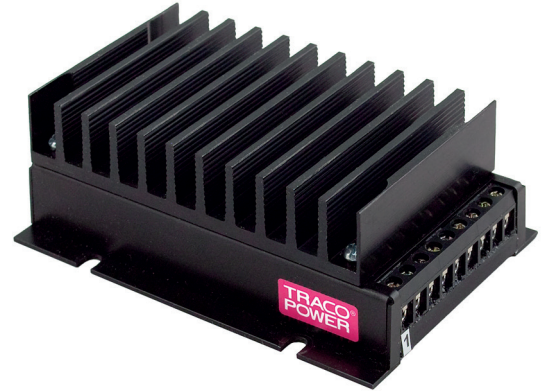


Features

- ◆ Shielded metal case with screw terminals
- ◆ Compact dimensions: 98 x 52 x 34 mm
- ◆ Ultra-wide 4:1 input voltage range
- ◆ Very high efficiency up to 87%
- ◆ Constant current output characteristic for battery load applications
- ◆ Optional with input filter to meet EN55022 class B
- ◆ Overtemperature protection
- ◆ Wide Operating temperature range: -40°C to +75°C
- ◆ Reverse input protection
- ◆ Under voltage lock-out
- ◆ I/O isolation 2250 VDC
- ◆ Easy chassis and wall mounting
- ◆ 3-year product warranty



The TEP-150WI Series is a family of high power density dc-dc converter modules with ultra-wide 4:1 input voltage range which come in an ultra-compact metal case with screw terminal connection. Suitable for a wide range of applications, the TEP-150WI series was particularly designed with industrial applications in mind. The modules have flanges for easy chassis or wall mounting. A very high efficiency allows an operating temperature up to +50°C with natural convection cooling. Further features include adjustable output voltage with constant current characteristic for battery charger applications.

Models

| Order code* | Input voltage | Output voltage | Output current max. | Efficiency typ. |
|----------------|----------------------------------|----------------|---------------------|-----------------|
| TEP 150-2412WI | 9 – 36 VDC (24 VDC nominal) | 12 VDC | 12.5 A | 86 % |
| TEP 150-2413WI | | 15 VDC | 10 A | 86 % |
| TEP 150-2415WI | | 24 VDC | 6.3 A | 87 % |
| TEP 150-2416WI | | 28 VDC | 5.4 A | 87 % |
| TEP 150-2418WI | | 48 VDC | 3.2 A | 86 % |
| TEP 150-4812WI | 18 – 75 VDC (48 VDC nominal) | 12 VDC | 12.5 A | 87 % |
| TEP 150-4813WI | | 15 VDC | 10 A | 87 % |
| TEP 150-4815WI | | 24 VDC | 6.3 A | 88 % |
| TEP 150-4816WI | | 28 VDC | 5.4 A | 88 % |
| TEP 150-4818WI | | 48 VDC | 3.2 A | 87 % |
| TEP 150-7212WI | 43 – 160 VDC (72 VDC nominal) | 12 VDC | 12.5 A | 86 % |
| TEP 150-7213WI | | 15 VDC | 10 A | 86 % |
| TEP 150-7215WI | | 24 VDC | 6.3 A | 87 % |
| TEP 150-7216WI | | 28 VDC | 5.4 A | 87 % |
| TEP 150-7218WI | | 48 VDC | 3.2 A | 86 % |

Options

| | |
|-----------|--|
| suffix -F | Modules with input filter to meet EN 55022 class B, see page 5 |
| on demand | Negative (passive = Off) remote On/Off function (standard is passive = On) range |

Input Specifications

| | | |
|--|---|--|
| Input current (no load) | 24 Vin, 12 – 24 VDC models: | 80 mA typ. |
| | 24 Vin, 28 – 48 VDC models: | 130 mA typ. |
| | 48 Vin, 12 – 24 VDC models: | 60 mA typ. |
| | 48 Vin, 28 – 48 VDC models: | 70 mA typ. |
| | 110 Vin, 12 – 24 VDC models: | 30 mA typ. |
| | 110 Vin, 28 – 48 VDC models: | 40 mA typ. |
| Start-up voltage / under voltage lock-out | 24 Vin models: | 9 VDC / 8.2 VDC typ. |
| | 48 Vin models: | 18 VDC / 16.2 VDC typ. |
| | 110 Vin models: | 43 VDC / 34.5 VDC typ. |
| Surge voltage (1sec. max.) | 24 Vin models: | 50 V |
| | 48 Vin models: | 100 V |
| | 110 Vin models: | 170 V |
| Conducted noise (input) | | EN 55022 class A, FCC part 15, class A without external components. optional filter for class B – suffix F |
| ESD (electrostatic discharge) | | EN 61000-4-2, air ±8 kV, contact ±6 kV, perf. criteria A |
| Radiated immunity | | EN 61000-4-3, 10 V/m, perf. criteria A |
| Fast transient / Surge (with input capacitor for models without filter module) | | EN 61000-4-4, ±2 kV, perf. criteria A |
| | | EN 61000-4-5, ±1 kV perf. criteria A |
| | – Input capacitor: | 24 VDC models: Nippon chemi-con KY 470 µF, 50 V, ESR 45 mOhm |
| | | 48 VDC models: Nippon chemi-con KY 220 µF, 100 V, ESR 48 mOhm |
| | 110 VDC models: Nippon chemi-con KXJ series, 150 µF, 200V | |
| | models with filter module (suffix F): | no input capacitor required |
| Conducted immunity | | EN 61000-4-6, 10 Vrms, perf. criteria A |
| Reverse voltage protection | | parallel diode (input fuse required) |
| Recommended input fuse (slow blow) | 24 Vin models: | 15 A |
| | 48 Vin models: | 10 A |
| | 72 Vin models: | 5 A |

Output Specifications

| | | |
|---|--|---|
| Voltage set accuracy | | ±1 % |
| Output voltage adjustment | | +20 % by external resistor (see application note) |
| Regulation | – Input variation Vin min. to Vin max. | 0.2 % max. |
| | – Load variation 0 – 100 % | 0.4 % max. |
| Temperature coefficient | | ±0.02 %/K |
| Minimum load | | not required |
| Ripple and noise (20 MHz Bandwidth) | 12 & 15 VDC models: | 100 mVpk-pk max. |
| | 24 & 28 VDC models: | 200 mVpk-pk max. |
| | 48 VDC models: | 350 mVpk-pk max. |
| Start up time (nominal Vin and constant resistive load) | | 25 ms typ. (at power On or remote On) |
| Transient response (25 % load step change) | | 200 µs typ. |
| Output current | – Constant voltage (CV) | up to 110 % of Iout max. |
| | – Constant current (CC) | above 110 % of Iout max. |
| Over voltage protection | | at 125 –140 % of Vout nom. |
| Short circuit protection | | indefinite, automatic recovery |
| Capacitive load | 12 VDC models: | 40'000 µF max. |
| | 15 VDC models: | 26'000 µF max. |
| | 24 VDC models: | 10'000 µF max. |
| | 28 VDC models: | 7'600 µF max. |
| | 48 VDC models: | 2'600 µF max. |

General Specifications

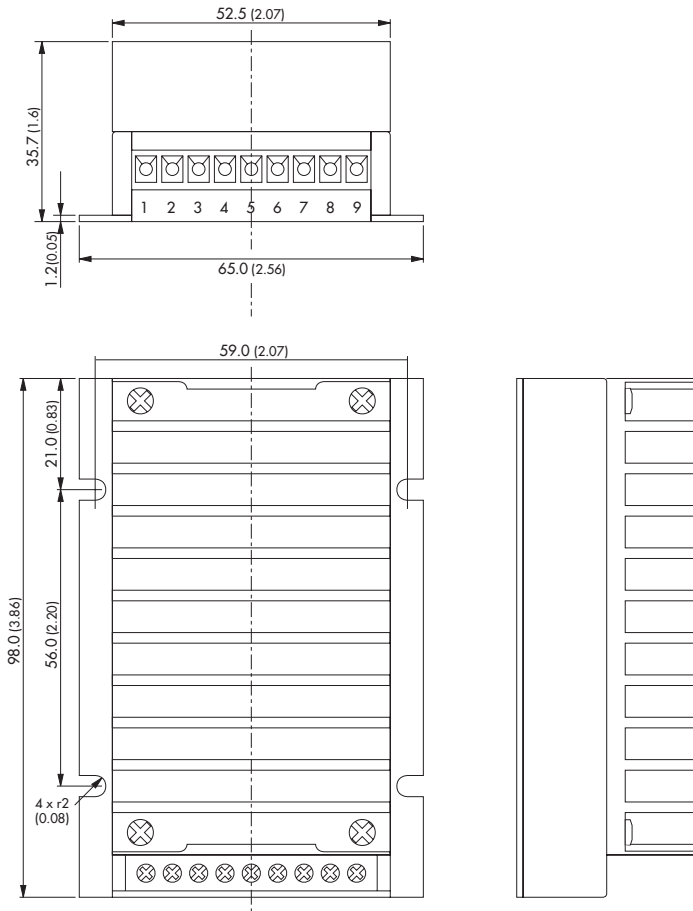
| | | |
|---|--|--|
| Temperature ranges | <ul style="list-style-type: none"> - Operating - Case temperature - Storage | <ul style="list-style-type: none"> -40°C to +75°C +100°C max. -55°C to +125°C |
| Thermal consideration | <ul style="list-style-type: none"> - Mounting surface - Derating and temperature test point | Optimize thermal coupling to heat conducting surface. Not to mount on flammable surface! see application note |
| Over temperature protection | | at 110°C (auto restart) |
| Vibration and thermal shock | | acc. MIL-STD-810F |
| Humidity (non condensing) | | 95 % rel H max. |
| Reliability, calculated MTBF (MIL-HDBK-217F, at +40°C, ground benign) | | >135'000 h |
| Isolation voltage (60 sec.) | <ul style="list-style-type: none"> - Input/Output - Input/Case - Output/Case | <ul style="list-style-type: none"> 2250 VDC (functional insulation) 1500 VDC 1500 VDC |
| Isolation capacitance | - Input/Output | 3500 pF max. |
| Isolation resistance | - Input/Output (500 VDC) | >1 GOhm min. |
| Switching frequency | | 220 – 330 kHz depending on model (puls width modulation) |
| Safety standards | | UL 60950-1, IEC/EN 60950-1 |
| Safety approvals | <ul style="list-style-type: none"> - UL/cUL 60950-1 - CB test certificate (IEC 60950-1) | www.ul.com -> certifications -> File e188913 www.tracopower.com/products/tep150wi-cb.pdf (72 Vin models pending) |
| Remote On/Off | <ul style="list-style-type: none"> - positive logic (standard) - negative logic (option -N) - Off idle current: | <ul style="list-style-type: none"> - On: 3 to 12 VDC or open circuit - Off: 0 to 1.2 VDC or short circuit pin 5 and 3 - On: 0 to 1.2 VDC or short circuit pin 5 and 3 - Off: 3 to 12 VDC or open circuit 3 mA |
| Environmental compliance | <ul style="list-style-type: none"> - Reach - RoHS | www.tracopower.com/products/tep150wi-reach.pdf RoHS directive 2011/65/EU |

Physical Specifications

| | |
|------------------|--------------------------------------|
| Casing material | metal |
| Potting material | silicon (UL 94V-0 rated) |
| Case protection | IP 50 (in accordance to IEC/EN60529) |
| Weight | 300 g (10.6 oz) |

Application note: www.tracopower.com/products/tep150wi-application.pdf (72 Vin models pending)

Outline Dimensions

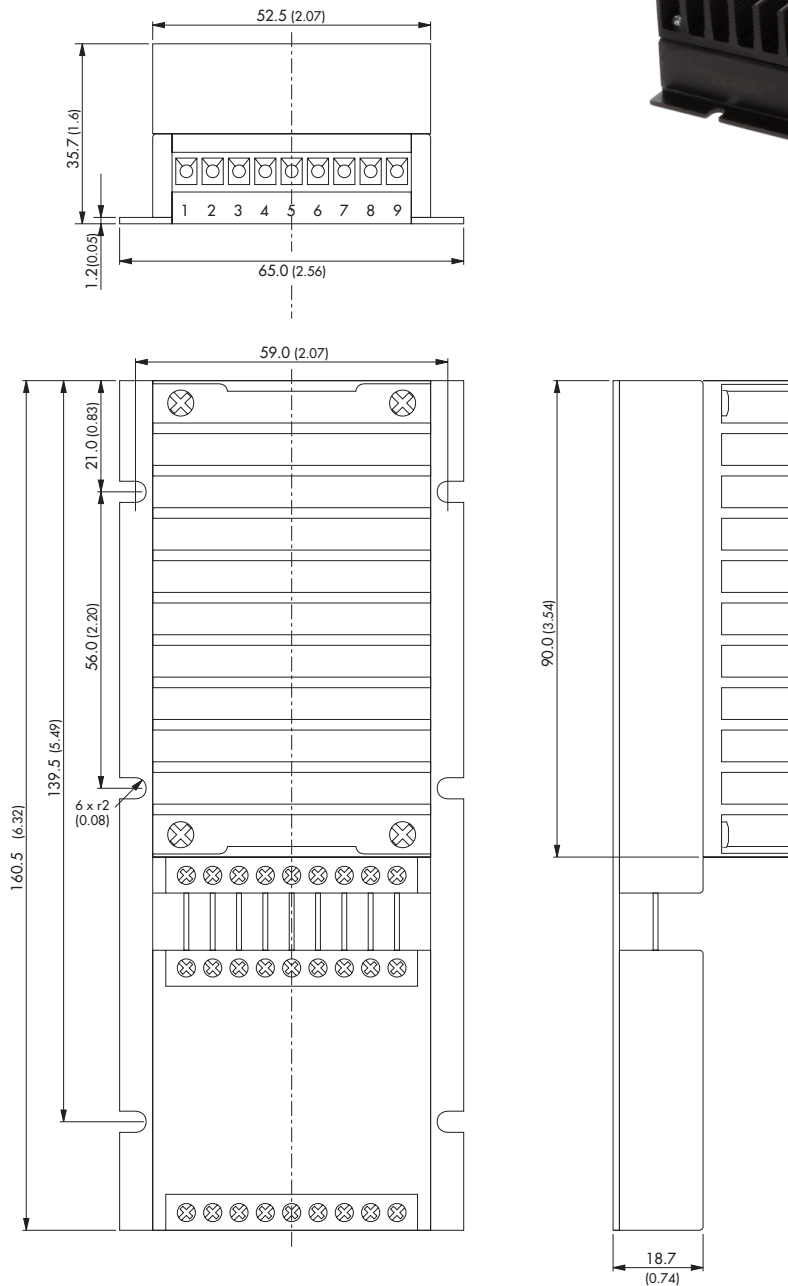


| Pin Connection | | |
|----------------|---------------|------------------|
| pin | function | recommended wire |
| 1 | + Vin | 14 - 16 AWG |
| 2 | + Vin | 14 - 16 AWG |
| 3 | - Vin | 14 - 16 AWG |
| 4 | - Vin | 14 - 16 AWG |
| 5 | Remote On/Off | 14 - 24 AWG |
| 6 | + Vout | 14 - 16 AWG |
| 7 | - Vout | 14 - 16 AWG |
| 8 | Trim | 14 - 24 AWG |
| 9 | Trim | 14 - 24 AWG |

Weight: 300g (10.6 oz)

Dimensions in [mm], () = Inch
 Mounting slot tolerance: ± 0.25 (± 0.001)
 Case tolerances: ± 0.5 (± 0.02)

Outline Dimensions



| Pin Connection | | |
|----------------|---------------|------------------|
| pin | function | recommended wire |
| 1 | + Vin | 14 - 16 AWG |
| 2 | + Vin | 14 - 16 AWG |
| 3 | - Vin | 14 - 16 AWG |
| 4 | - Vin | 14 - 16 AWG |
| 5 | Remote On/Off | 14 - 24 AWG |
| 6 | + Vout | 14 - 16 AWG |
| 7 | - Vout | 14 - 16 AWG |
| 8 | Trim | 14 - 24 AWG |
| 9 | Trim | 14 - 24 AWG |

Weight: 435g (15.3 oz)

Dimensions in [mm], () = Inch
Mounting slot tolerance: ± 0.25 (± 0.001)
Case tolerances: ± 0.5 (± 0.02)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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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