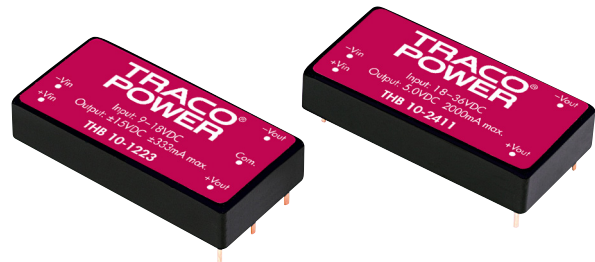


### Features

- ◆ Supplementary and reinforced insulation
- ◆ I/O isolation 4000 VACrms rated for 300 Vrms working voltage
- ◆ 2 x MOOP Medical safety according to AAMI/ANSI ES 60601-1:2005(R) and IEC/EN 60601-1 3rd edition
- ◆ Industrial safety to UL/IEC/EN 60950-1
- ◆ Wide 2:1 input voltage ranges
- ◆ Extended operating temperature range -40°C to 75°C max.
- ◆ Input filter meets EN55022, class A
- ◆ Continuous short-circuit protection
- ◆ High reliability
- ◆ 3-year product warranty



The THB 10 series is a range of high performance DC/DC converter modules with double reinforced insulation system. It complies to latest medical safety standard IEC 60950-1 3rd edition for MOOP (Means of Operator Protection). The product comes in a 2"x1" industry standard package. All 12 models features wide 2:1 input voltage range and fully regulated output voltage. The converters offer an economical solution for demanding applications in industrial and medical instrumentation.

### Models

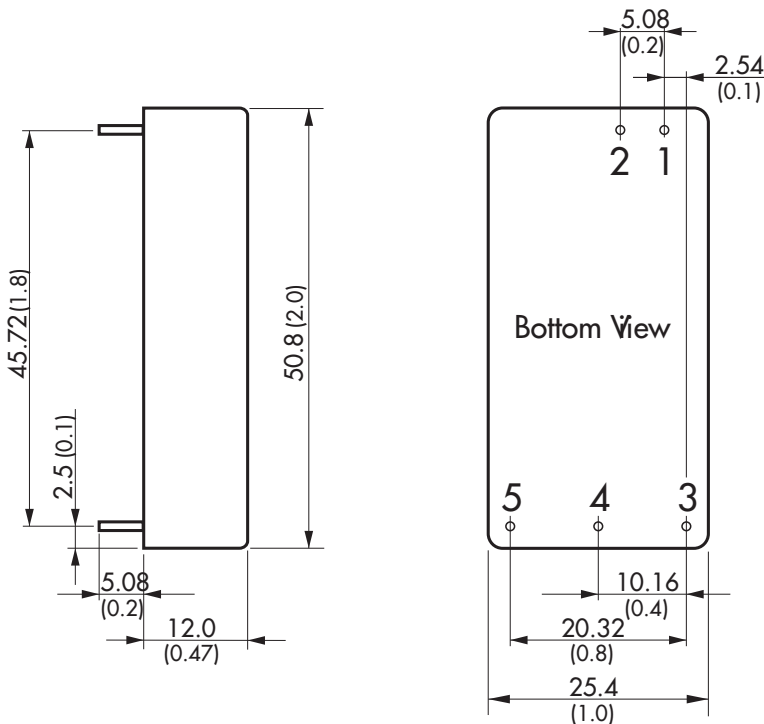
Order code	Input voltage range	Output voltage	Output current max.	Efficiency typ.
THB 10-1211	9 - 18 VDC (12 VDC nominal)	5.1 VDC	1600 mA	75 %
THB 10-1212		12.0 VDC	835 mA	80 %
THB 10-1222		±12.0 VDC	±417 mA	80 %
THB 10-1223		±15.0 VDC	±333 mA	81 %
THB 10-2411	18 - 36 VDC (24 VDC nominal)	5.1 VDC	2000 mA	76 %
THB 10-2412		12.0 VDC	835 mA	81 %
THB 10-2422		±12.0 VDC	±417 mA	81 %
THB 10-2423		±15.0 VDC	±333 mA	82 %
THB 10-4811	36 - 75 VDC (48 VDC nominal)	5.1 VDC	2000 mA	76 %
THB 10-4812		12.0 VDC	835 mA	81 %
THB 10-4822		±12.0 VDC	±417 mA	81 %
THB 10-4823		±15.0 VDC	±333 mA	82 %



**General Specifications**

Temperature ranges	- Operating - Case - Storage	-40°C to +75°C +95°C max. -50°C to +125°C
Derating		2.5 %/K above 60°C
Humidity (non condensing)		95 % rel H max.
Altitude during operation		4000 m
Temperature coefficient		±0.02 %/K typ.
Reliability, calculated MTBF (MIL-HDBK-217F at +25°C, ground benign)		>1'000'000 h
Switching frequency		150 kHz typ. (puls width modulation)
Casing material		non conductive plastic (UL 94V-0-rated)
Pin Material		copper alloy with gold plate over nickel subplate
Weight		24.5 g (0.86 oz)
Soldering temperature		max. 260°C / 10 sec.

**Outline Dimensions**



Pin-Out		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin(GND)	-Vin(GND)
3	+Vout	+Vout
4	No pin	Common
5	-Vout	-Vout

Dimensions in [mm], ( ) = Inch  
 Tolerances: X.X ±0.5 (±0.02)  
 X.XX ±0.25 (±0.01)  
 Pin diameter ø 1.0 ±0.05 (0.04 ±0.002)  
 Pin pitch tolerances ±0.13 (±0.005)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)