THE DATASHEET OF

TEN 15-2422WI

DC/DC Converters

TEN 15WI Series, 15 Watt

UL 60950-1

Features

- Ultra-wide 4:1 input range
- High efficiency up to 86 %
- Extended operating temperature range –40°C to +85°C max.
- Indefinite short circuit protection
- I/O isolation 1500 VDC
- Built-in filter meets EN 55022, Class A and FCC, Level A without external components
- Remote On/Off
- Industry standard pinout
- Six-side shielded case
- Lead free design, fully RoHS compliant
- 3–year product warranty

not recommended for new design in

The TEN 15WI series of DC/DC converters, comprising 10 different models, has been designed for a wide range of applications including communications, industrial systems and battery powered equipments. Full SMD-design with use of ceramic chip capacitors guarantees a high reliability and a long lifetime. Other features of this converters are internal filter to meet EN 55022, class A and FCC, level A and an extended temperature range of –40°C to +85°C.

Models

Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TEN 15-2410WI	**9 – 36 VDC** (24 VDC nominal)	3,3 VDC	3'000 mA	78 %
TEN 15-2411WI		5,1 VDC	2'950 mA	82 %
TEN 15-2412WI		12 VDC	1'250 mA	85 %
TEN 15-2422WI		±12 VDC	±625 mA	85 %
TEN 15-2423WI		±15 VDC	±500 mA	86 %
TEN 15-4810WI	**18 – 75 VDC** (48 VDC nominal)	3,3 VDC	3'000 mA	78 %
TEN 15-4811WI		5,1 VDC	2'950 mA	82 %
TEN 15-4812WI		12 VDC	1'250 mA	85 %
TEN 15-4822WI		±12 VDC	±625 mA	85 %
TEN 15-4823WI		±15 VDC	±500 mA	86 %

Input Specifications

Input current at no load		24 Vin models:	**25 mA typ.**
		48 Vin models:	**15 mA typ.**
Input current at full load	24 Vin;	3.3 Vout models:	**528 mA typ.**
	24 Vin;	other output models:	**740 mA typ.**
	48 Vin;	3.3 Vout models:	**264 mA typ.**
	48 Vin;	other output models:	**370 mA typ.**
Surge voltage (100 msec. max.)		24 Vin models:	**50 V max.**
		48 Vin models:	**100 V max.**
Conducted noise (input)			**EN 55022 level A, FCC part 15, level A**

Output Specifications

Voltage set accuracy		**±1 %**
Regulation	– Input variation Vin min. to Vin max.	**0.5 % max.**
	– Load variation 10 – 100 %	**1 % max.**
Ripple and noise (20 MHz Bandwidth)		**80 mVpk-pk max.**
Temperature coefficient		**±0.02 %/K**
Output current limitation		**>110 % of Iout max., foldback**
Short circuit protection		**indefinite (automatic recovery)**
Capacitive load	single output models:	**470 µF max.**
	dual output models:	**220 µF max.**

General Specifications

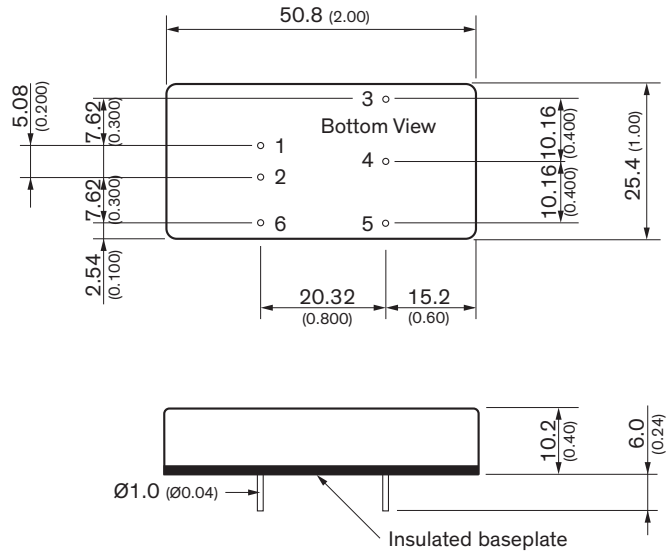
Temperature ranges	– Operating	**–40°C to +85°C** (–40F to +185°F)
	– Case temperature	**+100°C max.**
	– Storage	**–55°C to +125°C** (–67°F to +257°F)
Load derating	– without heatsink	**2.5 %/K above 60°C**
	– with heatsink	**3.3 %/K above 70°C**
Humidity (non condensing)		**95 % rel H max.**
Reliability, calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign)		**>700'000 h**
Isolation voltage (60 sec.)	– Input/Output	**1'500 VDC**
Isolation capacitance	– Input/Output	**1200 pF typ**
Isolation resistance	– Input/Output (500 VDC)	**>1'000 MOhm**
Switching frequency (fixed)		**330 kHz typ.** (pulse width modulation)
Remote On/Off:	– On:	**2.5 ... 5.5 VDC or open circuit.**
	– Off:	**-0.7 ... 0.8 VDC or short circuit pin 2 and pin 6**
	– Off idle current:	**10 mA max.**
Safety approvals		**cUL/UL 60950-1, IEC/EN 60950-1**
	– Certification documents	**www.tracopower.com/overview/ten15wi**
Environmental compliance	– Reach	**www.tracopower.com/info/reach-declaration.pdf**
	– RoHS	**RoHS directive 2011/65/EU**

Physical Specifications

Casing material	**copper, nickel plated**
Baseplate material	**non conductive FR4**
Potting material	**Epoxy** (UL 94 V-0 rated)
Weight	**32 g** (1.09oz)
Soldering temperature	**max. 265°C / 10 sec.**
Thermal Impedance	**12.2 K/W typ.** **9.2 K/W typ.** (with Heatsink)

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

Outline Dimensions



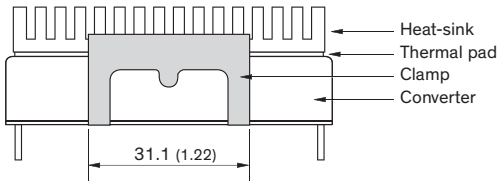
Pin-Out		
Pin	**Single**	**Dual**
1	+Vin (Vcc)	+Vin (Vcc)
2	–Vin (GND)	–Vin (GND)
3	+Vout	+Vout
4	No pin	Common
5	–Vout	–Vout
6	Remote On/Off	

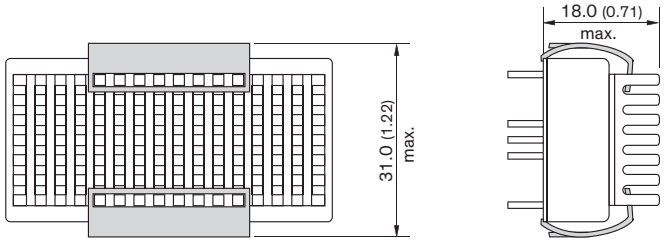
Dimensions in [mm], () = Inch
Pin diameter: 1.0 ±0.05 (0.039 ±0.002)
Pin pitch tolerances: ±0.25 (±0.01)
Casing tolerances: x.x ±0.5 (x.xx ±0.02)
x.xx ±0.13 (x.xxx ±0.005)

Supporting documents: www.tracopower.com/overview/ten15wi

Heat-Sink (Option)

Heat-sink TEN-HS4 (optional)





Order code: **TEN-HS4**
(cont.: heat-sink, thermal pad, 2 clamps)
Material: Aluminum
Finish: Anodic treatment (black)
Weight: 9 g (0.31oz) without converter

Note:
Before attaching the heatsink, the product label on converter has to be removed for optimal performance.
For volume orders we can supply the converters with heatsink already mounted.
Please contact us for a relative quotation.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View TEN 15-2422WI on WIN SOURCE
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