



ABC75 Series

Low Profile Open Frame Power Supplies

The ABC75 Series of open frame power supplies feature a wide universal AC input range of 85 V – 264 VAC, offering 75 W of output power in a compact 3 x 2 x 1 inch footprint, with a variety of isolated single output voltages.

The high efficiency and high power density of the ABC family ensures minimal power loss in end-use equipment, thereby facilitating higher reliability, easier thermal management and meets regulatory approvals for environmentally-friendly end products.

ABC Series power supplies are ideal for telecom, datacom, industrial equipment and other applications.



Key Features & Benefits

- 3 x 2 x 1 Inch Form Factor
- 75 Watts with Convection Cooling
- Efficiency up to 93%
- -40 to 70°C Operating Temperature
- Thermal Shut-Down Feature
- 2 Million Hours, Telcordia -SR332-Issue 3
- Standby Power < 0.3 W
- RoHS Compliant
- CE Marked

Applications

- Instrumentation
- Lighting
- Industrial Applications
- Applied Computing
- Renewable Energy
- Test and Measurement
- Robotics
- Wireless Communication

1. MODEL SELECTION

| MODEL NUMBER | DESCRIPTION | VOLTAGE | MAX. LOAD (CONVECTION) | MIN. LOAD | RIPPLE & NOISE ¹ |
|----------------------------|--------------------------------|---------|---------------------------|-----------|-----------------------------|
| ABC75-1T12L ABC75-1012L | Screw Terminal Molex Header | 12 V | 6.25 A | 0.0 A | 1% |
| ABC75-1T15L ABC75-1015L | Screw Terminal Molex Header | 15 V | 5.00 A | 0.0 A | 1% |
| ABC75-1T24L ABC75-1024L | Screw Terminal Molex Header | 24 V | 3.12 A | 0.0 A | 1% |
| ABC75-1T30L ABC75-1030L | Screw Terminal Molex Header | 30 V | 2.50 A | 0.0 A | 1% |
| ABC75-1T48L ABC75-1048L | Screw Terminal Molex Header | 48 V | 1.56 A | 0.0 A | 1% |
| ABC75-1T58L ABC75-1058L | Screw Terminal Molex Header | 58 V | 1.29 A | 0.0 A | 1% |
| COVER-120-XBC ² | metal cover kit accessory | | | | |

2. INPUT SPECIFICATIONS

Specifications are for nominal input voltage, 25°C unless otherwise stated.

| PARAMETER | DESCRIPTION / CONDITION | SPECIFICATION |
|---------------------|--|-----------------------------------|
| Input Voltage | Universal (Derate from 75 W @ 100 VAC to 65 W @ 85 VAC) | 85-264 VAC / 390 VDC ³ |
| Input Frequency | | 47-63 Hz |
| Input Current | 115 VAC: 230 VAC: | 1 A max. 0.5 A max. |
| No Load Power | Typical | < 0.3 W |
| Inrush Current | 115 VAC: 230 VAC: 264 VAC: | 25 A 45 A 75 A |
| Power Factor | @ Full Load | > 0.95 |
| Switching Frequency | Typical | 60 kHz |

¹ Ripple is peak to peak with 20 MHz bandwidth and 10 µF (Tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.

² When used in Cover Kit, de-rate output power to 70 % under all operating conditions

³ Functional, not approved.

3. OUTPUT SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | SPECIFICATION |
|--------------------------|---|----------------------|
| Output Power | Convection cooled | 75 W |
| Efficiency | 48 V, 58 V: 24 V, 30 V: 12 V, 15 V: | 93% 91% 90% |
| Hold-up Time | Typical | >16 ms |
| Line Regulation | | +/-0.5% |
| Load Regulation | | +/-1% |
| Transient Response | 25% step load change, at 0.1A/uS slew rate, 50% duty cycle, 50 Hz = 4% | recovery time < 5 ms |
| Voltage Adjustment | | +/-3% |
| Rise Time | Typical | 55 ms |
| Set Point Tolerance | | +/-1% |
| Over Current Protection | | > 110% |
| Over Voltage Protection | Latch type (AC recycling required) | 110 to 140% |
| Short Circuit Protection | Hiccup mode | |

4. EMC SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | SPECIFICATION |
|------------------------------------|--|----------------------|
| Conducted Emissions | EN55032-B, CISPR22-B, FCC PART15-B | Pass |
| Radiated Emissions | EN 55032 A; with external core (King core K5B RC 25x12x15-M in input cable) | Pass Level B |
| Input Current Harmonics | EN 61000-3-2 | Class D |
| Voltage Fluctuation and Flicker | EN 61000-3-3 | Pass |
| ESD Immunity | EN 61000-4-2 | Level 3, Criterion A |
| Radiated Field Immunity | EN 61000-4-3 | Level 3, Criterion A |
| Electrical Fast Transient Immunity | EN 61000-4-4 | Level 3, Criterion A |
| Surge Immunity | EN 61000-4-5 | Level 3, Criterion A |
| Conducted Immunity | EN 61000-4-6 | Level 3, Criterion A |
| Magnetic Field Immunity | EN 61000-4-8 | Level 3, Criterion A |
| Voltage Dips, Interruptions | EN 61000-4-11 | Criterion A & B |

5. SAFETY SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | SPECIFICATION |
|--------------------|--|----------------------|
| Isolation Voltage | Input to Output: (For ITE application) Input to GND: | 3000 VAC 1500 VAC |
| Safety Standard(s) | Approved to the latest edition of the following standards: CSA/UL60950-1, EN60950-1 and IEC60950-1. | |
| Agency Approvals | Nemko, UL, C-UL, CCC | |
| CE mark | Complies with LVD Directive | |

6. ENVIRONMENTAL SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | SPECIFICATION |
|------------------------------------|--|----------------------------|
| Operating Temperature ⁴ | Startup guaranteed with spec deviation, see Fig 1. | -40 to +70°C -40 to 0°C |
| Storage Temperature | | -40 to +85°C |
| Cooling | With natural convection cooling at 100 to 264 VAC | 75 W |
| Relative Humidity | Noncondensing | 5% to 95% |
| Altitude | Operating: Nonoperating: | 16,000 ft 40,000 ft. |
| Reliability | MTBF according to Telcordia -SR332-Issue 3 | 2.00 million hours |

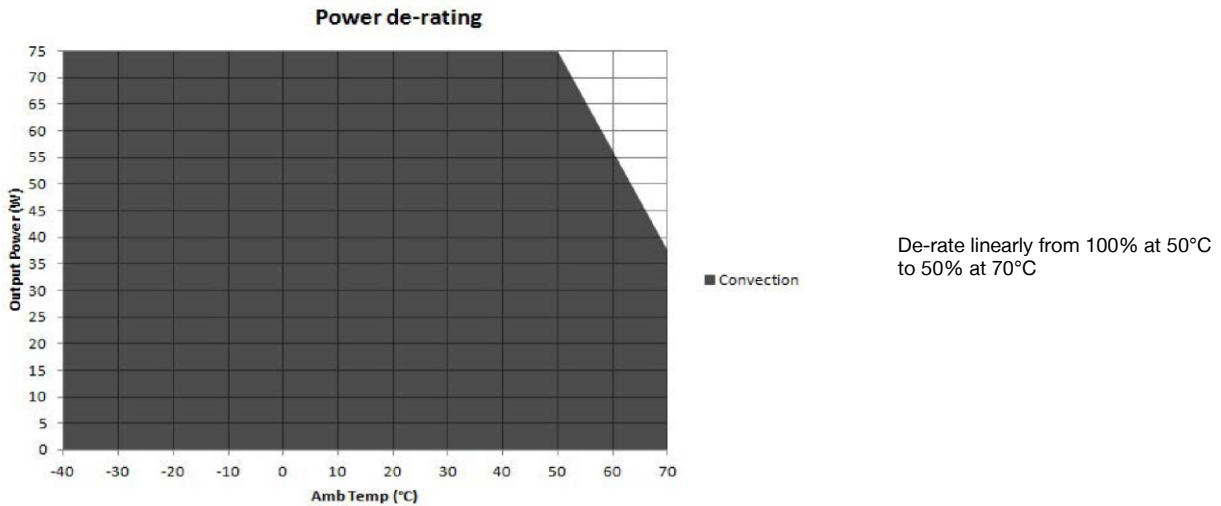


Figure 1. Derating Curve

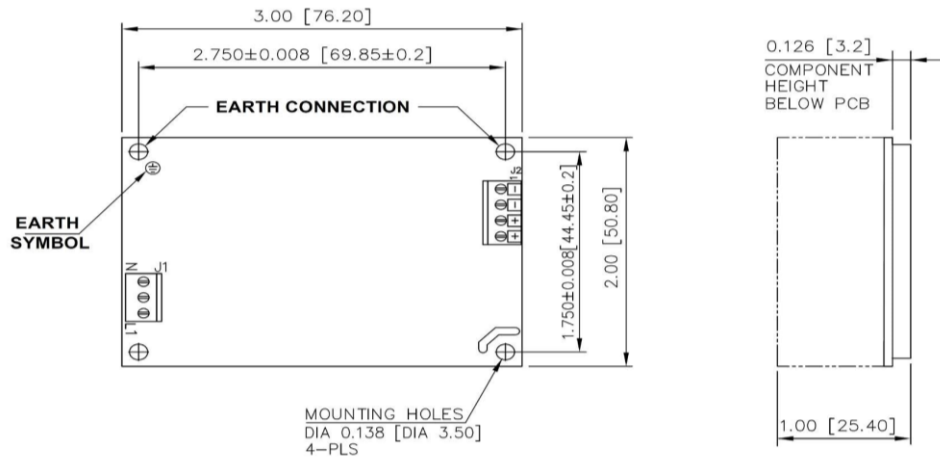
7. CONNECTOR & PIN DESCRIPTIONS

| CONNECTOR | PIN | DESCRIPTION / CONDITION | MANUFACTURER / PN | | |
|---------------------|-----|-------------------------|-------------------|---------------------------|--|
| AC Input Connector | J1 | Pin 1 | AC Line | Screw Terminal (Option 1) | Molex: 39357-0003 |
| | | Pin 2 | Not Fitted | | Tyco-2-1776112-3 |
| | | Pin 3 | AC Neutral | Molex Header (Option 2) | Molex: 1722861103 (Mating conn: Molex 1722561003) |
| DC Output Connector | J2 | Pin 1, 2 | V1 -VE | Screw Terminal (Option 1) | Molex: 39357-0004 |
| | | Pin 3, 4 | V1 +VE | Molex Header (Option 2) | Tyco-2-1776112-4 Molex: 1722861104 (Mating conn: Molex 1722561004) |

8. MECHANICAL SPECIFICATIONS

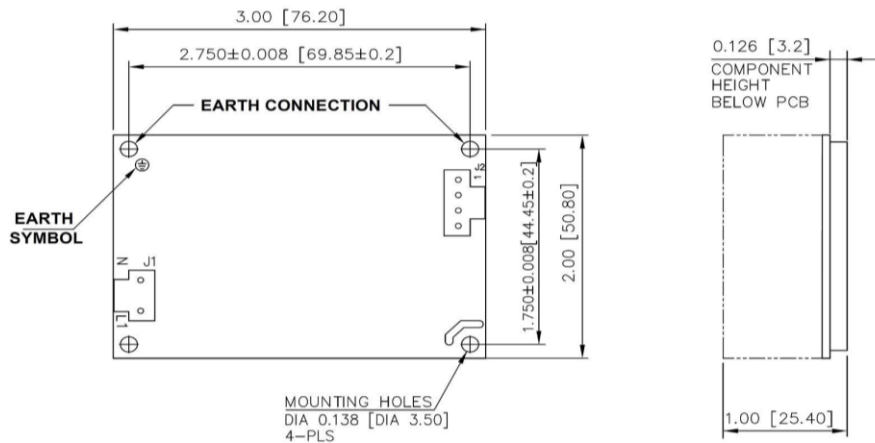
| PARAMETER | DESCRIPTION / CONDITION |
|------------|--|
| Weight | 150 g |
| Dimensions | 76.2 x 50.8 x 25.4 mm (3 x 2 x 1 inch) |
| Cooling | 75 W with natural convection cooling at 100 to 264 VAC |

⁴ Output ripple can be more than 10% of the output voltage.



MECHANICAL OUTLINE DIMENSIONS
 ALL DIMENSIONS ARE IN INCHES[MM]
 GEN TOLERANCE: ±0.06

Figure 2. Mechanical Drawing - Screw Terminal (Option 1)



MECHANICAL OUTLINE DIMENSIONS
 ALL DIMENSIONS ARE IN INCHES[MM]
 GEN TOLERANCE: ±0.06

Figure 3 - Mechanical Drawing - Molex Header (Option 2)

NOTES: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following:

- 1 Stand off, used to mount PCB has OD of 5.4 mm max.
- 2 Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
- 3 Washer, if used, to have dia of 6.5 mm max.

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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