



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Features

- ◆ I/O isolation voltage 3000 VACrms
- ◆ Reinforced insulation, rated for 300 VAC working voltage
- ◆ Certified to IEC/EN/UL 60950-1 safety standards
- ◆ Safety barrier 100 % production test
- ◆ Low coupling capacity
- ◆ Single-in-line package (SIP)
- ◆ Lead-free design, RoHS compliant
- ◆ 3-year product warranty



The TMV-EN series is a range of 1 Watt non-regulated DC/DC converters with high I/O-isolation. This product features an isolation barrier which is approved for supplementary an reinforced insulation. SMD construction and a special designed toroidal transformer made it possible to built these converters in a standard SIP package with a very small footprint. These features making the TMV-EN series an economical solution in many DC/DC converter applications requiring safety agency approval.

Models

Order code	Input voltage	Output voltage	Output current max.	Efficiency typ.
TMV 0505 EN	5 VDC ±10 %	5 VDC	200 mA	66 %
TMV 0512 EN		12 VDC	80 mA	66 %
TMV 0515 EN		15 VDC	65 mA	66 %
TMV 0505D EN		±5 VDC	±100 mA	66 %
TMV 0512D EN		±12 VDC	±40 mA	72 %
TMV 0515D EN		±15 VDC	±35 mA	73 %
TMV 1205 EN	12 VDC ±10 %	5 VDC	200 mA	66 %
TMV 1212 EN		12 VDC	80 mA	66 %
TMV 1215 EN		15 VDC	65 mA	66 %
TMV 1205D EN		±5 VDC	±100 mA	66 %
TMV 1212D EN		±12 VDC	±40 mA	74 %
TMV 1215D EN		±15 VDC	±35 mA	75 %

Input Specifications

Input current no load / full load	5 Vin models: 55 mA / 285 mA typ. 12 Vin models: 30 mA / 115 mA typ.
Surge voltage (1 s max.)	5 Vin models: 9 V max. 12 Vin models: 29 V max.
Reverse polarity input current	0.3 A max.
Reflected input ripple current	can be reduced by ext. 1–3.3 µF polyester film capacitor
Input filter	internal capacitor
Input fuse	recommended, required for compliance with CB
– recommended fuse rating	5 V models: 500 mA 12 V models: 200 mA

Output Specifications

Voltage set accuracy	±1 % typ. / ±3 % max.
Voltage balance (dual output models, balanced loads)	±0.1 % typ. / ±1 % max.
Regulation	– Input variation (1 % change of Vin) 1.2 % typ. / 1.5 % max. – Load variation (20 – 100 %) <10 %
Ripple and noise (20 MHz Bandwidth)	100 mVp-p typ. / 150 mVp-p max.
Temperature coefficient	±0.01 %/K typ. / ±0.02 %/K max.
Short circuit protection	limited 0.5 s max.
Capacitive load	single output models: 680 µF max. dual output models: 220 µF max. (each output)

Isolation / Safety

Isolation voltage	– Isolation test voltage (tested for 1 s) 4'500 Vpk – I/O isolation voltage (60 s) 3'000 VAC – Rated max. working voltage 300 VAC / 640 Vpk
Isolation capacitance (input/output)	15 pF typ. / 20 pF max.
Isolation resistance (input/output)	>10 GOhm
Safety standards	IEC 60950-1:2005 +A1:2009 EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011 UL 60950-1, CSA C22.2 No. 60950-1-03 www.tracopower.com/overview/tmv-en
– Certification documents	

General Specifications

Temperature ranges	– Operating –25°C to +85°C – Max. ambient approved IEC/UL 60950-1 +70°C – Case temperature +90°C max. – Storage temperature –50°C to +125°C
Derating	2.85 %/K above 70°C
Humidity (non condensing)	95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F at +25°C, ground benign)	>2'000'000 h
Switching frequency	50 to 100 kHz (frequency modulation)
Altitude during operation	4'000m max. approved
Environmental compliance	– Reach www.tracopower.com/products/reach-declaration.pdf – RoHS RoHS directive 2011/65/EU

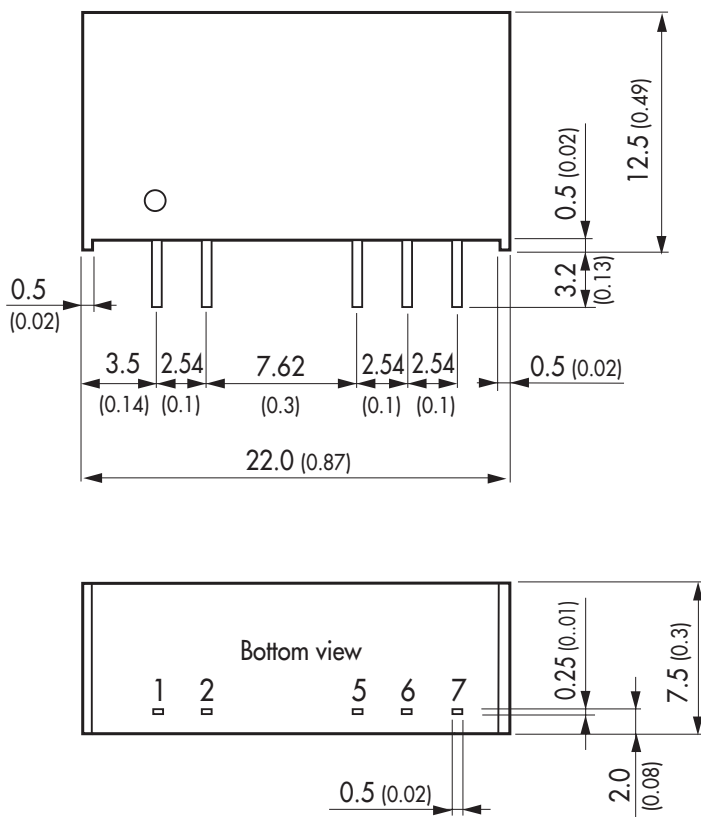
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Physical Specifications

Casing material	non conductive plastic (UL 94V-0 rated)
Package weight	3.9 g (0.14 oz)
Soldering temperature	max. 260°C / 10 s

Supporting documents: www.tracopower.com/overview/tmv-en

Outline Dimensions



Pin-Out		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
5	-Vout	-Vout
6	No pin	Common
7	+Vout	+Vout

Dimensions in [mm], () = Inch
Tolerance ±0.5 (0.02)
Pin pitch tolerance ±0.13 (0.005)
Pin width tolerance ±0.05 (0.002)