DC/DC Converters

TEN 15WI Series, 15 Watt

RoHS compliant

cULus pending

Features

- Ultrawide 4 : 1 Input Range
- High Efficiency up to 86%
- Extended Operating Temperature Range – 40°C to +85°C
- Indefinite Short-Circuit Protection
- I/O-Isolation 1500 VDC
- Input 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 - RoHS compliant
- 3 Year Product Warranty

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	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	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

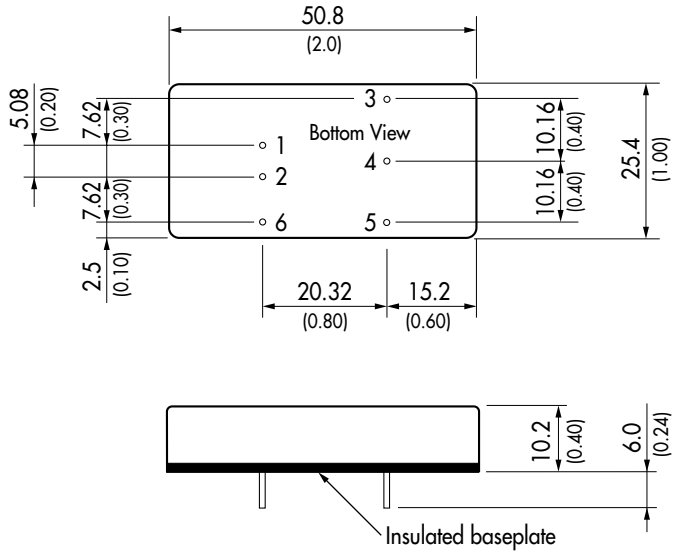
Temperature ranges	– Operating	– 40 °C ... + 85 °C
	– Case temperature	+ 100 °C max.
	– Storage	– 55 °C ... + 125 °C
Derating		3.5%/K above 70°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217 E)		> 700'000 h @ + 25 °C
Isolation voltage	– Input/Output	1'500 VDC
Isolation capacity	– 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 standards		UL 60950, EN 60950, IEC 6095 (Compliance up to 60 VDC input voltage(SELV limit)
Safety approvals		UL /cUL pending

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

Physical Specifications

Case material	copper, Nickel plated
Baseplate material	non conductive FR4
Potting material	epoxy (flammability to UL 94V-0)
Weight	32g (1.09oz)
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
6	Remote On/Off	

Dimensions in [mm], () = Inch
Pin diameter: 1.0 ±0.05 (0.02 ±0.002)
Pin pitsch tolerances: ±0.25 (±0.01)
Case tolerances: ±0.5 (±0.02)

Specifications can be changed without notice

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