

### Features

- ◆ Ultrawide 4 : 1 input range
- ◆ Full SMD-design
- ◆ Input filter meets EN 55022, Class A and FCC, level A without external components
- ◆ Indefinite short-circuit protection
- ◆ Overvoltage protection
- ◆ I/ O isolation 1500 VDC
- ◆ operating temperature range  
–40°C to 85°C
- ◆ Remote On/ Off (optional)
- ◆ Insulated baseplate
- ◆ Industry standard pinout
- ◆ 3-year product warranty



The TEN 12WI series is a family 12W DC/DC converter modules featuring ultra wide 4:1 input voltage ranges in a compact 2"x1.0" low profile package with industry-standard footprint.

A high efficiency up to 84% allows operating temperatures from –40°C to +85°C. A built-in EMI input filter complies with EN 55022, class A without any external components.

Further standard features include remote On/Off (optional), over voltage protection and continuous short-circuit protection.

Typical applications for these converters are battery operated equipment and distributed power architectures in communication and industrial electronics, everywhere where isolated, tightly regulated voltages are required.

### Models

Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TEN 12-2410	9 – 36 VDC (24 VDC nominal)	3,3 VDC	2'400 mA	78 %
TEN 12-2411		5 VDC	2'000 mA	82 %
TEN 12-2412		12 VDC	1'000 mA	84 %
TEN 12-2413		15 VDC	800 mA	84 %
TEN 12-2421		±5 VDC	±1'000 mA	82 %
TEN 12-2422		±12 VDC	±500 mA	84 %
TEN 12-2423		±15 VDC	±400 mA	84 %
TEN 12-4810	18 – 75 VDC (48 VDC nominal)	3,3 VDC	2'400 mA	78 %
TEN 12-4811		5 VDC	2'000 mA	82 %
TEN 12-4812		12 VDC	1'000 mA	84 %
TEN 12-4813		15 VDC	800 mA	84 %
TEN 12-4821		±5 VDC	±1'000 mA	82 %
TEN 12-4822		±12 VDC	±500 mA	84 %
TEN 12-4823		±15 VDC	±400 mA	84 %

**Input Specifications**

<b>Input current</b> (no load)	24 Vin models: <b>40 mA typ.</b>
	48 Vin models: <b>20 mA typ.</b>
<b>Input current</b> (full load)	24 Vin; 3.3 Vout models: <b>425 mA typ.</b>
	24 Vin; 5 & ±5 Vout models: <b>510 mA typ.</b>
	24 Vin; other output models: <b>600 mA typ.</b>
	48 Vin; 3.3 Vout models: <b>215 mA typ.</b>
	48 Vin; 5 & ±5 Vout models: <b>255 mA typ.</b>
<b>Surge voltage</b> (1 sec. max.)	24 Vin models: <b>42 V max..</b>
	48 Vin models: <b>84 V max.</b>
<b>Conducted noise</b> (input)	<b>EN 55022 level A, FCC part 15, level A</b>

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

**Physical Specifications**

Casing material	steel, nickel plated
Baseplate	non conductive FR4
Potting material	silicon rubber (UL 94 V-0 rated)
Weight	30 g (1.2 oz)
Soldering temperature	max. 265°C / 10 sec.

**Outline Dimensions**

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

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