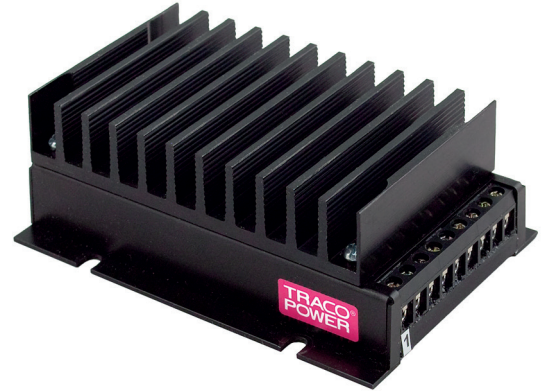


Features

- ◆ 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

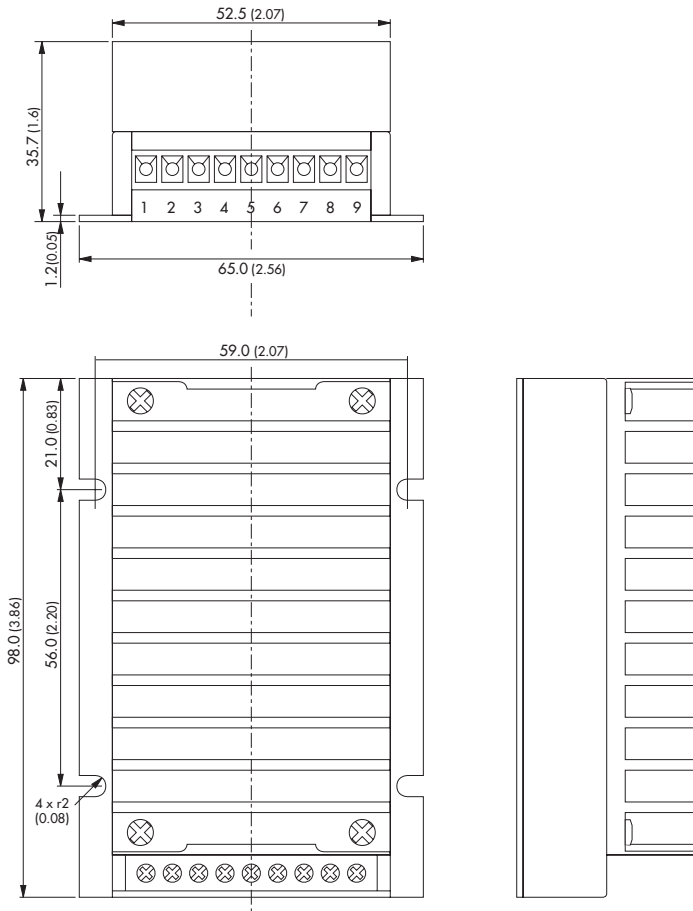
| | | |
|---|--|--|
| Temperature ranges | <ul style="list-style-type: none"> - Operating - Case temperature - Storage | -40°C to +75°C +100°C max. -55°C to +125°C |
| Thermal consideration | <ul style="list-style-type: none"> - Mounting surface - Derating and temperature test point | Optimize thermal 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 | 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

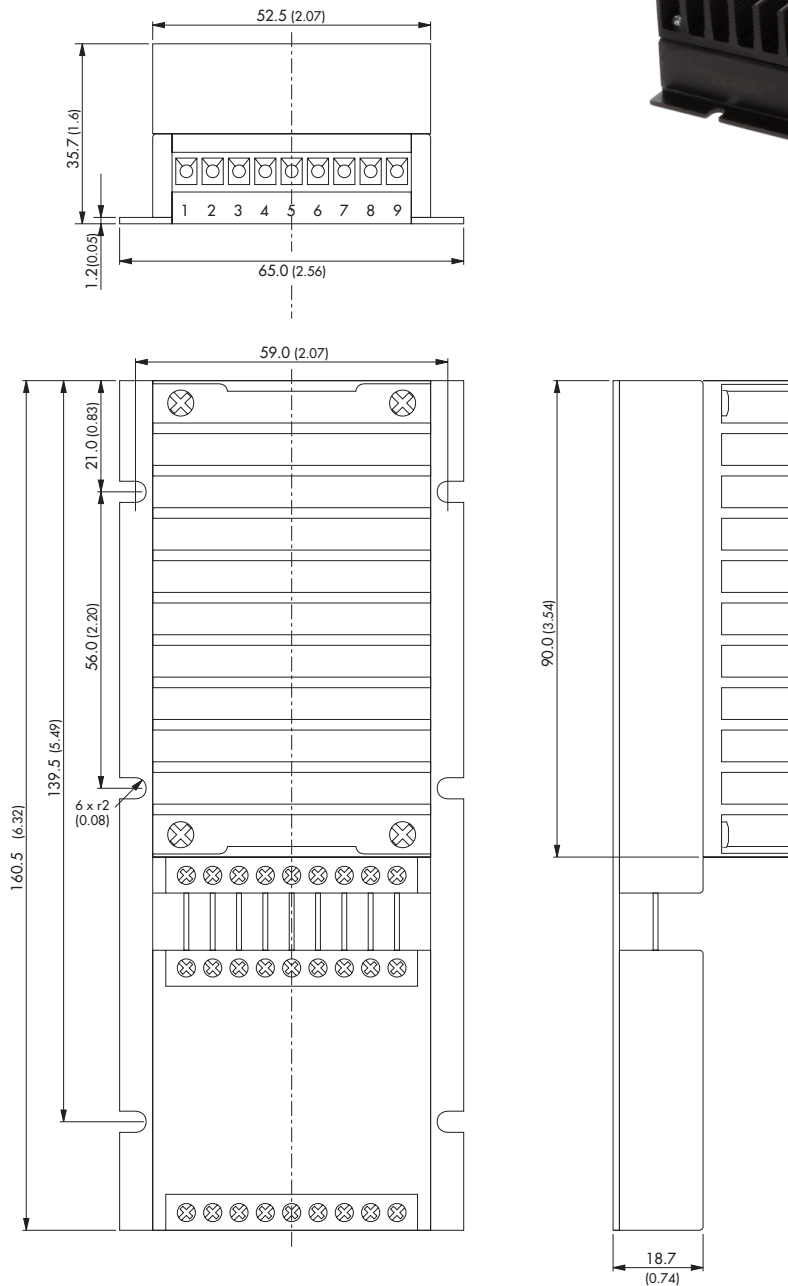


| Pin Connection | | |
|----------------|---------------|------------------|
| pin | function | recommended wire |
| 1 | + Vin | 14 - 16 AWG |
| 2 | + Vin | 14 - 16 AWG |
| 3 | - Vin | 14 - 16 AWG |
| 4 | - Vin | 14 - 16 AWG |
| 5 | Remote On/Off | 14 - 24 AWG |
| 6 | + Vout | 14 - 16 AWG |
| 7 | - Vout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

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com



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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