

Features

- ◆ Compact high voltage power supplies
- ◆ Full SMD design with ceramic capacitors for highest reliability
- ◆ Positive or negative polarity models
- ◆ PCB- and flying lead versions
- ◆ Excellent output stability
- ◆ Low temperature coefficient
- ◆ Ultra low ripple
- ◆ Remote voltage programming 0 to 100 %
- ◆ Short circuit protection
- ◆ Shielded metal case
- ◆ 3-year product warranty



The THV / SHV series are regulated miniature high voltage power modules using SMD and hybrid technology. They are designed for PCB mounting (THV series) or chassis mounting (SHV series). The use of high stability components guarantees a minimal temperature drift and a very stable output voltage. Typical applications for these high voltage power supplies are photomultiplier tubes, gas chromatography, analytical instruments and wherever where small size and high output voltage stability is requested.

Models

| Order code | Input voltage range | Output voltage | Output current max. | Case |
|--------------------|---------------------------|----------------|---------------------|------|
| THV 12-180P | 12 VDC 10.8 – 13.2 VDC | 0...+180 VDC | 15 mA | A |
| THV 12-180N | | 0...-180 VDC | 15 mA | A |
| THV 12-300P | | 0...+300 VDC | 10 mA | A |
| THV 12-300N | | 0...-300 VDC | 10 mA | A |
| THV 12-350P | | 0...+350 VDC | 7 mA | A |
| THV 12-350N | | 0...-350 VDC | 7 mA | A |
| THV 12-500P | | 0...+500 VDC | 6 mA | B |
| THV 12-500N | | 0...-500 VDC | 6 mA | B |
| THV 12-1000P | 12 VDC 10.8 – 16.5 VDC | 0...+1000 VDC | 2 mA | B |
| THV 12-1000N | | 0...-1000 VDC | 2 mA | B |
| THV 12-1500P | | 0...+1500 VDC | 1.3 mA | B |
| THV 12-1500N | | 0...-1500 VDC | 1.3 mA | B |
| THV 12-2000P | | 0...+2000 VDC | 1 mA | B |
| THV 12-2000N | | 0...-2000 VDC | 1 mA | B |
| SHV 12-0.5 K 6000P | 12 VDC 10.8 – 13.2 VDC | 0...+500 VDC | 6 mA | C |
| SHV 12-0.5 K 6000N | | 0...-500 VDC | 6 mA | C |
| SHV 12-1.0 K 2000P | 12 VDC 10.8 – 16.5 VDC | 0...+1000 VDC | 2 mA | C |
| SHV 12-1.0 K 2000N | | 0...-1000 VDC | 2 mA | C |
| SHV 12-1.5 K 1300P | | 0...+1500 VDC | 1.3 mA | C |
| SHV 12-1.5 K 1300N | | 0...-1500 VDC | 1.3 mA | C |
| SHV 12-2.0 K 1000P | | 0...+2000 VDC | 1 mA | C |
| SHV 12-2.0 K 1000N | | 0...-2000 VDC | 1 mA | C |

Appendix P for positive output polarity / Appendix N for negative output polarity

Input Specifications

| | |
|----------------------------|--|
| Input voltage | 180, 300, 350 & 500 VDC models: +10.8 to +13.2 VDC other VDC models: +10.8 to +16.5 VDC |
| Reserve voltage protection | none |
| Conducted noise (input) | internal filter |

Output Specifications

| | |
|---|---|
| Voltage set accuracy | ±5 % |
| Voltage adjustment range (adjustable with external voltage 0 to +4 VDC or with 5 kOhm variable resistor) | 0 – 100 % |
| Remote On/Off control (not for 180, 300, 350 VDC models) | On = pin 2 to pin 5 open Off = pin 2 to pin 5 short |
| Regulation | – Input variation Vin min. to Vin max. 0.03 % max. – Load variation 0 – 100 % 0.08 % max. |
| Ripple and noise (20 MHz Bandwidth) | 180, 300 & 350 VDC models: 30 mVpk-pk typ. 500 VDC models: 10 mVpk-pk typ. 1.0, 1.5 & 2.0 kVDC models: 8 mVpk-pk typ. |
| Temperature coefficient | ±0.01 %/K |
| Stability | 0.05 % 8h after warm-up time |
| Output current limitation | 105 % of Iout max., fold back |
| Short circuit protection | indefinite, automatic recovery |

General Specifications

| | |
|---|--|
| Temperature ranges | – Operating –10°C to +60°C – Case temperature +95°C max. – Storage –25°C to +85°C |
| Derating | 4 %/K above 50°C |
| Humidity (non condensing) | 95 % rel H max. |
| Efficiency | 60 – 65 % |
| Reliability, calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign) | >300'000 h |
| Isolation (Input/Output) – Voltage | none |
| Switching frequency | 125 kHz typ. (fixed) |
| Vibration | 5 – 100 Hz amplitude 10 mm pk-pk 10 – 55 Hz acceleration 2 G |
| Thermal shock | acceleration 20 G max. time 11 ms. |
| Environmental compliance | – Reach www.tracopower.com/products/thv-reach.pdf – RoHS RoHS Directive 2011/65/EU |

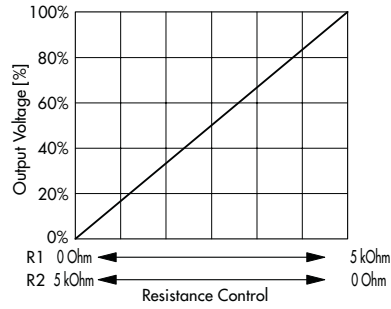
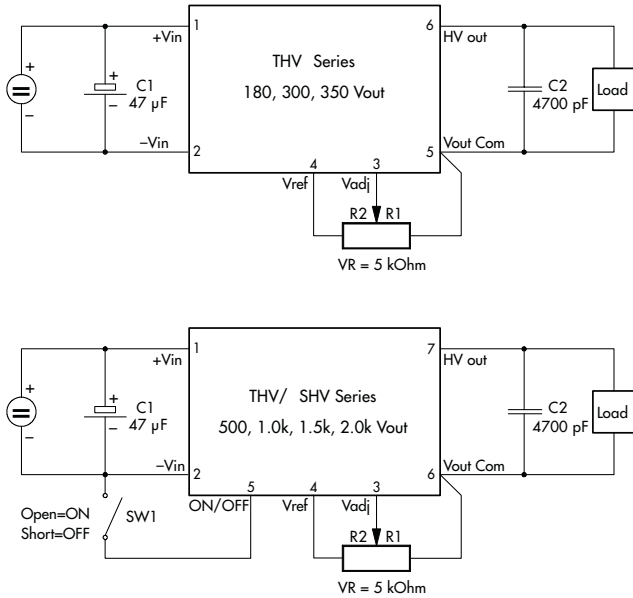
Physical Specifications

| | |
|-----------------------|---|
| Casing material | Steel chrome-nickel plated |
| Weight | THV models case A : 47 g (1.66 oz) THV models case B : 65 g (2.29 oz) SHV models : 98 g (3.46 oz) |
| Soldering temperature | max. 260°C / 10 sec. |

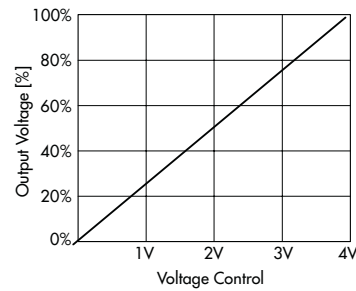
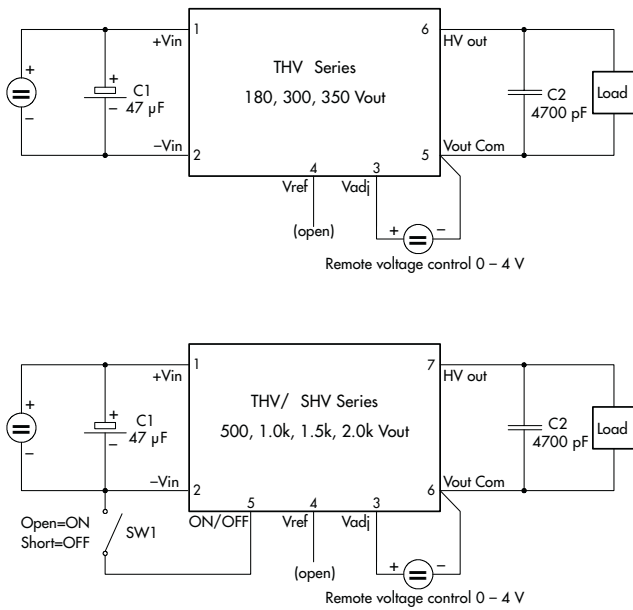
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Connection Diagram

Connection for remote control by variable resistor

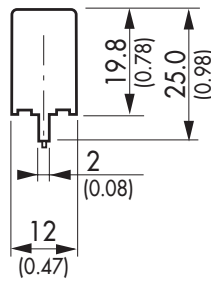
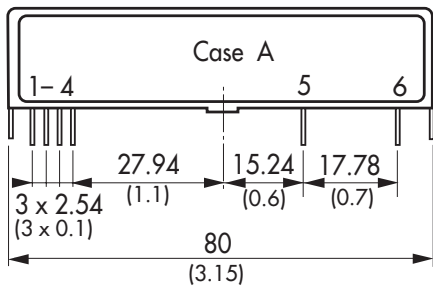


Connection for remote control voltage control

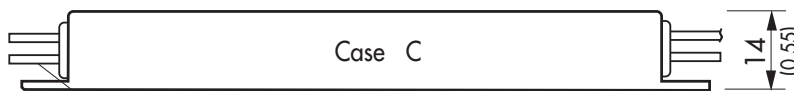
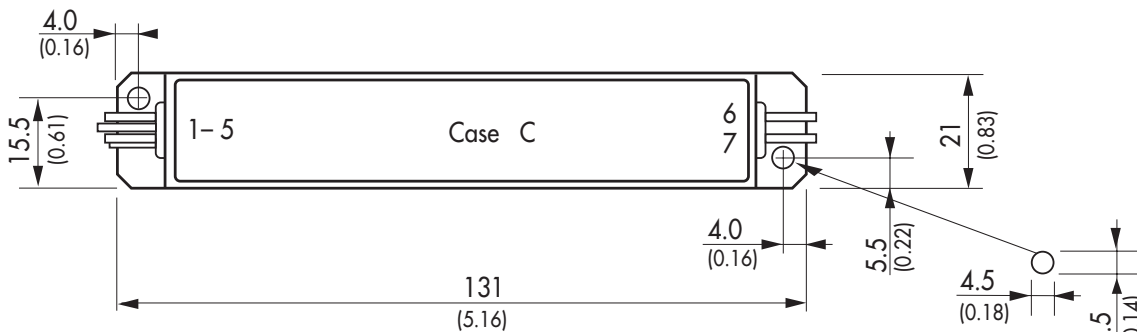
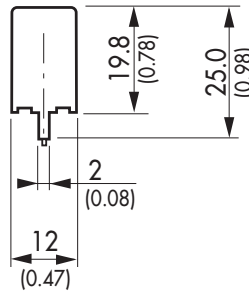
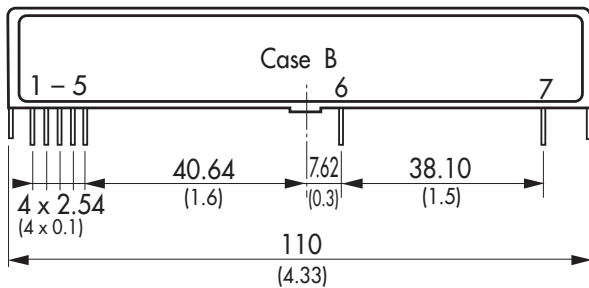


All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Outline Dimensions



| Pin-Out | | |
|---------|------------|------------|
| Pin | Case A | Case B |
| 1 | +Vin (Vcc) | +Vin (Vcc) |
| 2 | -Vin (GND) | -Vin (GND) |
| 3 | V adj. | V adj. |
| 4 | V ref. | V ref. |
| 5 | Common | ON/OFF |
| 6 | Vout | Common |
| 7 | no pin | Vout |



Lead length 250 mm (10.0)

| Pin-Out | | |
|---------|------------|------------|
| Pin | Lead color | Case C |
| 1 | red | +Vin (Vcc) |
| 2 | black | -Vin (GND) |
| 3 | yellow | V adj. |
| 4 | orange | V ref. |
| 5 | blue | ON/OFF |
| 6 | black | Common |
| 7 | red | Vout |

Dimensions in [mm], () = Inch
Pin diameter: 0.65 ±0.05 (0.03 ±0.002)
Tolerances: ±0.5 (±0.02)

Specifications can be changed any time without notice.



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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