

NOTE (J3): To change pins 1 and 3 from Remote Sense to a second fan drive, remove W1 and W3 and install W2 and W4 on power board near J3.

Ordering Information

Options*

QP4 - A 1 A C D R



*List all options selected

All Power Supplies are warranted to be free of defects in materials and workmanship for a period of one year.

Specifications

DC Input	Nominal: 48 VDC Range: 42-60 VDC	Reverse Voltage Protection	Up to 100% of rated current, all outputs
DC Outputs	Nominal: See AVAILABLE OUTPUTS table Range: adjustable $\pm 5\%$, all outputs	In-rush Current	25A Pk, cold start
Regulation	Line: $\pm 0.25\%$, all outputs, full input range Load: $\pm 0.25\%$ for Output 1, $\pm 1\%$ for all other outputs; for 10-100% loading to Output 1 and zero to full loading of other Outputs	Fusing	GMA-15 15A/125V
Ripple/Noise	Sum: 1% Pk-Pk, all outputs	Remote On/Off*	Turn on: open circuit or TTL "hi" Turn off: short to Output 1 return, or TTL "lo" Option "R" is the reverse
Overshoot & Undershoot	Deviation: 2% for 25% load change at 5A/usec Response: 200 usec to 1% deviation, all outputs, turn-on or turn-off	Thermal Shutdown*	Heat-sink-mounted thermal switch acts equivalently to Remote On/Off
Temperature Coefficient	$\pm 0.02\%$ / °C, all outputs	Fan Drive*	Output 3 voltage provided on separate
Temperature Range	Operation: 0° to 50°C at rated output power derates linearly to 50% power at 70°C Storage: -55°C to 85°C	Shock/Vibration	Per MIL-STD-810C Vibration: Method 514.2 Procedures X, X1 Shock: Method 516.2, Procedures I, III Shock (Transit): Method 516.2, Procedure II
Efficiency	75% typical	Specifications are subject to change without notice.	
Overload Protection	Output 1: current limited by primary current level Outputs 2 and 3: current limited by post regulator characteristics		
Overvoltage Protection	Output 1: output level $> 6.25V \pm 5\%$ causes shutdown (DC input removal for restart) Outputs 2 and 3: post regulators have pre-regulated inputs.		

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