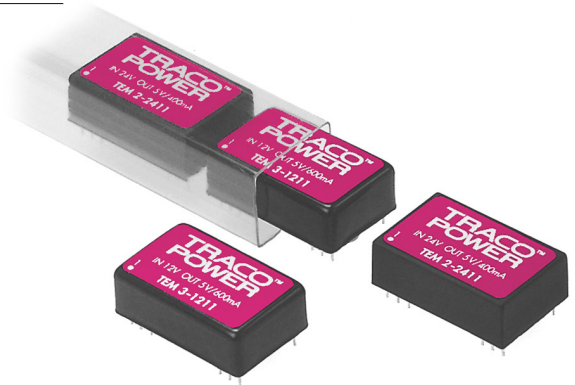


Features

- ◆ DIL-24 metal package
- ◆ Tightly regulated output
- ◆ Very low output noise
- ◆ Short circuit protection
- ◆ Operating temperature range -25°C to $+71^{\circ}\text{C}$
- ◆ I/O isolation 1'000 VDC
- ◆ Internal filter
- ◆ Industry standard pinout
- ◆ 3-year product warranty

August 2012: Obsolete



The TEM 3 series is a range of isolated dc/dc converters in a DIL-24 package. They offer tight output regulation and very low output noise. Operating temperature range is -25°C to $+71^{\circ}\text{C}$. This product series provides a cost effective solution for many industrial or consumer electronics applications.

Models				
Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TEM 3-0511	5 VDC $\pm 10\%$	5 VDC	600 mA	60 %
TEM 3-0512		12 VDC	250 mA	62 %
TEM 3-0521		± 12 VDC	± 125 mA	60 %
TEM 3-0522		± 15 VDC	± 100 mA	60 %
TEM 3-1211	12 VDC $\pm 10\%$	5 VDC	600 mA	60 %
TEM 3-1212		12 VDC	250 mA	62 %
TEM 3-1221		± 12 VDC	± 125 mA	60 %
TEM 3-1222		± 15 VDC	± 100 mA	60 %
TEM 3-2411	24 VDC $\pm 10\%$	5 VDC	600 mA	60 %
TEM 3-2412		12 VDC	250 mA	64 %
TEM 3-2421		± 12 VDC	± 125 mA	60 %
TEM 3-2422		± 15 VDC	± 100 mA	60 %

Input Specifications

Input current no load / full load	5 Vin models: 100 mA / 980 mA typ. 12 Vin models: 50 mA / 410 mA typ. 24 Vin models: 25 mA / 205 mA typ.
Surge voltage (1 sec. max.)	5 Vin models: 7.5 V max. 12 Vin models: 15 V max. 24 Vin models: 30 V max.

Output Specifications

Voltage set accuracy	±3 %
Regulation	<ul style="list-style-type: none"> - Input variation Vin min. to Vin max. ±0.5 % max. - Load variation 10 – 100 % <ul style="list-style-type: none"> single output models: ±0.5 % max. dual output models balanced load: ±1.0 % max. dual output models unbalanced load: ±3.0 % max.
Ripple and noise (20 MHz Bandwidth)	50 mVpk-pk max
Temperature coefficient	±0.02 %/K
Current limitation	>120 % of Iout max., constant current
Short circuit protection	indefinite
Capacitive load	<ul style="list-style-type: none"> single output models: 470 µF max. dual output models: 220 µF max.

General Specifications

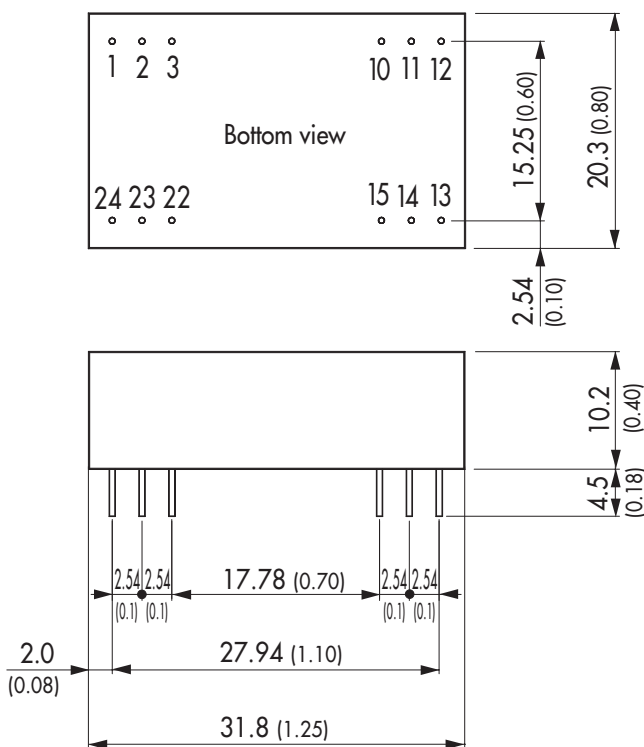
Temperature ranges	<ul style="list-style-type: none"> - Operating -25°C to +71°C - Case +95°C max. - Storage -40°C to +125°C
Derating	3 %/K above +70°C
Humidity (non condensing)	95 % rel H max.
Reliability, calculated MTF (MIL-HDBK-217F, @ +25°C, ground benign)	>600'000 Mio. h
Isolation voltage (60 sec.) - Input/Output	1'000 VDC
Isolation capacitance - Input/Output	100 pF typ.
Isolation resistance - Input/Output (500 VDC)	>1'000 M Ohm
Switching frequency	80 kHz typ. (Pulse frequency modulation PFM)
Safety standards	cUL/UL 60950-1, IEC/EN 60950-1
Safety approval	CSA File No. 226037 http://directories.csa-international.org

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

Physical Specifications

Casing material	black coated metal
Weight	14 g (0.49 oz)
Soldering temperature	max. 260°C / 10 sec.

Outline Dimensions mm (inches)



Pin-Out		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	ntd.	-Vout
3	ntc.	Common
10	-Vout	Common
11	+Vout	+Vout
12	-Vin (GND)	-Vin (GND)
13	-Vin (GND)	-Vin (GND)
14	+Vout	+Vout
15	-Vout	Common
22	ntc.	Common
23	ntc.	-Vout
24	+Vin (Vcc)	+Vin (Vcc)

ntc. = not to connect

Pin diameter $\varnothing 0.5 \pm 0.05$ (0.02) ± 0.002
Tolerances ± 0.5 (± 0.02)

Specifications can be changed any time without notice.

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