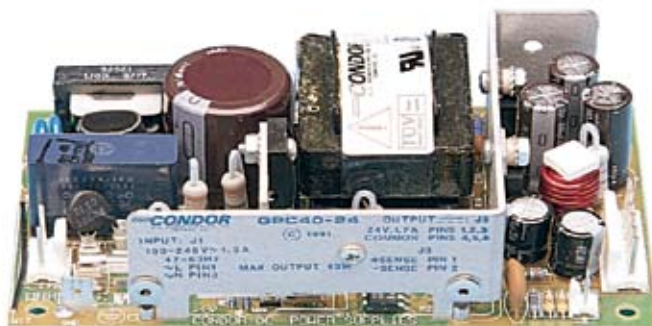


GLOBAL PERFORMANCE SWITCHERS

Summary:

- Wide-range ac input 85-264 Vac
- 2-year warranty
- Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)
- Single and multiple outputs
- Commercial Approved to UL1950, EN60950 E3:2000 and CSA-C22.2 No. 234
- Medical Approved to UL2601-1, EN60601-1 and CSA22.2 No. 601
- Single and multiple outputs
- RoHS compliant models available (G suffix)
- CE marked to LVD



SPECIFICATIONS

| Ac Input 85-264 Vac, 47-63 Hz single phase. | Output Noise 0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply. | | | | | | | | | | | | | | | | |
|--|--|--------------------|------------------|---------------------|------------------------------|-----------------------|------------------------------|------------------|-------------------------------------|-------------------------|------------------------|------------------------|--------------------------|----------------------|------------------------------------|--------------------------|-------------|
| Input Current Maximum input current at 120 Vac, 60 Hz with full rated output load: 1.3 A | Transient Response Main output—500 μ s typical response time for return to within 0.5% of final value for a 50% load step change. $\Delta i / \Delta t < 0.2$ A/ μ s. Maximum voltage deviation is 3.5%. Startup/ shutdown overshoot less than 3%. | | | | | | | | | | | | | | | | |
| Hold-Up Time 20 ms minimum from loss of ac input at full load, nominal line (115 Vac). | Remote Sense Provided as a standard feature on single-output models. | | | | | | | | | | | | | | | | |
| Output Power 40 W continuous, 50 W peak. Peak ratings are for 60 s maximum duration, 10% duty cycle. During peak load condition, output regulation may exceed total regulation limits. | Voltage Adjustment Built-in potentiometer adjusts main output voltage $\pm 5\%$. | | | | | | | | | | | | | | | | |
| Overload Protection Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit on outputs 1 & 2; foldback type on output 3. Recovery after fault is automatic. See output ratings chart for additional notes or conditions. | EMI/EMC Compliance All models include built-in EMI filtering to meet the following emissions requirements: | | | | | | | | | | | | | | | | |
| Overvoltage Protection. Main outputs: 124% \pm 12%. | <table border="1"> <thead> <tr> <th>EMI SPECIFICATIONS</th> <th>COMPLIANCE LEVEL</th> </tr> </thead> <tbody> <tr> <td>Conducted Emissions</td> <td>EN55022 Class B; FCC Class B</td> </tr> <tr> <td>Conducted Emissions</td> <td>EN55011 Class B; FCC Class B</td> </tr> <tr> <td>Static Discharge</td> <td>EN61000-4-2, 6 kV contact, 8 kV air</td> </tr> <tr> <td>RF Field Susceptibility</td> <td>EN61000-4-3, 3 V/meter</td> </tr> <tr> <td>Fast Transients/Bursts</td> <td>EN61000-4-4, 2 kV, 5 kHz</td> </tr> <tr> <td>Surge Susceptibility</td> <td>EN61000-4-5, 1 kV diff., 2 kV com.</td> </tr> <tr> <td>Line Frequency Harmonics</td> <td>EN61000-3-2</td> </tr> </tbody> </table> | EMI SPECIFICATIONS | COMPLIANCE LEVEL | Conducted Emissions | EN55022 Class B; FCC Class B | Conducted Emissions | EN55011 Class B; FCC Class B | Static Discharge | EN61000-4-2, 6 kV contact, 8 kV air | RF Field Susceptibility | EN61000-4-3, 3 V/meter | Fast Transients/Bursts | EN61000-4-4, 2 kV, 5 kHz | Surge Susceptibility | EN61000-4-5, 1 kV diff., 2 kV com. | Line Frequency Harmonics | EN61000-3-2 |
| EMI SPECIFICATIONS | COMPLIANCE LEVEL | | | | | | | | | | | | | | | | |
| Conducted Emissions | EN55022 Class B; FCC Class B | | | | | | | | | | | | | | | | |
| Conducted Emissions | EN55011 Class B; FCC Class B | | | | | | | | | | | | | | | | |
| Static Discharge | EN61000-4-2, 6 kV contact, 8 kV air | | | | | | | | | | | | | | | | |
| RF Field Susceptibility | EN61000-4-3, 3 V/meter | | | | | | | | | | | | | | | | |
| Fast Transients/Bursts | EN61000-4-4, 2 kV, 5 kHz | | | | | | | | | | | | | | | | |
| Surge Susceptibility | EN61000-4-5, 1 kV diff., 2 kV com. | | | | | | | | | | | | | | | | |
| Line Frequency Harmonics | EN61000-3-2 | | | | | | | | | | | | | | | | |
| Efficiency 70% at full rated load, nominal input voltage, depending on model and load distribution. | Commercial Safety Approved to UL1950, CSA22.2 No. 950, IEC950, EN60950. All dc outputs are SELV under normal and single fault conditions. | | | | | | | | | | | | | | | | |
| Turn-on Time Less than 1 second at 120 Vac, 25°C (inversely proportional to input voltage and thermistor temperature). | Medical Leakage Current The maximum leakage current is as follows: | | | | | | | | | | | | | | | | |
| Input Protection Internal ac fuse provided. Designed to blow only if a catastrophic failure occurs in the unit. | <table border="1"> <thead> <tr> <th>Test Condition</th> <th>Normal</th> <th>Single</th> <th>Fault</th> </tr> </thead> <tbody> <tr> <td>120 Vac @ 60 Hz input</td> <td>25 μA</td> <td></td> <td>35 μA</td> </tr> <tr> <td>264 Vac @ 60 Hz input</td> <td>40 μA</td> <td></td> <td>60 μA</td> </tr> </tbody> </table> | Test Condition | Normal | Single | Fault | 120 Vac @ 60 Hz input | 25 μ A | | 35 μ A | 264 Vac @ 60 Hz input | 40 μ A | | 60 μ A | | | | |
| Test Condition | Normal | Single | Fault | | | | | | | | | | | | | | |
| 120 Vac @ 60 Hz input | 25 μ A | | 35 μ A | | | | | | | | | | | | | | |
| 264 Vac @ 60 Hz input | 40 μ A | | 60 μ A | | | | | | | | | | | | | | |
| Inrush Current Inrush is limited by internal thermistors. Inrush at 240 Vac under cold start conditions will not exceed 34 A. | Medical Safety Approved to UL2601-1, CSA22.2 No. 601 Level 3 and EN60601-1. UL file E116994; CSA #LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. The output(s) are not acceptable for patient connection without additional isolation. All dc outputs are SELV under normal and single fault conditions. | | | | | | | | | | | | | | | | |
| Temperature Coefficient 0.03%/°C typical on all outputs. | | | | | | | | | | | | | | | | | |
| Environmental Designed for 0 to 50°C operation at full rated output power; derate output current and total output power by 2.5% per °C above 50°C. | | | | | | | | | | | | | | | | | |

| Commercial Model | Medical Model | Output No. | Output | Output Minimum | Output Maximum | Output Peak | Noise P-P | Total Regulation | Notes |
|------------------|---------------|------------|--------|----------------|----------------|-------------|-----------|------------------|-------|
| GPC40A | GPM40A | 1 | +5.1 V | 0.4 A | 4 A | 5 A | 50 mV | 2% | |
| | | 2 | +12 V | 0 A | 2 A | 3 A | 120 mV | 5% | B,C |
| | | 3 | -12 V | 0 A | 0.4 A | 0.7 A | 120 mV | 3% | C |
| GPC40B | GPM40B | 1 | +5.1 V | 0.4 A | 4 A | 5 A | 50 mV | 2% | |
| | | 2 | +15 V | 0 A | 2 A | 3 A | 150 mV | 5% | B,C |
| | | 3 | -15 V | 0 A | 0.4 A | 0.7 A | 150 mV | 3% | C |
| GPC40D | GPM40D | 1 | +5.1 V | 0.4 A | 4 A | 5 A | 50 mV | 2% | |
| | | 2 | +24 V | 0 A | 1 A | 1.5 A | 240 mV | 5% | B,C |
| | | 3 | -12 V | 0 A | 0.4 A | 0.7 A | 120 mV | 3% | C |
| GPC40-3.3 | GPM40-3.3 | 1 | 3.3 V | 0 | 8 A | 10 A | 35 mV | 2% | |
| GPC40-5 | GPM40-5 | 1 | 5 V | 0 | 8 A | 10 A | 50 mV | 2% | |
| GPC40-9 | GPM40-9 | 1 | 9 V | 0 A | 4.5 A | 6 A | 90mV | 2% | |
| GPC40-12 | GPM40-12 | 1 | 12 V | 0 A | 3.3 A | 4.2 A | 120 mV | 2% | |
| GPC40-15 | GPM40-15 | 1 | 15 V | 0 A | 2.7 A | 3.3 A | 150 mV | 2% | |
| GPC40-24 | GPM40-24 | 1 | 24 V | 0 A | 1.7 A | 2.1 A | 240 mV | 2% | |
| GPC40-28 | GPM40-28 | 1 | 28 V | 0 A | 1.4 A | 1.8 A | 280 mV | 2% | |

Note: For 48 volt model, GPC40-48 or GPM40-48, contact factory for availability.

A. Total regulation is defined as the maximum deviation from the nominal voltage for all steady-state conditions of initial voltage setting, input line voltage and output load.

B. To maintain these regulation conditions, the 5.1V current must be at least 1/4 of V2 and not greater than 5 times the V2 current.

C. Requires +5.1V to be adjusted within ±1% with at least a 0.4A load to maintain regulation on this output.

D. Add "G" suffix to model number for RoHS compliant model.

GPC40/GPM40 MECHANICAL SPECIFICATIONS

J1 CONNECTOR: AMP P/N 640445-3, W/CENTERPIN REMOVED
0.156 [3.96mm] CTR HEADER

J2 CONNECTOR: AMP P/N 640445-6
0.156 [3.96mm] CTR HEADER

GND 0.250 FASTONTAB

INPUT J1

PIN 1) AC LINE
PIN 3) AC NEUTRAL
⊕ GND

OUTPUT:

| J2 | MULTIPLE OUTPUT MODELS | SINGLE OUTPUT MODELS |
|--------|------------------------|----------------------|
| PIN 1) | OUTPUT #2 | OUTPUT #1 |
| PIN 2) | OUTPUT #1 | OUTPUT #1 |
| PIN 3) | OUTPUT #1 | OUTPUT #1 |
| PIN 4) | COMMON | COMMON |
| PIN 5) | COMMON | COMMON |
| PIN 6) | OUTPUT #3 | COMMON |

J3 REMOTE SENSE (SINGLE OUTPUT MODELS ONLY)

AMP P/N 640456-2 0.100 [2.54mm] CTR HEADER

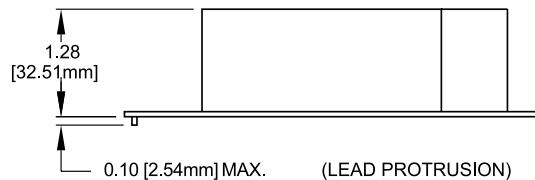
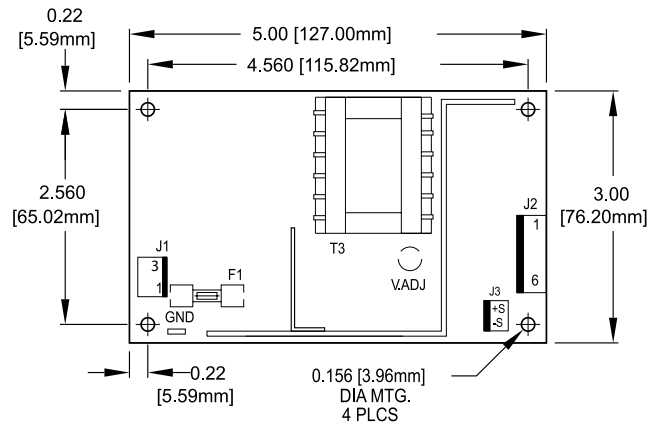
MATING CONNECTORS AMP P/N

| HOUSING | CONTACT |
|-----------------|----------|
| INPUT 640250-3 | 770476-1 |
| OUTPUT 640250-6 | 770476-1 |

NOTE: 5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN

WEIGHT: 1.0 LBS MAX. [0.45 kg MAX.] TOLERANCES: X,XX=0.030
X,XXX=0.010 [0.25mm]

OPTION: ENCLOSURE (P/N 08-30466-1040)



| ENVIRONMENTAL SPECIFICATIONS | OPERATING | NON-OPERATING |
|------------------------------|---|---|
| Temperature (A) | See individual specs. | -40 to +85°C |
| Humidity (A) | 0 to 95% RH | 0 to 95% RH |
| Shock (B) | 20 g _{pk} | 40 g _{pk} |
| Altitude | -500 to 10,000 ft | -500 to 40,000 ft |
| Vibration (C) | 1.5 g _{rms} 0.003 g ² /Hz | 5 g _{rms} 0.026 g ² /Hz |

A. Units should be allowed to warm up/operate under non-condensing conditions before application of power.

B. Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.

C. Random vibration—10 to 2000Hz, 6dB/octave roll-off from 350 to 2000Hz, 3 orthogonal axes. Tested for 10 min./axis operating and 1 hr./axis non-operating.