

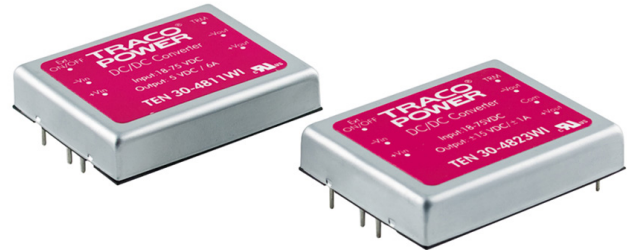


**THE DATASHEET OF
TEN 30-4811WI**



Features

- ◆ Ultra wide 4:1 input voltage range
- ◆ Single output voltage models from 1.8 to 15 VDC
- ◆ Dual output voltage models
- ◆ Extended operating temperature range: -40°C to 85°C
- ◆ Under voltage lockout
- ◆ Remote On/Off
- ◆ Shielded metal case with insulated baseplate
- ◆ Optional heatsink
- ◆ Lead free design - RoHS compliant
- ◆ 3-year product warranty



The TEN 30WI series is a family of high performance 30W dc-dc converters featuring ultra wide 4:1 input voltage ranges in a compact low profile package with industry-standard footprint. A very high efficiency allows operating temperatures up to 85°C. A built-in filter for both input and output minimizes the need for external filtering. Further standard features include remote On/Off, output voltage trimming, over voltage protection, under voltage lockout and short circuit protection. Typical applications for these products are battery operated equipment and distributed power architectures in communication and industrial electronics, everywhere where isolated, tightly regulated voltages are required and space is limited on the PCB.

Models

| Order code | Input voltage range | Output voltage | Output current max. | Efficiency typ. |
|---------------|---------------------------------|----------------|---------------------|-----------------|
| TEN 30-2408WI | 10 – 40 VDC (nominal 24 VDC) | 1.8 VDC | 8'000 mA | 80 % |
| TEN 30-2409WI | | 2.5 VDC | 8'000 mA | 85 % |
| TEN 30-2410WI | | 3.3 VDC | 6'000 mA | 87 % |
| TEN 30-2411WI | | 5.0 VDC | 6'000 mA | 87 % |
| TEN 30-2412WI | | 12 VDC | 2'500 mA | 87 % |
| TEN 30-2413WI | | 15 VDC | 2'000 mA | 88 % |
| TEN 30-2422WI | | ±12 VDC | ±1'250 mA | 85 % |
| TEN 30-2423WI | | ±15 VDC | ±1'000 mA | 86 % |
| TEN 30-4808WI | 18 – 75 VDC (nominal 48 VDC) | 1.8 VDC | 8'000 mA | 81 % |
| TEN 30-4809WI | | 2.5 VDC | 8'000 mA | 86 % |
| TEN 30-4810WI | | 3.3 VDC | 6'000 mA | 87 % |
| TEN 30-4811WI | | 5.0 VDC | 6'000 mA | 88 % |
| TEN 30-4812WI | | 12 VDC | 2'500 mA | 87 % |
| TEN 30-4813WI | | 15 VDC | 2'000 mA | 88 % |
| TEN 30-4822WI | | ±12 VDC | ±1'250 mA | 86 % |
| TEN 30-4823WI | | ±15 VDC | ±1'000 mA | 87 % |

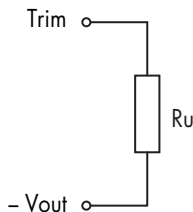
General Specifications

| | | |
|---|---|---|
| Temperature ranges | - Operating - Case temperature - Storage | -40°C to +85°C (with derating) +100°C max. -55°C to +105°C |
| Thermal impedance | - with heat-sink TEN-HS2 - without heat-sink | 8.24 K/Watt 10 K/Watt |
| Humidity (non condensing) | | 95 % rel H max. |
| Reliability, calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign) | | >750'000 h |
| Isolation voltage (60sec.) | - Input / Output | 1'500 VDC |
| Isolation resistance | - Input / Output | >1'000 M Ohm |
| Isolation capacitance | - Input / Output | 1000 pF max. |
| Remote On/Off | - On: - Off: - Off idle current: | 3.5 ... 12 VDC or open circuit. 0 ... 1.2 VDC or short circuit pin 3 and pin 2 3 mA typ. |
| Switching frequency | | 300 kHz typ. (pulse width modulation PWM) |
| Vibration | | 10-55 Hz, 2G, 30 minutes along X,Y,Z |
| Safety approvals | | UL 60950, IEC/EN 60950, compliance UL 62368-1 up to 60 VDC input voltage (SELV limit) www.tracopower.com/overview/ten30wi |
| Environmental compliance | - Reach - RoHS | www.tracopower.com/info/reach-declaration.pdf RoHS directive 20011/65/EU |

Supporting documents: www.tracopower.com/overview/ten30wi

Output Voltage Adjustment

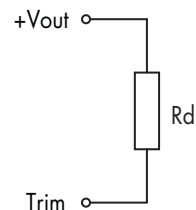
Trim up



Ru [kohm]*

| output | 1.8V | 2.5V | 3.3V | 5.0V |
|--------|-------|------|------|------|
| +5% | 1.2 | 4.3 | 6.8 | 4.7 |
| +10% | 0.068 | 0.82 | 1.5 | 0.56 |
| output | 12V | 15V | ±12V | ±15V |
| +5% | 47 | 47 | 27 | 33 |
| +10% | 8.2 | 6.8 | 2.2 | 2.7 |

Trim down



Ru [kohm]*

| output | 1.8V | 2.5V | 3.3V | 5.0V |
|--------|------|------|------|------|
| -5% | 1.8 | 6.8 | 8.2 | 5.6 |
| -10% | 0.1 | 0.82 | 0.68 | 0.68 |
| output | 12V | 15V | ±12V | ±15V |
| -5% | 56 | 56 | 33 | 39 |
| -10% | 5.6 | 2.2 | 2.7 | 3.3 |

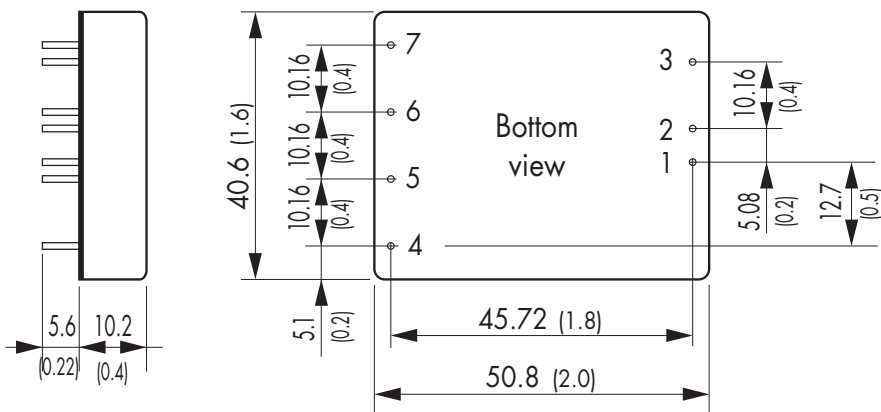
*approximate values

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

Physical Specifications

| | |
|-----------------------|-------------------------|
| Casing material | copper, nickel plated |
| Baseplate material | none conductive FR4 |
| Potting material | epoxy (UL 94V-0 -rated) |
| Weight | 48 g (1.69 oz) |
| Soldering temperature | max. 265°C / 10 sec. |

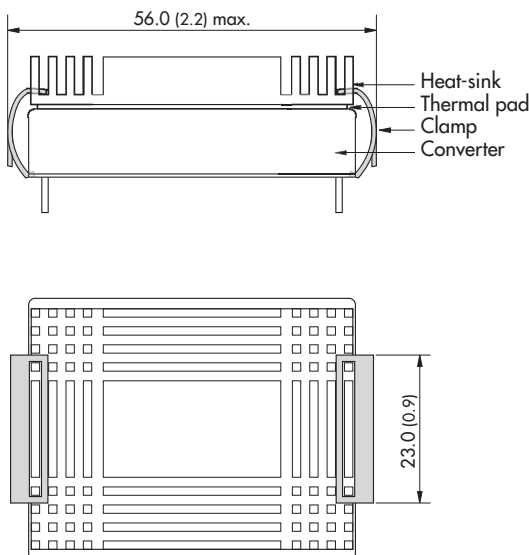
Outline Dimensions



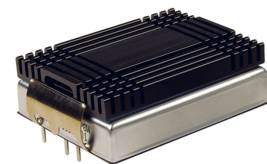
| Pin-Out | | |
|---------|---------------|------------|
| Pin | Single | Dual |
| 1 | +Vin (Vcc) | +Vin (Vcc) |
| 2 | -Vin (GND) | -Vin (GND) |
| 3 | Remote On/Off | |
| 4 | No pin | +Vout |
| 5 | +Vout | Common |
| 6 | -Vout | -Vout |
| 7 | Trim | |

Dimensions in [mm], () = Inch
 Pin diameter: 1.0 ±0.05 (0.02 ±0.002)
 Pin pitch tolerances: ±0.35 (±0.014)
 Case tolerances: ±0.5 (±0.02)

Heat-sink TEN-HS2



Order code: TEN-HS2
 (cont.: heat-sink, thermal pad, 2 clamps)
Material: Aluminum
Finish: Anodic treatment (black)
Weight: 19 g (0.67oz) (without converter)





Note:
 The product label on converter has to be removed before mounting the heat-sink. For volume orders converters will be supplied with heat-sinks already mounted. Please contact factory for quotation. Separate heat-sinks are only available for prototypes and small quantity orders.

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

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View TEN 30-4811WI on WIN SOURCE](#)
-  [Traco Power Information](#)

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