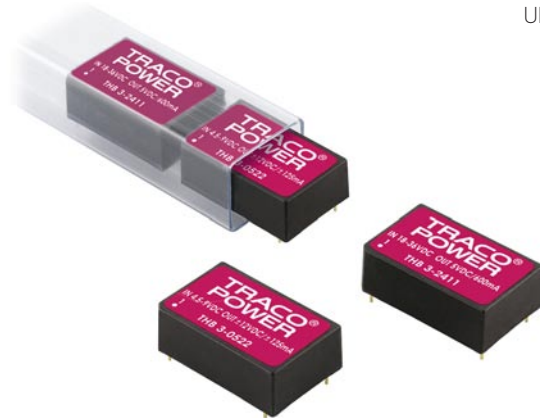


Features

- ◆ Supplementary and reinforced insulation for working voltages up to 300 VAC
- ◆ I/O isolation 4000 VACrms
- ◆ Isolation test voltage 6000 Vpk
- ◆ Wide 2:1 input voltage ranges
- ◆ Extended operating temperature range -40°C to 85°C max.
- ◆ Input filter meets EN55022, class A
- ◆ Continuous short-circuit protection
- ◆ High reliability
- ◆ Industrial & medical safety approvals
- ◆ 3-year product warranty



The THB-3 series is a range of high performance, regulated DC/DC converters in a DIP-24 plastic package. A reinforced I/O-isolation system and a wide 2:1 input voltage range make this product the best choice for many demanding applications like transportation systems, industrial controls, medical equipments, instrumentations, everywhere where high basic-, supplementary- or reinforced insulation is required to meet requested safety standards.

A high efficiency allows safe operation in a temperature range of -40°C to +85°C. Other features of this product are over voltage protection and internal EMI-input filter to meet EN 55022, class A without additional components. Full SMD-design with exclusive use of ceramic capacitors ensure a very high reliability and a long product lifetime.

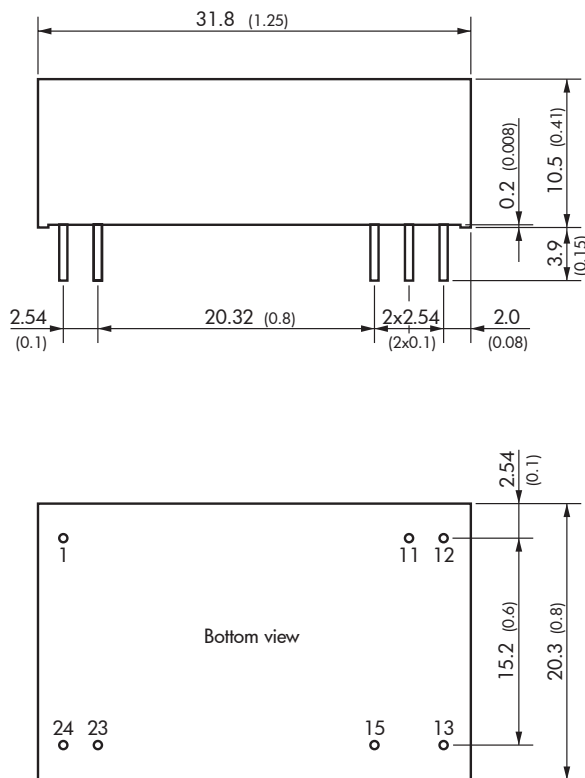
Models

| Order code | Input voltage range | Output voltage | Output current max. | Efficiency typ. |
|------------|---------------------------------|----------------|---------------------|-----------------|
| THB 3-0511 | 4.5 – 9 VDC (5 VDC nominal) | 5 VDC | 600 mA | 70 % |
| THB 3-0512 | | 12 VDC | 250 mA | 75 % |
| THB 3-0515 | | 24 VDC | 125 mA | 76 % |
| THB 3-0522 | | ±12 VDC | ±125 mA | 75 % |
| THB 3-0523 | | ±15 VDC | ±100 mA | 75 % |
| THB 3-1211 | 9 – 18 VDC (12 VDC nominal) | 5 VDC | 600 mA | 74 % |
| THB 3-1212 | | 12 VDC | 250 mA | 80 % |
| THB 3-1215 | | 24 VDC | 125 mA | 81 % |
| THB 3-1222 | | ±12 VDC | ±125 mA | 80 % |
| THB 3-1223 | | ±15 VDC | ±100 mA | 80 % |
| THB 3-2411 | 18 – 36 VDC (24 VDC nominal) | 5 VDC | 600 mA | 78 % |
| THB 3-2412 | | 12 VDC | 250 mA | 83 % |
| THB 3-2415 | | 24 VDC | 125 mA | 84 % |
| THB 3-2422 | | ±12 VDC | ±125 mA | 83 % |
| THB 3-2423 | | ±15 VDC | ±100 mA | 83 % |
| THB 3-4811 | 36 – 75 VDC (48 VDC nominal) | 5 VDC | 600 mA | 78 % |
| THB 3-4812 | | 12 VDC | 250 mA | 83 % |
| THB 3-4815 | | 24 VDC | 125 mA | 84 % |
| THB 3-4822 | | ±12 VDC | ±125 mA | 83 % |
| THB 3-4823 | | ±15 VDC | ±100 mA | 83 % |

General Specifications

| | | |
|--|--------------------------------------|---|
| Temperature ranges | - Operating - Casing - Storage | -40°C to +85°C +95°C max. -40°C to +125°C |
| Derating | | 3.3 %/K above 70°C |
| Humidity (non condensing) | | 95 % rel H max. |
| Temperature coefficient | | ±0.02 %/K typ. |
| Reliability, calculated MTBF (MIL-HDBK-217F, at 25°C, ground benign) | | >1 Mio. h |
| Switching frequency | | 150 kHz typ. (puls width modulation) |
| Casing material | | non conductive plastic (UL 94V-0-rated) |
| Potting material | | Silicon TSE 3331 (UL 94V-0-rated) |
| Weight | | 16.2 g (0.57 oz) |
| Soldering temperature | | max. 265°C / 10 sec. |

Outline Dimensions



| Pin-Out | | |
|---------|------------|------------|
| Pin | Single | Dual |
| 1 | +Vin (Vcc) | +Vin (Vcc) |
| 11 | No pin | Common |
| 12 | -Vout | No pin |
| 13 | +Vout | -Vout |
| 15 | No pin | +Vout |
| 23 | -Vin (GND) | -Vin (GND) |
| 24 | -Vin (GND) | -Vin (GND) |

Dimensions in [mm], () = Inch
 Pin diameter $\varnothing 0.6 \pm 0.05$ (0.024 \pm 0.002)
 Tolerances ± 0.25 (± 0.001)
 Pin pitch tolerances ± 0.13 (± 0.005)

Specifications can be changed any time without notice.