



FEATURES:

- Wide Input Range 2:1
- 1600 Vdc Isolation
- Efficiency up to 91%
- Soft Start
- Remote On/Off Function
- No Minimum Load Required
- -40°C to +85°C Operating Temperature Range
- Short Circuit & Over Voltage Protection
- DIP 24 Package
- Low No Load Input Current



Models
Single output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Maximum Capacitive load (µF) | Efficiency (%) |
|--------------|-------------------|--------------------|-------------------------|-----------------|------------------------------|----------------|
| AM12T-1202SZ | 9-18 | 2.5 | 3500 | 1600 | 2000 | 85 |
| AM12T-1203SZ | 9-18 | 3.3 | 3500 | 1600 | 2000 | 87 |
| AM12T-1205SZ | 9-18 | 5 | 2400 | 1600 | 2000 | 89 |
| AM12T-1212SZ | 9-18 | 12 | 1000 | 1600 | 430 | 90 |
| AM12T-1215SZ | 9-18 | 15 | 800 | 1600 | 300 | 90 |
| AM12T-2402SZ | 18-36 | 2.5 | 3500 | 1600 | 2000 | 85 |
| AM12T-2403SZ | 18-36 | 3.3 | 3500 | 1600 | 2000 | 87 |
| AM12T-2405SZ | 18-36 | 5 | 2400 | 1600 | 2000 | 89 |
| AM12T-2412SZ | 18-36 | 12 | 1000 | 1600 | 430 | 90 |
| AM12T-2415SZ | 18-36 | 15 | 800 | 1600 | 300 | 90 |
| AM12T-4802SZ | 36-75 | 2.5 | 3500 | 1600 | 2000 | 84 |
| AM12T-4803SZ | 36-75 | 3.3 | 3500 | 1600 | 2000 | 88 |
| AM12T-4805SZ | 36-75 | 5 | 2400 | 1600 | 2000 | 89 |
| AM12T-4812SZ | 36-75 | 12 | 1000 | 1600 | 430 | 88 |
| AM12T-4815SZ | 36-75 | 15 | 800 | 1600 | 300 | 89 |

Models
Dual output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Maximum Capacitive load (µF) | Efficiency (%) |
|--------------|-------------------|--------------------|-------------------------|-----------------|------------------------------|----------------|
| AM12T-1212DZ | 9-18 | ±12 | ±500 | 1600 | ±200 | 90 |
| AM12T-1215DZ | 9-18 | ±15 | ±400 | 1600 | ±120 | 91 |
| AM12T-2412DZ | 18-36 | ±12 | ±500 | 1600 | ±200 | 90 |
| AM12T-2415DZ | 18-36 | ±15 | ±400 | 1600 | ±120 | 91 |
| AM12T-4812DZ | 36-75 | ±12 | ±500 | 1600 | ±200 | 88 |
| AM12T-4815DZ | 36-75 | ±15 | ±400 | 1600 | ±120 | 89 |

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|--------------------------------|---|----------|---------|-------|
| Voltage range | 12 | 9-18 | | VDC |
| | 24 | 18-36 | | |
| | 48 | 36-48 | | |
| Filter | π (Pi) Network | | | |
| Turn on Transient process time | | 250 | | µs |
| Transient response deviation | | | ±3 | % |
| Start up time | Nominal Vin and constant resistive load | | 20 | ms |
| Absolute Maximum Rating | 12 Vin models | -0.7-36 | | VDC |
| | 24 Vin models | -0.7-50 | | |
| | 48 Vin models | -0.7-100 | | |

Input Specifications (continued)

| Parameters | Nominal | Typical | Maximum | Units |
|--------------------------------|--|---------|---------|--------|
| Peak Input Voltage time | | | 1000 | ms |
| Input reflected ripple current | | | 20 | mA p-p |
| Quiescent Current | | 15 | | mA |
| On/Off Control | ON – High (3.0 ... 12Vdc) or open circuit; OFF – Low (0 ... 1.2Vdc) or Short circuit pin1 and pin 2/3 OFF idle current: 5.0 mA typ | | | |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|------------------------------|------------|---------|-------|-------|
| Tested I/O voltage | 3 sec | | 1600 | VDC |
| Tested Case/Input and Output | | 1600 | | VDC |
| Resistance | | >1000 | | MOhm |
| Capacitance | | 1200 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|----------------------------------|----------------------|---------|---------|--------|
| Voltage accuracy | | ±1.2 | | % |
| Voltage balance | Dual output | ±5 | | % |
| Line voltage regulation | HL-LL | ±0.5 | | % |
| Load voltage regulation (Single) | 0% Load to Full Load | ±0.5 | | % |
| Load voltage regulation (Dual) | 0% Load to Full Load | ±1.0 | | % |
| Over voltage protection | Zener diode clamp | | | |
| Over current protection | Full Load | 150 | | % |
| Short Circuit protection | Continuous | | | |
| Short circuit restart | Auto recovery | | | |
| Ripple & Noise | | 85 | | m Vp-p |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------|---|---------------------------|--------------------------|-------|
| Switching frequency | 100% load | 330 | | KHz |
| Operating temperature | Full Load with Derating above 60°C | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Max Case temperature | | | 100 | °C |
| Temperature coefficient | | ±0.02 | | %/°C |
| Derating | Above 60°C | 2.5 % per 1°C | | |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % RH |
| Case material | Nickel-coated Copper | | | |
| Potting material | UL94V-0 rated | | | |
| Weight | | 18.0 | | g |
| Dimensions (L x W x H) | Tolerance ±0.5 mm or ±0.02 inches | 1.25 x 0.80 x 0.40 inches | 31.80 x 20.30 x 10.20 mm | |
| MTBF | >1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | | |

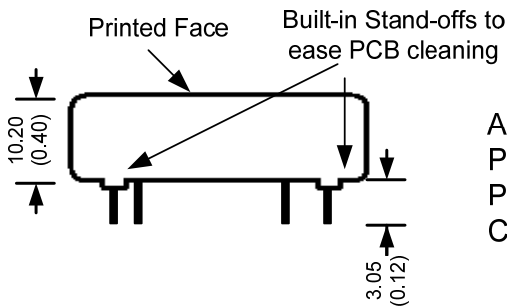
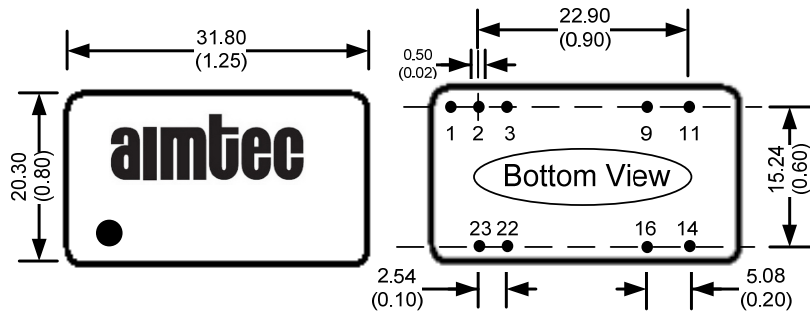
Safety Specifications

| Parameters | |
|-----------------|---|
| Agency Approval | CE |
| Standards | IEC 60950-1:2005 (2 nd Edition); EN 60950-1: 2006 |
| | EN55022 Class A, EN55024 |
| | IEC61000-4-2, Perf. Criteria B |
| | IEC61000-4-3, Perf. Criteria A |
| | IEC61000-4-4, Perf. Criteria B (external 330uF/100V cap required) |
| | IEC61000-4-5, Perf. Criteria B (external 330uF/100V cap required) |
| | IEC61000-4-6, Perf. Criteria A |
| | IEC61000-4-8, Perf. Criteria A |

Pin Out Specifications

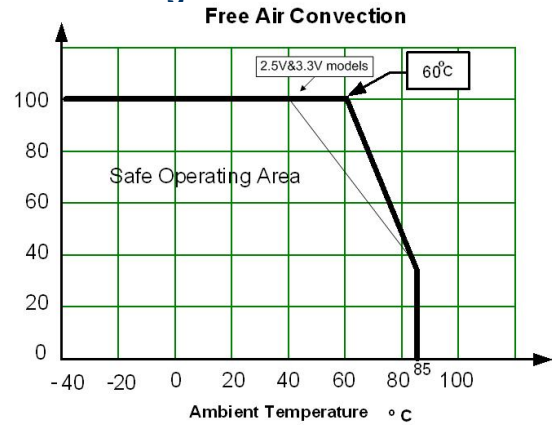
| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -V Input | -V Input |
| 3 | -V Input | -V Input |
| 9 | No Pin | Common |
| 11 | N.C. | -V Output |
| 14 | +V Output | +V Output |
| 16 | -V Output | Common |
| 22 | +V Input | +V Input |
| 23 | +V Input | +V Input |

Dimensions



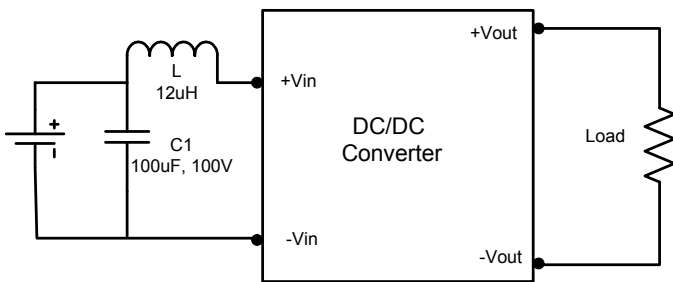
All dimensions are typical: millimeters (inches)
 Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
 Pin Pitch Tolerance: ± 0.35 (± 0.014)
 Case Tolerance: ± 0.5 (± 0.02)

Derating

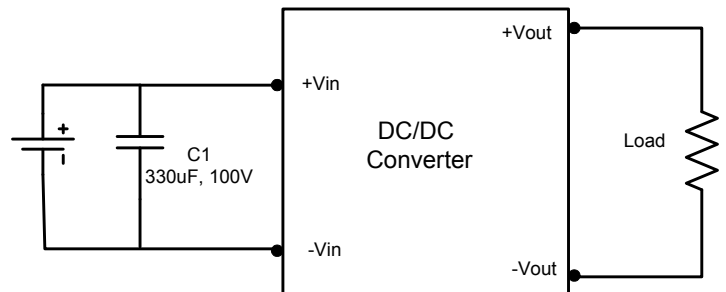


Test Circuits

Conducted Emissions :



Surge:



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