

2020~2021 | Medical Power Solutions

IEC /EN / ES 60601-1 3rd Edition Approved
AC/DC Power Supplies & DC/DC Converters



Company Profile

TRACO Electronic AG is a Swiss company with headquarters based in Baar, Switzerland. As a leading power supply specialist with more than 40 years experience we are dedicated to the design and manufacturing of high quality DC/DC and AC/DC power conversion products.

TRACO markets its products worldwide under the registered trademark TRACO POWER. Our mission is to provide our customers with optimal power supply solutions in terms of performance, quality and cost for their individual application.

TRACO POWER Products

for applied versus non applied medical requirements

For non-applied parts sections of medical equipment, power and safety requirements can be satisfied by any of Traco Power power supplies, non-medical for 1×MOOP applications and medical rated power supplies for all other MOPP levels. If this part of the system is attaching to a DC input from a non-medical rated power supply, then use of our DC/DC Converters should satisfy safety requirements for 1×MOPP / 2×MOPP applications.

For applied parts sections of medical equipment, the clearance and creepage distances, as well as a secondary isolation barrier are required to further isolate the patient from potentially high voltages (2×MOPP is means of patient protection). The isolation barrier may be satisfied using Traco Power medical rated 2×MOPP AC/DC power supplies or DC/DC converters. Even this reinforced insulation system does not unconditionally qualify a power supply unit and DC/DC converter for medical applications. Particular and collateral standards also require that a risk/quality management System be in place at the component level, especially for safety critical applications.

TRACO POWER products for applied parts applications with a 2×MOPP rating, have been carefully designed and manufactured to the highest standards to meet the increased quality, reliability and safety standards for medical equipment. These products have fully regulated output voltages and feature:

- Product certification according to IEC/EN/ES 60601-1 3rd edition for 2xMOPP
- ISO 14971 risk management file
- EMC emission and immunity according to IEC 60601-1-2 edition 4
- Acceptance criteria for electronic assemblies according to IPC-A-610 Level 3
- Design and production according to ISO 13485 quality management system
- 5-year product warranty

UL 62368-1 - Effective December 2020

The upcoming discontinuation of the IEC/EN/UL 60950-1 by December 20, 2020 and the associated transfer to the new IEC/EN/UL 62368-1 impacts many different industries including the power supply industry in which we are operating in. All TPP series AC/DC power supplies will have IEC/EN/UL 62368-1 in addition to IEC/EN/ES 60601-1.

Traco Power has made a great effort to upgrade nearly our all our product families to the new standard before the December deadline. Only older series which could not meet the new requirements without a major design change, or series which were bound to become NRND shortly weren't transferred to the new standard. However, for those products possible replacements or alternative series are already available.

Please check our website for the latest status and the most current product datasheet and safety documentation.

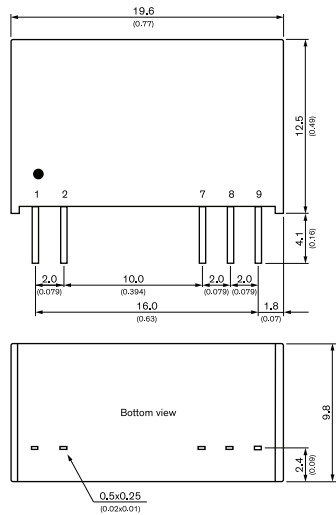
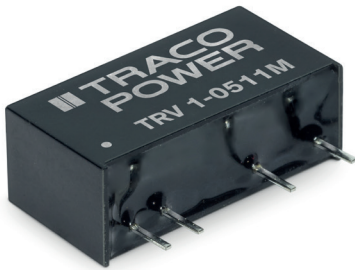
Medical DC/DC Converters

TRV 1M	SIP-9 package, $\pm 10\%$ input, encapsulated, semi-regulated	NEW	1 Watt	4
TIM 2	DIP-16 package, 2 :1 input, encapsulated	NEW	2 Watt	4
TIM 2SM	DIP-16 package, SMD, 2:1 input, encapsulated	NEW	2 Watt	5
TIM 3.5	DIP-16 package, 2 :1 input, encapsulated	NEW	3.5 Watt	5
TIM 3.5SM	DIP-16 package, SMD, 2:1 input, encapsulated	NEW	3.5 Watt	6
THM 3	DIP-24 package, 2:1 input, encapsulated		3 Watt	6
THM 3WI	DIP-24 package, 4:1 input, encapsulated		3 Watt	7
THM 6	DIP-24 package, 2:1 input, encapsulated		6 Watt	7
THM 6WI	DIP-24 package, 4:1 input, encapsulated		6 Watt	8
THM 10	DIP-24 package, 2:1 input, encapsulated		10 Watt	8
THM 10WI	DIP-24 package, 4:1 input, encapsulated		10 Watt	9
THM 15	1.6" x 1.0" package, 2:1 input, encapsulated		15 Watt	9
THM 15WI	1.6" x 1.0" package, 4:1 input, encapsulated		15 Watt	10
THM 20	1.6" x 1.0" package, 2:1 input, encapsulated		20 Watt	10
THM 20WI	1.6" x 1.0" package, 4:1 input, encapsulated		20 Watt	11
THM 30	2.0" x 1.0" package, 2:1 input, encapsulated		30 Watt	11
THM 30WI	2.0" x 1.0" package, 4:1 input, encapsulated		30 Watt	12
THM 60WI	2.28" x 1.45" package, 4:1 input, encapsulated	NEW under development	60 Watt	12

Medical AC/DC Power Supplies

TMF 05	1.6" x 1.0" package, PCB-mount, encapsulated		5 Watt	13
TMF 10	2.0" x 1.0" package, PCB-mount, encapsulated		10 Watt	13
TPP 15A-J	2.6" x 1.0" package, JST-connectors, open frame		15 Watt	14
TPP 15A-D	1.5" x 1.0" package, PCB-mount, open frame		15 Watt	14
TPP 15-J	2.82" x 1.14" package, JST-connectors, encapsulated		15 Watt	15
TPP 15-D	1.65" x 1.14" package, PCB-mount, encapsulated		15 Watt	15
TMF 20	2.16" x 1.78" package, PCB-mount, encapsulated		20 Watt	16
TMW 24	2.09" x 2.0" package, flush box mounting, encapsulated (IP68)	NEW under development	24 Watt	16
TMF 30	2.52" x 1.80" package, PCB-mount, encapsulated		30 Watt	17
TPP 30A-J	3.34" x 1.36" package, JST-connectors, open frame		30 Watt	17
TPP 30A-D	2.74" x 1.1" package, PCB-mount, open frame		30 Watt	18
TPP 30-J	3.95" x 1.5" package, JST-connectors, encapsulated		30 Watt	18
TPP 30-D	2.89" x 1.50" package, PCB-mount, encapsulated		30 Watt	19
TMW 36	2.09" x 2.0" package, flush box mounting, encapsulated (IP68)	NEW under development	36 Watt	19
TPP 40A	3" x 2" package, JST-connectors, open frame		40 Watt	20
TPP 40	3.53" x 2.38" package, JST-connectors, encased		40 Watt	20
TPP 65A	3" x 2" package, JST-connectors, open frame		65 Watt	21
TPP 65	3.53" x 2.38" package, JST-connectors, encased		65 Watt	21
TPP 100A-J	3" x 2" package, JST-connectors, open frame		100 Watt	22
TPP 100	3.6" x 2.44" package, JST-connectors, encased		100 Watt	22
TPP 150A-J	4 x 2" package, JST-connectors, open frame		150 Watt	23
TPP 150	4.6" x 2.44" package, JST-connectors, encased		150 Watt	23
TPP 180A	3" x 2" package, JST-connectors, open frame	NEW under development	180 Watt	24
TPP 300A	4 x 2" package, JST-connectors, open frame	NEW under development	300 Watt	24
TPP 450A	5 x 3" package, Molex connectors, open frame		450 Watt	25
TPP 450	5.83 x 3" package, Molex connectors, encased		450 Watt	25
TPP 600A	3 x 5" package, open frame	NEW under development	450 Watt	26
TPP 600	3 x 5" package, open frame with top-mount fan	NEW under development	450 Watt	26
TPP850A	4 x 6" package, open frame	NEW under development	450 Watt	27
TPP850	4 x 6" package, open frame with top-mount fan	NEW under development	450 Watt	27

TRV 1M **NEW!** 1 Watt

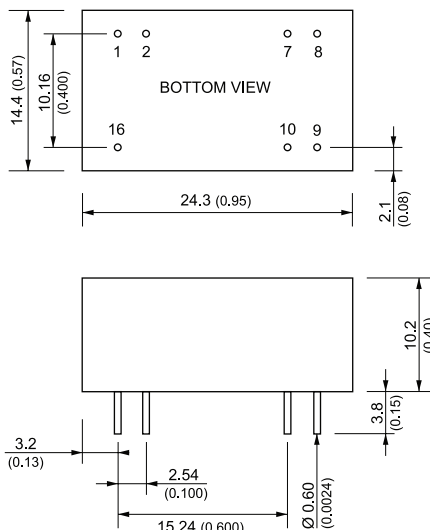
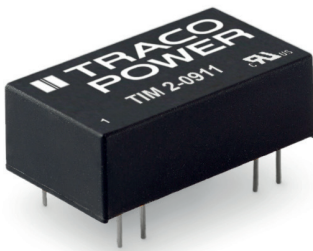


Model	Input	Vout	Iout	Efficiency
TRV 1-0510M	4.5-5.5 VDC	3.3 VDC	303 mA	80 %
TRV 1-0511M	4.5-5.5 VDC	5 VDC	200 mA	82 %
TRV 1-0512M	4.5-5.5 VDC	12 VDC	83 mA	85 %
TRV 1-0513M	4.5-5.5 VDC	15 VDC	67 mA	84 %
TRV 1-0521M	4.5-5.5 VDC	±5 VDC	±100 mA	85 %
TRV 1-0522M	4.5-5.5 VDC	±12 VDC	±42 mA	85 %
TRV 1-0523M	4.5-5.5 VDC	±15 VDC	±34 mA	84 %
TRV 1-1210M	9.6-14.4 VDC	3.3 VDC	303 mA	80 %
TRV 1-1211M	9.6-14.4 VDC	5 VDC	200 mA	82 %
TRV 1-1212M	9.6-14.4 VDC	12 VDC	83 mA	84 %
TRV 1-1213M	9.6-14.4 VDC	15 VDC	67 mA	83 %
TRV 1-1221M	9.6-14.4 VDC	±5 VDC	±100 mA	82 %
TRV 1-1222M	9.6-14.4 VDC	±12 VDC	±42 mA	83 %
TRV 1-1223M	9.6-14.4 VDC	±15 VDC	±34 mA	83 %
TRV 1-1510M	12-18 VDC	3.3 VDC	303 mA	79 %
TRV 1-1511M	12-18 VDC	5 VDC	200 mA	83 %
TRV 1-1512M	12-18 VDC	12 VDC	83 mA	84 %
TRV 1-1513M	12-18 VDC	15 VDC	67 mA	84 %
TRV 1-1521M	12-18 VDC	±5 VDC	±100 mA	82 %
TRV 1-1522M	12-18 VDC	±12 VDC	±42 mA	83 %
TRV 1-1523M	12-18 VDC	±15 VDC	±34 mA	83 %
TRV 1-2410M	19.2-28.8 VDC	3.3 VDC	303 mA	78 %
TRV 1-2411M	19.2-28.8 VDC	5 VDC	200 mA	82 %
TRV 1-2412M	19.2-28.8 VDC	12 VDC	83 mA	83 %
TRV 1-2413M	19.2-28.8 VDC	15 VDC	67 mA	83 %
TRV 1-2421M	19.2-28.8 VDC	±5 VDC	±100 mA	80 %
TRV 1-2422M	19.2-28.8 VDC	±12 VDC	±42 mA	81 %
TRV 1-2423M	19.2-28.8 VDC	±15 VDC	±34 mA	81 %

- Semi regulated output
- SIP-9 package, only .77 x .39 x .49"
- ±10% Input (5 to 24 VDC)
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 µA
- 5-year product warranty

Pinout / Connection		
Pin	Single Output	Dual Output
1	+Vin	+Vin
2	-Vin	-Vin
7	-Vout	-Vout
8	No pin	Common
9	+Vout	+Vout

TIM 2 **NEW!** 2 Watt



Model	Input Voltage Range	Output Vnom	Imax	Efficiency
TIM 2-0910	4.5 - 12 VDC (9 VDC nom.)	3.3 VDC	600 mA	75 %
TIM 2-0911		5 VDC	400 mA	78 %
TIM 2-0919		9 VDC	222 mA	78 %
TIM 2-0912		12 VDC	167 mA	82 %
TIM 2-0913		15 VDC	134 mA	82 %
TIM 2-0915		24 VDC	83 mA	82 %
TIM 2-0922		±12 VDC	83 mA	82 %
TIM 2-0923		±15 VDC	67 mA	80 %
TIM 2-1210		9 - 18 VDC (12 VDC nom.)	3.3 VDC	600 mA
TIM 2-1211	5 VDC		400 mA	78 %
TIM 2-1219	9 VDC		222 mA	79 %
TIM 2-1212	12 VDC		167 mA	82 %
TIM 2-1213	15 VDC		134 mA	82 %
TIM 2-1215	24 VDC		83 mA	81 %
TIM 2-1222	±12 VDC		83 mA	81 %
TIM 2-1223	±15 VDC	67 mA	81 %	
TIM 2-2410	18 - 36 VDC (24 VDC nom.)	3.3 VDC	600 mA	76 %
TIM 2-2411		5 VDC	400 mA	79 %
TIM 2-2419		9 VDC	222 mA	80 %
TIM 2-2412		12 VDC	167 mA	81 %
TIM 2-2413		15 VDC	134 mA	81 %
TIM 2-2415		24 VDC	83 mA	81 %
TIM 2-2422		±12 VDC	83 mA	81 %
TIM 2-2423		±15 VDC	67 mA	81 %
TIM 2-4810	36 - 75 VDC (48 VDC nom.)	3.3 VDC	600 mA	76 %
TIM 2-4811		5 VDC	400 mA	78 %
TIM 2-4819		9 VDC	222 mA	79 %
TIM 2-4812		12 VDC	167 mA	80 %
TIM 2-4813		15 VDC	134 mA	82 %
TIM 2-4815		24 VDC	83 mA	81 %
TIM 2-4822		±12 VDC	83 mA	81 %
TIM 2-4823		±15 VDC	67 mA	81 %

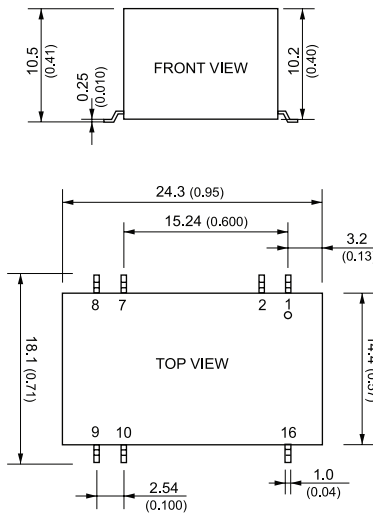
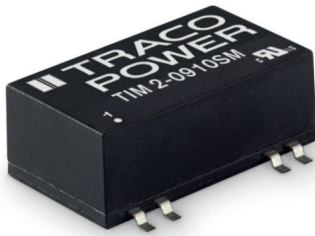
- Compact DIP-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 µA
- -40°C to 95°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
- 5-year product warranty

Pinout / Connection		
Pin	Single Output	Dual Output
1	-Vin (GND)	-Vin (GND)
2	Remote	Remote
7	NC	NC
8	NC	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin (Vcc)	+Vin (Vcc)

TIM 2SM

NEW!

2 Watt



- Compact SMD-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 μA
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
- 5-year product warranty

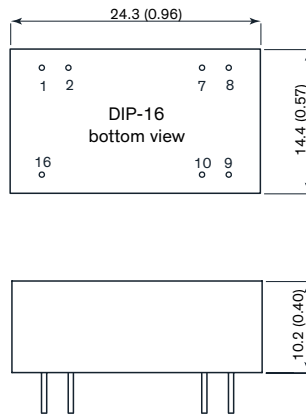
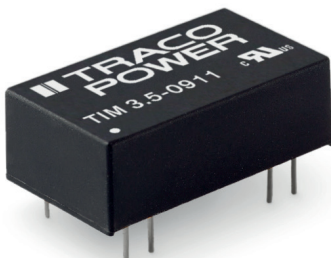
Pinout / Connection		
Pin	Single Output	Dual Output
1	-Vin (GND)	-Vin (GND)
2	Remote	Remote
7	NC	NC
8	NC	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin (Vcc)	+Vin (Vcc)

Model	Input Voltage Range	Output		Efficiency	
		Vnom	I _{max}		
TIM 2-0910SM	4.5 - 12 VDC (9 VDC nom.)	3.3 VDC	600 mA	75 %	
TIM 2-0911SM		5 VDC	400 mA	78 %	
TIM 2-0919SM		9 VDC	222 mA	78 %	
TIM 2-0912SM		12 VDC	167 mA	82 %	
TIM 2-0913SM		15 VDC	134 mA	82 %	
TIM 2-0915SM		24 VDC	83 mA	82 %	
TIM 2-0922SM		±12 VDC	83 mA	82 %	
TIM 2-0923SM		±15 VDC	67 mA	80 %	
TIM 2-1210SM		9 - 18 VDC (12 VDC nom.)	3.3 VDC	600 mA	76 %
TIM 2-1211SM			5 VDC	400 mA	78 %
TIM 2-1219SM	9 VDC		222 mA	79 %	
TIM 2-1212SM	12 VDC		167 mA	82 %	
TIM 2-1213SM	15 VDC		134 mA	82 %	
TIM 2-1215SM	24 VDC		83 mA	81 %	
TIM 2-1222SM	±12 VDC		83 mA	81 %	
TIM 2-1223SM	±15 VDC		67 mA	81 %	
TIM 2-2410SM	18 - 36 VDC (24 VDC nom.)	3.3 VDC	600 mA	76 %	
TIM 2-2411SM		5 VDC	400 mA	79 %	
TIM 2-2419SM		9 VDC	222 mA	80 %	
TIM 2-2412SM		12 VDC	167 mA	81 %	
TIM 2-2413SM		15 VDC	134 mA	81 %	
TIM 2-2415SM		24 VDC	83 mA	81 %	
TIM 2-2422SM		±12 VDC	83 mA	81 %	
TIM 2-2423SM		±15 VDC	67 mA	81 %	
TIM 2-4810SM	36 - 75 VDC (48 VDC nom.)	3.3 VDC	600 mA	76 %	
TIM 2-4811SM		5 VDC	400 mA	78 %	
TIM 2-4819SM		9 VDC	222 mA	79 %	
TIM 2-4812SM		12 VDC	167 mA	80 %	
TIM 2-4813SM		15 VDC	134 mA	82 %	
TIM 2-4815SM		24 VDC	83 mA	81 %	
TIM 2-4822SM		±12 VDC	83 mA	81 %	
TIM 2-4823SM		±15 VDC	67 mA	81 %	

TIM 3.5

NEW!

3.5 Watt

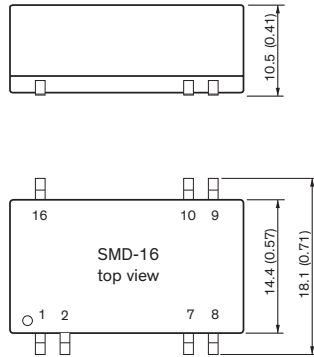
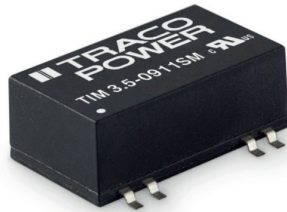


- Compact SMD-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Operation to 5000m altitude
- Low leakage current < 2 μA
- Rated for BF applications
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
- 5-year product warranty

Pinout / Connection		
Pin	Single Output	Dual Output
1	-Vin (GND)	-Vin (GND)
2	Remote	Remote
7	NC	NC
8	NC	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin (Vcc)	+Vin (Vcc)

Model	Input Voltage Range	Output		Efficiency	
		Vnom	I _{max}		
TIM 3.5-0911	4.5 - 12 VDC (9 VDC nom.)	5 VDC	700 mA	77 %	
TIM 3.5-0919		9 VDC	389 mA	78 %	
TIM 3.5-0912		12 VDC	292 mA	82 %	
TIM 3.5-0913		15 VDC	234 mA	82 %	
TIM 3.5-0915		24 VDC	146 mA	82 %	
TIM 3.5-0922		±12 VDC	146 mA	82 %	
TIM 3.5-0923		±15 VDC	117 mA	81 %	
TIM 3.5-1211		9 - 18 VDC (12 VDC nom.)	5 VDC	700 mA	79 %
TIM 3.5-1219			9 VDC	389 mA	79 %
TIM 3.5-1212			12 VDC	292 mA	82 %
TIM 3.5-1213	15 VDC		234 mA	82 %	
TIM 3.5-1215	24 VDC		146 mA	82 %	
TIM 3.5-1222	±12 VDC		146 mA	82 %	
TIM 3.5-1223	±15 VDC		117 mA	82 %	
TIM 3.5-2411	18 - 36 VDC (24 VDC nom.)		5 VDC	700 mA	79 %
TIM 3.5-2419		9 VDC	389 mA	80 %	
TIM 3.5-2412		12 VDC	292 mA	83 %	
TIM 3.5-2413		15 VDC	234 mA	83 %	
TIM 3.5-2415		24 VDC	146 mA	82 %	
TIM 3.5-2422		±12 VDC	146 mA	82 %	
TIM 3.5-2423		±15 VDC	117 mA	82 %	
TIM 3.5-4811		36 - 75 VDC (48 VDC nom.)	5 VDC	700 mA	79 %
TIM 3.5-4819	9 VDC		389 mA	80 %	
TIM 3.5-4812	12 VDC		292 mA	82 %	
TIM 3.5-4813	15 VDC		234 mA	82 %	
TIM 3.5-4815	24 VDC		146 mA	82 %	
TIM 3.5-4822	±12 VDC		146 mA	82 %	
TIM 3.5-4823	±15 VDC		117 mA	82 %	

TIM 3.5SM **NEW!** **3.5 Watt**

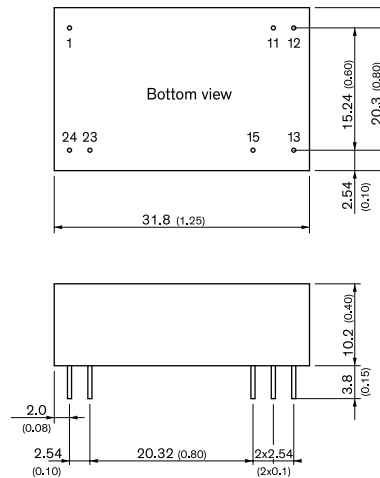


- Compact SMD-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Operation to 5000m altitude
- Low leakage current < 2 μA
- Rated for BF applications
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
- 5-year product warranty

Pinout / Connection		
Pin	Single Output	Dual Output
1	-Vin (GND)	-Vin (GND)
2	Remote	Remote
7	NC	NC
8	NC	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin (Vcc)	+Vin (Vcc)

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
TIM 3.5-0911SM	4.5 - 12 VDC (9 VDC nom.)	5 VDC	700 mA	77 %
TIM 3.5-0919SM		9 VDC	389 mA	78 %
TIM 3.5-0912SM		12 VDC	292 mA	82 %
TIM 3.5-0913SM		15 VDC	234 mA	82 %
TIM 3.5-0915SM		24 VDC	146 mA	82 %
TIM 3.5-0922SM		±12 VDC	146 mA	82 %
TIM 3.5-0923SM	±15 VDC	117 mA	81 %	
TIM 3.5-1211SM	9 - 18 VDC (12 VDC nom.)	5 VDC	700 mA	79 %
TIM 3.5-1219SM		9 VDC	389 mA	79 %
TIM 3.5-1212SM		12 VDC	292 mA	82 %
TIM 3.5-1213SM		15 VDC	234 mA	82 %
TIM 3.5-1215SM		24 VDC	146 mA	82 %
TIM 3.5-1222SM		±12 VDC	146 mA	82 %
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TIM 3.5-2411SM	18 - 36 VDC (24 VDC nom.)	5 VDC	700 mA	79 %
TIM 3.5-2419SM		9 VDC	389 mA	80 %
TIM 3.5-2412SM		12 VDC	292 mA	83 %
TIM 3.5-2413SM		15 VDC	234 mA	83 %
TIM 3.5-2415SM		24 VDC	146 mA	82 %
TIM 3.5-2422SM		±12 VDC	146 mA	82 %
TIM 3.5-2423SM	±15 VDC	117 mA	82 %	
TIM 3.5-4811SM	36 - 75 VDC (48 VDC nom.)	5 VDC	700 mA	79 %
TIM 3.5-4819SM		9 VDC	389 mA	80 %
TIM 3.5-4812SM		12 VDC	292 mA	82 %
TIM 3.5-4813SM		15 VDC	234 mA	82 %
TIM 3.5-4815SM		24 VDC	146 mA	82 %
TIM 3.5-4822SM		±12 VDC	146 mA	82 %
TIM 3.5-4823SM	±15 VDC	117 mA	82 %	

THM 3 **3 Watt**



- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current < 2 μA
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
11	No pin	Common
12	-Vout	No pin
13	+Vout	-Vout
15	No pin	+Vout
23	-Vin (GND)	-Vin (GND)
24	-Vin (GND)	-Vin (GND)

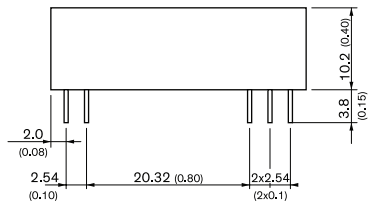
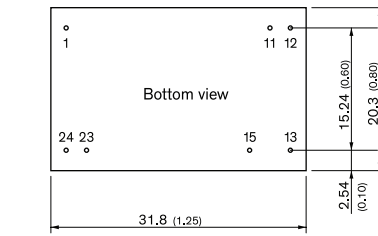
Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 3-0510	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	1000 mA	81 %
THM 3-0511		5 VDC	600 mA	85 %
THM 3-0512		12 VDC	250 mA	86 %
THM 3-0513		15 VDC	200 mA	88 %
THM 3-0515		24 VDC	125 mA	86 %
THM 3-0521		±5 VDC	300 mA	83 %
THM 3-0522	±12 VDC	125 mA	86 %	
THM 3-0523	±15 VDC	100 mA	86 %	
THM 3-1210	9 - 18 VDC (12 VDC nom.)	3.3 VDC	1000 mA	82 %
THM 3-1211		5 VDC	600 mA	85 %
THM 3-1212		12 VDC	250 mA	87 %
THM 3-1213		15 VDC	200 mA	87 %
THM 3-1215		24 VDC	125 mA	87 %
THM 3-1221		±5 VDC	300 mA	84 %
THM 3-1222	±12 VDC	125 mA	88 %	
THM 3-1223	±15 VDC	100 mA	87 %	
THM 3-2410	18 - 36 VDC (24 VDC nom.)	3.3 VDC	1000 mA	82 %
THM 3-2411		5 VDC	600 mA	85 %
THM 3-2412		12 VDC	250 mA	87 %
THM 3-2413		15 VDC	200 mA	87 %
THM 3-2415		24 VDC	125 mA	87 %
THM 3-2421		±5 VDC	300 mA	83 %
THM 3-2422	±12 VDC	125 mA	87 %	
THM 3-2423	±15 VDC	100 mA	86 %	
THM 3-4810	36 - 75 VDC (48 VDC nom.)	3.3 VDC	1000 mA	81 %
THM 3-4811		5 VDC	600 mA	84 %
THM 3-4812		12 VDC	250 mA	87 %
THM 3-4813		15 VDC	200 mA	87 %
THM 3-4815		24 VDC	125 mA	87 %
THM 3-4821		±5 VDC	300 mA	83 %
THM 3-4822	±12 VDC	125 mA	86 %	
THM 3-4823	±15 VDC	100 mA	86 %	

THM 3WI

3 Watt



- Ultra wide 4:1 input range
- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2 μA
- Operating temp. -40°C to 90°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty



Pinout / Connection		
Pin	Single	Dual
1	No pin*/Remote	No pin*/Remote
2	-Vin (GND)	-Vin (GND)
10	No pin*/Trim	No pin*/Trim
11	No pin/NC **	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin (Vcc)	+Vin (Vcc)
23	+Vin (Vcc)	+Vin (Vcc)

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 3-0510WI	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	1000 mA	81 %
THM 3-0511WI		5 VDC	600 mA	85 %
THM 3-0512WI		12 VDC	250 mA	86 %
THM 3-0513WI		15 VDC	200 mA	88 %
THM 3-0515WI		24 VDC	125 mA	86 %
THM 3-0521WI		± 5 VDC	300 mA	83 %
THM 3-0522WI		± 12 VDC	125 mA	86 %
THM 3-0523WI	± 15 VDC	100 mA	86 %	
THM 3-2410WI	9 - 36 VDC (24 VDC nom.)	3.3 VDC	1000 mA	82 %
THM 3-2411WI		5 VDC	600 mA	85 %
THM 3-2412WI		12 VDC	250 mA	87 %
THM 3-2413WI		15 VDC	200 mA	87 %
THM 3-2415WI		24 VDC	125 mA	87 %
THM 3-2421WI		± 5 VDC	300 mA	83 %
THM 3-2422WI		± 12 VDC	125 mA	87 %
THM 3-2423WI	± 15 VDC	100 mA	86 %	
THM 3-4810WI	18 - 75 VDC (48 VDC nom.)	3.3 VDC	1000 mA	81 %
THM 3-4811WI		5 VDC	600 mA	84 %
THM 3-4812WI		12 VDC	250 mA	87 %
THM 3-4813WI		15 VDC	200 mA	87 %
THM 3-4815WI		24 VDC	125 mA	87 %
THM 3-4821WI		± 5 VDC	300 mA	83 %
THM 3-4822WI		± 12 VDC	125 mA	86 %
THM 3-4823WI	± 15 VDC	100 mA	86 %	

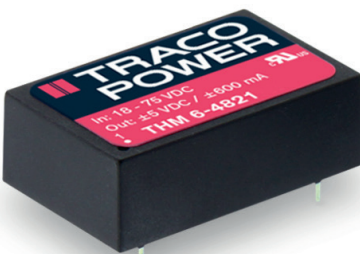
NC: No connection

* If Remote or Trim is not selected there is no pin on corresponding number.

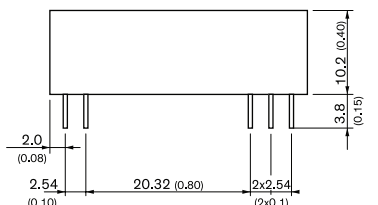
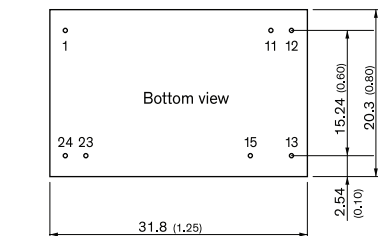
** If Trim is selected there is no pin on the corresponding pin number.

THM 6

6 Watt



- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2 μA
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- 5-year product warranty



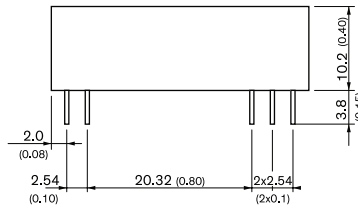
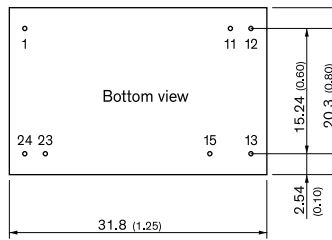
Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
11	No pin	Common
12	-Vout	Mo pin
13	+Vout	-Vout
15	No pin	+Vout
23	-Vin (GND)	-Vin (GND)
24	-Vin (GND)	-Vin (GND)

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 6-0510	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	1800 mA	82 %
THM 6-0511		5 VDC	1200 mA	86 %
THM 6-0512		12 VDC	500 mA	86 %
THM 6-0513		15 VDC	400 mA	88 %
THM 6-0515		24 VDC	250 mA	87 %
THM 6-0521		± 5 VDC	600 mA	84 %
THM 6-0522		± 12 VDC	250 mA	87 %
THM 6-0523	± 15 VDC	200 mA	88 %	
THM 6-1210	9 - 18 VDC (12 VDC nom.)	3.3 VDC	1800 mA	84 %
THM 6-1211		5 VDC	1200 mA	86 %
THM 6-1212		12 VDC	500 mA	89 %
THM 6-1213		15 VDC	400 mA	89 %
THM 6-1215		24 VDC	250 mA	89 %
THM 6-1221		± 5 VDC	600 mA	85 %
THM 6-1222		± 12 VDC	250 mA	89 %
THM 6-1223	± 15 VDC	200 mA	88 %	
THM 6-2410	18 - 36 VDC (24 VDC nom.)	3.3 VDC	1800 mA	83 %
THM 6-2411		5 VDC	1200 mA	86 %
THM 6-2412		12 VDC	500 mA	89 %
THM 6-2413		15 VDC	400 mA	89 %
THM 6-2415		24 VDC	250 mA	89 %
THM 6-2421		± 5 VDC	600 mA	85 %
THM 6-2422		± 12 VDC	250 mA	89 %
THM 6-2423	± 15 VDC	200 mA	89 %	
THM 6-4810	36 - 75 VDC (48 VDC nom.)	3.3 VDC	1800 mA	83 %
THM 6-4811		5 VDC	1200 mA	87 %
THM 6-4812		12 VDC	500 mA	88 %
THM 6-4813		15 VDC	400 mA	89 %
THM 6-4815		24 VDC	250 mA	88 %
THM 6-4821		± 5 VDC	600 mA	85 %
THM 6-4822		± 12 VDC	250 mA	88 %
THM 6-4823	± 15 VDC	200 mA	87 %	

THM 6W1 **6 Watt**



- Ultra wide 4:1 input range
- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2 μ A
- Operating temperature -40°C to 90°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty



Pinout / Connection		
Pin	Single	Dual
1	No pin*/Remote	No pin*/Remote
2	-Vin (GND)	-Vin (GND)
10	No pin*/Trim	No pin*/Trim
11	No pin/NC **	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin (Vcc)	+Vin (Vcc)
23	+Vin (Vcc)	+Vin (Vcc)

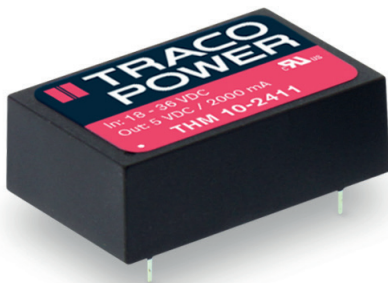
Model	Input Voltage Range	Output		Efficiency	
		Vnom	I _{max}		
THM 6-0510WI	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	1800 mA	82 %	
THM 6-0511WI		5 VDC	1200 mA	86 %	
THM 6-0512WI		12 VDC	500 mA	86 %	
THM 6-0513WI		15 VDC	400 mA	88 %	
THM 6-0515WI		24 VDC	250 mA	87 %	
THM 6-0521WI		± 5 VDC	600 mA	84 %	
THM 6-0522WI		± 12 VDC	250 mA	87 %	
THM 6-0523WI		± 15 VDC	200 mA	88 %	
THM 6-2410WI		9 - 36 VDC (24 VDC nom.)	3.3 VDC	1800 mA	83 %
THM 6-2411WI			5 VDC	1200 mA	86 %
THM 6-2412WI	12 VDC		500 mA	89 %	
THM 6-2413WI	15 VDC		400 mA	89 %	
THM 6-2415WI	24 VDC		250 mA	89 %	
THM 6-2421WI	± 5 VDC		600 mA	85 %	
THM 6-2422WI	± 12 VDC		250 mA	89 %	
THM 6-2423WI	± 15 VDC		200 mA	89 %	
THM 6-4810WI	18 - 75 VDC (48 VDC nom.)	3.3 VDC	1800 mA	83 %	
THM 6-4811WI		5 VDC	1200 mA	87 %	
THM 6-4812WI		12 VDC	500 mA	88 %	
THM 6-4813WI		15 VDC	400 mA	89 %	
THM 6-4815WI		24 VDC	250 mA	88 %	
THM 6-4821WI		± 5 VDC	600 mA	85 %	
THM 6-4822WI		± 12 VDC	250 mA	88 %	
THM 6-4823WI		± 15 VDC	200 mA	87 %	

NC: No connection

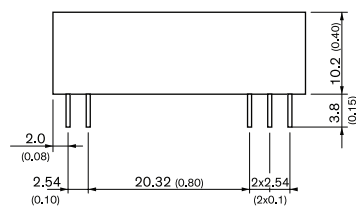
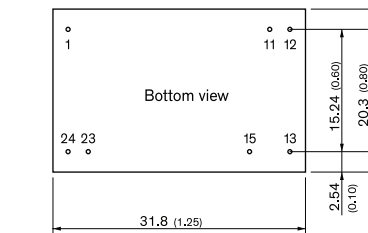
* If Remote or Trim is not selected there is no pin on corresponding number.

** If Trim is selected there is no pin on the corresponding pin number.

THM 10 **10 Watt**



- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 3 acceptance criteria
- Low leakage current <2 μ A
- Operating temperature -40°C to 90°C
- IEC 60601-1-2 4th edition EMC and EN55032 class
- 5-year product warranty



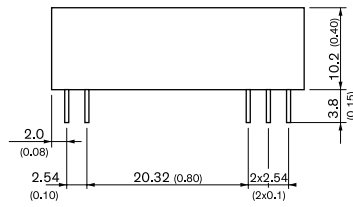
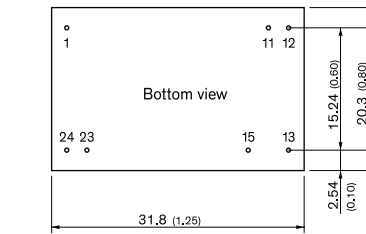
Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
11	No pin	Common
12	-Vout	No pin
13	+Vout	-Vout
15	No pin	+Vout
23	-Vin (GND)	-Vin (GND)
24	-Vin (GND)	-Vin (GND)

Model	Input Voltage Range	Output		Efficiency	
		Vnom	I _{max}		
THM 10-0510	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	2500 mA	80 %	
THM 10-0511		5 VDC	2000 mA	84 %	
THM 10-0512		12 VDC	830 mA	87 %	
THM 10-0513		15 VDC	670 mA	87 %	
THM 10-0515		24 VDC	416 mA	86 %	
THM 10-0521		± 5 VDC	1000 mA	83 %	
THM 10-0522		± 12 VDC	416 mA	86 %	
THM 10-0523		± 15 VDC	333 mA	87 %	
THM 10-1210		9 - 18 VDC (12 VDC nom.)	3.3 VDC	2500 mA	83 %
THM 10-1211			5 VDC	2000 mA	86 %
THM 10-1212	12 VDC		830 mA	88 %	
THM 10-1213	15 VDC		670 mA	89 %	
THM 10-1215	24 VDC		416 mA	89 %	
THM 10-1221	± 5 VDC		1000 mA	84 %	
THM 10-1222	± 12 VDC		416 mA	89 %	
THM 10-1223	± 15 VDC		333 mA	88 %	
THM 10-2410	18 - 36 VDC (24 VDC nom.)	3.3 VDC	2500 mA	83 %	
THM 10-2411		5 VDC	2000 mA	87 %	
THM 10-2412		12 VDC	830 mA	89 %	
THM 10-2413		15 VDC	670 mA	89 %	
THM 10-2415		24 VDC	416 mA	89 %	
THM 10-2421		± 5 VDC	1000 mA	85 %	
THM 10-2422		± 12 VDC	416 mA	89 %	
THM 10-2423		± 15 VDC	333 mA	88 %	
THM 10-4810	36 - 75 VDC (48 VDC nom.)	3.3 VDC	2500 mA	83 %	
THM 10-4811		5 VDC	2000 mA	87 %	
THM 10-4812		12 VDC	830 mA	89 %	
THM 10-4813		15 VDC	670 mA	89 %	
THM 10-4815		24 VDC	416 mA	89 %	
THM 10-4821		± 5 VDC	1000 mA	85 %	
THM 10-4822		± 12 VDC	416 mA	88 %	
THM 10-4823		± 15 VDC	333 mA	88 %	

THM 10WI **10 Watt**



- Ultra wide 4:1 input voltage
- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2 μA
- Operating temperature -40°C to 90°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty



Pinout / Connection		
Pin	Single	Dual
1	No pin*/Remote	No pin*/Remote
2	-Vin (GND)	NC -Vin (GND)
10	No pin*/Trim	No pin*/Trim
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin (Vcc)	+Vin (Vcc)
23	+Vin (Vcc)	+Vin (Vcc)

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 10-0510WI	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	2500 mA	80 %
THM 10-0511WI		5 VDC	2000 mA	84 %
THM 10-0512WI		12 VDC	830 mA	87 %
THM 10-0513WI		15 VDC	670 mA	87 %
THM 10-0515WI		24 VDC	416 mA	86 %
THM 10-0521WI		± 5 VDC	1000 mA	83 %
THM 10-0522WI		± 12 VDC	416 mA	86 %
THM 10-0523WI	± 15 VDC	333 mA	87 %	
THM 10-2410WI	9 - 36 VDC (24 VDC nom.)	3.3 VDC	2500 mA	83 %
THM 10-2411WI		5 VDC	2000 mA	87 %
THM 10-2412WI		12 VDC	830 mA	89 %
THM 10-2413WI		15 VDC	670 mA	89 %
THM 10-2415WI		24 VDC	416 mA	89 %
THM 10-2421WI		± 5 VDC	1000 mA	85 %
THM 10-2422WI		± 12 VDC	416 mA	89 %
THM 10-2423WI	± 15 VDC	333 mA	88 %	
THM 10-4810WI	18 - 75 VDC (48 VDC nom.)	3.3 VDC	2500 mA	83 %
THM 10-4811WI		5 VDC	2000 mA	87 %
THM 10-4812WI		12 VDC	830 mA	89 %
THM 10-4813WI		15 VDC	670 mA	89 %
THM 10-4815WI		24 VDC	416 mA	89 %
THM 10-4821WI		± 5 VDC	1000 mA	85 %
THM 10-4822WI		± 12 VDC	416 mA	88 %
THM 10-4823WI	± 15 VDC	333 mA	88 %	

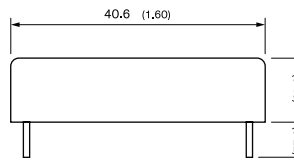
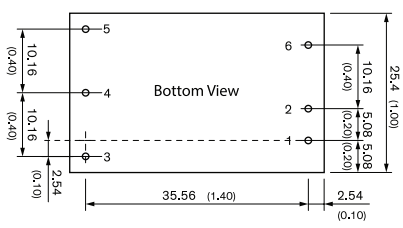
NC: No connection

* If Remote or Trim is not selected there is no pin on corresponding number.

THM 15 **15 Watt**



- Wide 2:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 μA
- Operating temperature -40°C to 85°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty



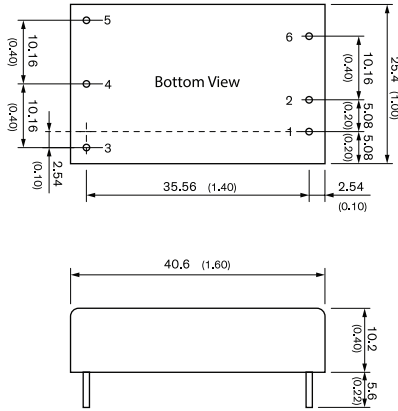
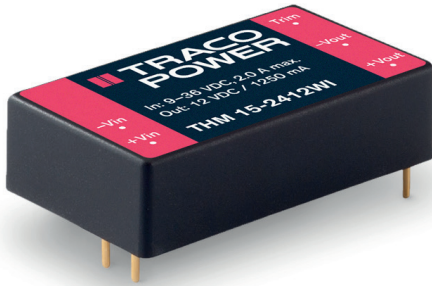
Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 15-1211	9 - 18 VDC (12 VDC nom.)	5 VDC	3000 mA	89 %
THM 15-1212		12 VDC	1250 mA	89 %
THM 15-1213		15 VDC	1000 mA	89 %
THM 15-1215		24 VDC	625 mA	89 %
THM 15-1221		± 5 VDC	1500 mA	86 %
THM 15-1222		± 12 VDC	625 mA	89 %
THM 15-1223		± 15 VDC	500 mA	89 %
THM 15-2411	18 - 36 VDC (24 VDC nom.)	5 VDC	3000 mA	90 %
THM 15-2412		12 VDC	1250 mA	90 %
THM 15-2413		15 VDC	1000 mA	90 %
THM 15-2415		24 VDC	625 mA	90 %
THM 15-2421		± 5 VDC	1500 mA	86 %
THM 15-2422		± 12 VDC	625 mA	90 %
THM 15-2423		± 15 VDC	500 mA	90 %
THM 15-4811	36 - 75 VDC (48 VDC nom.)	5 VDC	3000 mA	90 %
THM 15-4812		12 VDC	1250 mA	88 %
THM 15-4813		15 VDC	1000 mA	89 %
THM 15-4815		24 VDC	625 mA	89 %
THM 15-4821		± 5 VDC	1500 mA	86 %
THM 15-4822		± 12 VDC	625 mA	89 %
THM 15-4823		± 15 VDC	500 mA	89 %

* If Remote or Trim is not selected there is no pin on corresponding number.

THM 15WI

15 Watt



Model	Input Voltage Range	Output Vnom	Imax	Efficiency
THM 15-2411WI	9 - 36 VDC (24 VDC nom.)	5 VDC	3000 mA	88 %
THM 15-2412WI		12 VDC	1250 mA	89 %
THM 15-2413WI		15 VDC	1000 mA	89 %
THM 15-2415WI		24 VDC	625 mA	88 %
THM 15-2421WI		± 5 VDC	1500 mA	86 %
THM 15-2422WI		± 12 VDC	625 mA	88 %
THM 15-2423WI	± 15 VDC	500 mA	89 %	
THM 15-4811WI	18 - 75 VDC (48 VDC nom.)	5 VDC	3000 mA	90 %
THM 15-4812WI		12 VDC	1250 mA	88 %
THM 15-4813WI		15 VDC	1000 mA	89 %
THM 15-4815WI		24 VDC	625 mA	89 %
THM 15-4821WI		± 5 VDC	1500 mA	86 %
THM 15-4822WI		± 12 VDC	625 mA	89 %
THM 15-4823WI	± 15 VDC	500 mA	89 %	

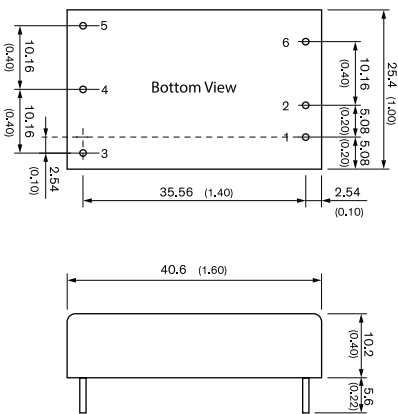
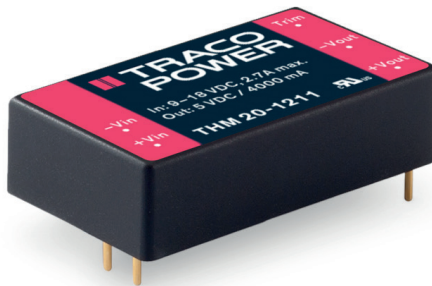
- Ultra wide 4:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 µA
- Operating temperature -40°C to 85°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

* If remote is not selected there will be no pin.

THM 20

20 Watt



Model	Input Voltage Range	Output Vnom	Imax	Efficiency
THM 20-1211	9 - 18 VDC (12 VDC nom.)	5 VDC	4000 mA	89 %
THM 20-1212		12 VDC	1670 mA	89 %
THM 20-1213		15 VDC	1330 mA	89 %
THM 20-1215		24 VDC	833 mA	89 %
THM 20-1221		± 5 VDC	2000 mA	86 %
THM 20-1222		± 12 VDC	833 mA	89 %
THM 20-1223	± 15 VDC	667 mA	89 %	
THM 20-2411	18 - 36 VDC (24 VDC nom.)	5 VDC	4000 mA	90 %
THM 20-2412		12 VDC	1670 mA	90 %
THM 20-2413		15 VDC	1330 mA	90 %
THM 20-2415		24 VDC	833 mA	90 %
THM 20-2421		± 5 VDC	2000 mA	86 %
THM 20-2422		± 12 VDC	833 mA	90 %
THM 20-2423	± 15 VDC	667 mA	90 %	
THM 20-4811	36 - 75 VDC (48 VDC nom.)	5 VDC	4000 mA	90 %
THM 20-4812		12 VDC	1670 mA	89 %
THM 20-4813		15 VDC	1330 mA	89 %
THM 20-4815		24 VDC	833 mA	89 %
THM 20-4821		± 5 VDC	2000 mA	86 %
THM 20-4822		± 12 VDC	833 mA	89 %
THM 20-4823	± 15 VDC	667 mA	89 %	

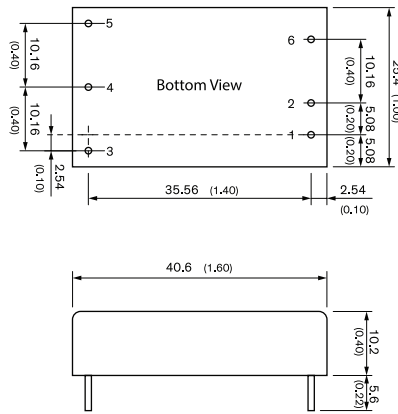
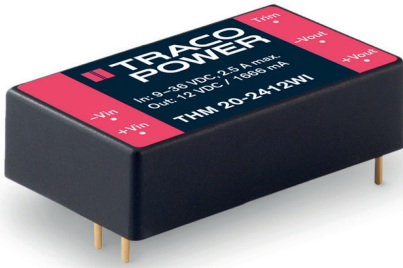
- Wide 2:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 µA
- Operating temperature -40°C to 80°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

* If remote is not selected there will be no pin.

THM 20WI

20 Watt



- Ultra wide 4:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 μ A
- Operating temperature -40°C to 80°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty

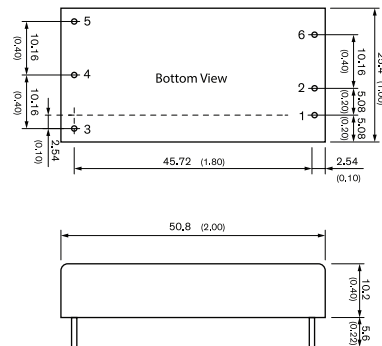
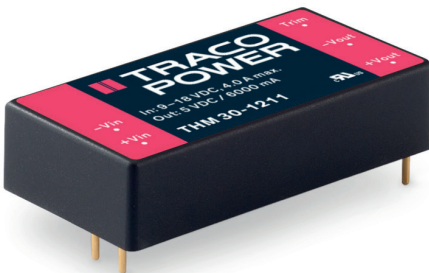
Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 20-2411WI	9 - 36 VDC (24 VDC nom.)	5 VDC	4000 mA	89 %
THM 20-2412WI		12 VDC	1670 mA	89 %
THM 20-2413WI		15 VDC	1330 mA	89 %
THM 20-2415WI		24 VDC	833 mA	89 %
THM 20-2421WI		± 5 VDC	2000 mA	86 %
THM 20-2422WI		± 12 VDC	833 mA	89 %
THM 20-2423WI	± 15 VDC	667 mA	89 %	
THM 20-4811WI	18 - 75 VDC (48 VDC nom.)	5 VDC	4000 mA	90 %
THM 20-4812WI		12 VDC	1670 mA	89 %
THM 20-4813WI		15 VDC	1330 mA	89 %
THM 20-4815WI		24 VDC	833 mA	89 %
THM 20-4821WI		± 5 VDC	2000 mA	86 %
THM 20-4822WI		± 12 VDC	833 mA	89 %
THM 20-4823WI	± 15 VDC	667 mA	89 %	

* If remote is not selected there will be no pin.

THM 30

30 Watt



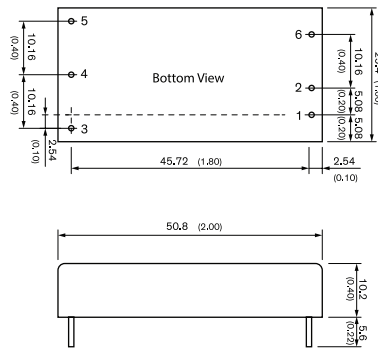
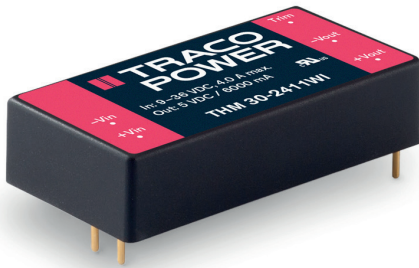
- Wide 2:1 input voltage
- Compact 2 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 μ A
- Operating temperature -40°C to 80°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 30-1211	9 - 18 VDC (12 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-1212		12 VDC	2500 mA	89 %
THM 30-1213		15 VDC	2000 mA	90 %
THM 30-1215		24 VDC	1250 mA	89 %
THM 30-1221		± 5 VDC	3000 mA	86 %
THM 30-1222		± 12 VDC	1250 mA	89 %
THM 30-1223	± 15 VDC	1000 mA	89 %	
THM 30-2411	18 - 36 VDC (24 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-2412		12 VDC	2500 mA	89 %
THM 30-2413		15 VDC	2000 mA	91 %
THM 30-2415		24 VDC	1250 mA	90 %
THM 30-2421		± 5 VDC	3000 mA	86 %
THM 30-2422		± 12 VDC	1250 mA	90 %
THM 30-2423	± 15 VDC	1000 mA	90 %	
THM 30-4811	36 - 75 VDC (48 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-4812		12 VDC	2500 mA	89 %
THM 30-4813		15 VDC	2000 mA	90 %
THM 30-4815		24 VDC	1250 mA	89 %
THM 30-4821		± 5 VDC	3000 mA	87 %
THM 30-4822		± 12 VDC	1250 mA	90 %
THM 30-4823	± 15 VDC	1000 mA	90 %	

* If remote is not selected there will be no pin.

THM 30WI **30 Watt**



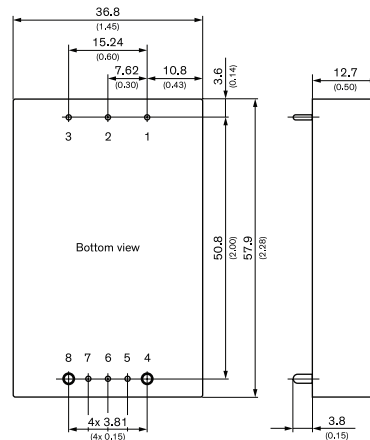
Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 30-2411WI	9 - 36 VDC (24 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-2412WI		12 VDC	2500 mA	89 %
THM 30-2413WI		15 VDC	2000 mA	91 %
THM 30-2415WI		24 VDC	1250 mA	90 %
THM 30-2421WI		±5 VDC	3000 mA	86 %
THM 30-2422WI		±12 VDC	1250 mA	90 %
THM 30-2423WI	±15 VDC	1000 mA	90 %	
THM 30-4811WI	18 - 75 VDC (48 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-4812WI		12 VDC	2500 mA	89 %
THM 30-4813WI		15 VDC	2000 mA	90 %
THM 30-4815WI		24 VDC	1250 mA	89 %
THM 30-4821WI		±5 VDC	3000 mA	87 %
THM 30-4822WI		±12 VDC	1250 mA	90 %
THM 30-4823WI	±15 VDC	1000 mA	90 %	

- Ultra wide 4:1 input voltage
- Compact 2 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 μA
- Operating temperature -40°C to 80°C
- IEC 60601-1-2 4th edition EMC and EN55032 class A
- Operating up to 5000m altitude
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+Vout	+Vout
4	-Vout	Common
5	Trim	-Vout
6	No pin*/Remote	No pin*/Remote

* If remote is not selected there will be no pin.

THM 60WI **NEW - under development** **60 Watt**

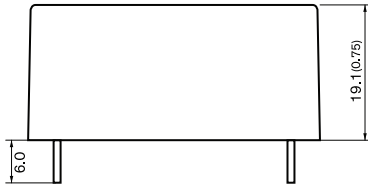
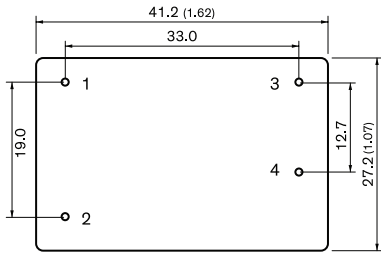
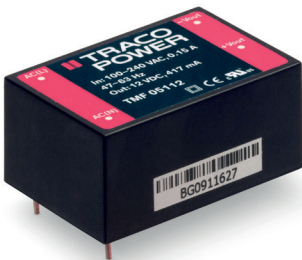


Model	Input	Vout	I _{out}	Efficiency
THM 60-2412WI	9 - 36 VDC	12.0 VDC	5.0 A	90 %
THM 60-2413WI	9 - 36 VDC	15.0 VDC	4.0 A	90 %
THM 60-2415WI	9 - 36 VDC	24.0 VDC	2.5 A	91 %
THM 60-2422WI	9 - 36 VDC	±12.0 VDC	±2.5 A	91 %
THM 60-2423WI	9 - 36 VDC	±15.0 VDC	±2.0 A	91 %
THM 60-4811WI	18 - 75 VDC	5.0 VDC	12.0 A	89 %
THM 60-4812WI	18 - 75 VDC	12.0 VDC	5.0 A	90 %
THM 60-4813WI	18 - 75 VDC	15.0 VDC	4.0 A	90 %
THM 60-4815WI	18 - 75 VDC	24.0 VDC	2.5 A	91 %
THM 60-4822WI	18 - 75 VDC	±12.0 VDC	±2.5 A	91 %
THM 60-4823WI	18 - 75 VDC	±15.0 VDC	±2.0 A	92 %

- Ultra wide 4:1 input voltage
- 2.28 x 1.45" eighth brick package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 μA
- 5-year product warranty

Pinout / Connection		
Pin	Single	Dual
1	-Vin	-Vin
2	Ctrl	Ctrl
3	+Vin	+Vin
4	-Vout	-Vout
5	-Sense	-Sense
6	Trim	Common
7	+Sense	+Sense
8	+Vout	+Vout

TMF 05 **5 Watt**

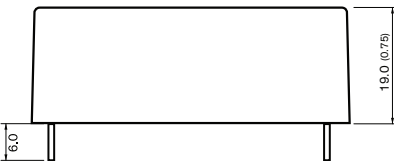
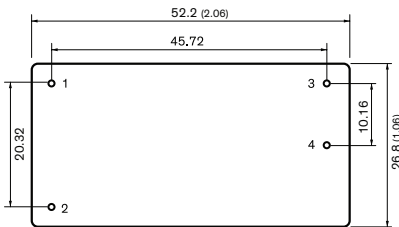


Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 05105	5.0 VDC	1000 mA	77 %
TMF 05112	12 VDC	417 mA	82 %
TMF 05115	15 VDC	333 mA	82 %
TMF 05124	24 VDC	208 mA	82 %

- 1.6 x 1.07" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- IPC-A-610 Level 3 acceptance criteria
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -25°C to +70°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection	
Pin	Single
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout

TMF 10 **10 Watt**

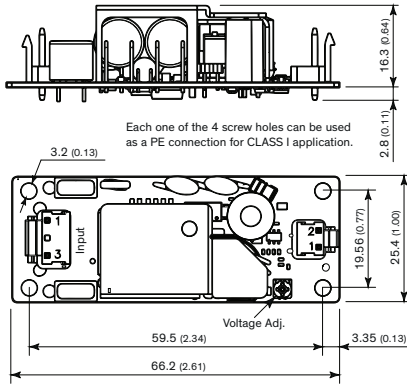
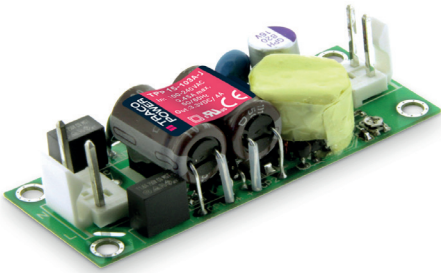


Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 10105	5.0 VDC	2000 mA	79 %
TMF 10112	12 VDC	833 mA	84 %
TMF 10115	15 VDC	666 mA	84 %
TMF 10124	24 VDC	417 mA	84 %

- 2.06 x 1.06" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- IPC-A-610 Level 3 acceptance criteria
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -25°C to +70°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection	
Pin	Single
1	AC (N)
2	AC (L)
3	+Vout
4	-Vout
5	No Pin

TPP 15A-J **15 Watt**



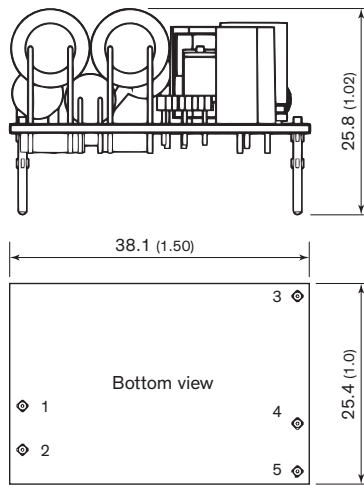
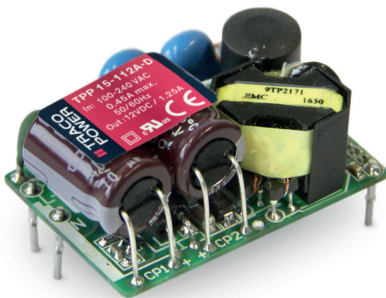
Print thickness: 1.0 mm (0.04 inch) Dimension in mm, () = inch
Tolerances: x.x ±0.50 (±0.02)
x.xxx ±0.25 (±0.01)

Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 15-103A-J	3.3 VDC (2.97 - 3.63 VDC)	4'000 mA	84 %
TPP 15-105A-J	5 VDC (4.5 - 5.5 VDC)	3'000 mA	86 %
TPP 15-109A-J	9 VDC (8.1 - 9.9 VDC)	1'670 mA	86 %
TPP 15-112A-J	12 VDC (10.8 - 13.2 VDC)	1'250 mA	87 %
TPP 15-115A-J	15 VDC (13.5 - 16.5 VDC)	1'000 mA	87 %
TPP 15-124A-J	24 VDC (21.6 - 26.4 VDC)	625 mA	88 %
TPP 15-136A-J	36 VDC (32.4 - 39.6 VDC)	417 mA	88 %
TPP 15-148A-J	48 VDC (43.2 - 52.8 VDC)	313 mA	89 %

- 2.61 x 1.00" open frame package
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Protection class I and II
- Operating up to 5000m altitude
- ErP compliant (<75 mW no load)
- 5-year product warranty

Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	-Vout
3	Neutral	2	+Vout

TPP 15A-D **15 Watt**

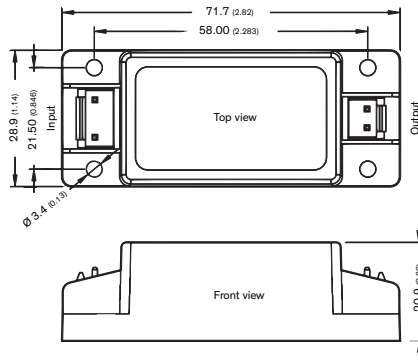


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 15-103A-D	3.3 VDC (2.97 - 3.63 VDC)	4'000 mA	84 %
TPP 15-105A-D	5 VDC (4.5 - 5.5 VDC)	3'000 mA	86 %
TPP 15-109A-D	9 VDC (8.1 - 9.9 VDC)	1'670 mA	86 %
TPP 15-112A-D	12 VDC (10.8 - 13.2 VDC)	1'250 mA	87 %
TPP 15-115A-D	15 VDC (13.5 - 16.5 VDC)	1'000 mA	87 %
TPP 15-124A-D	24 VDC (21.6 - 26.4 VDC)	625 mA	88 %
TPP 15-136A-D	36 VDC (32.4 - 39.6 VDC)	417 mA	88 %
TPP 15-148A-D	48 VDC (43.2 - 52.8 VDC)	313 mA	89 %

- 1.0 x 1.50" open frame (PCB mount)
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant (<75 mW no load)
- 5-year product warranty

PCB Pinout	
Pin	Function
1	Neutral
2	Line
3	Trim
4	-Vout
5	+Vout

TPP 15-J **15 Watt**

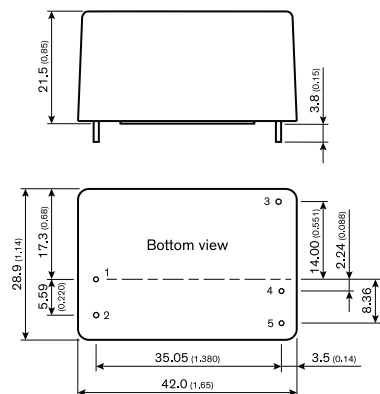


Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TPP 15-103-J	3.3 VDC	4'000 mA	84 %
TPP 15-105-J	5 VDC	3'000 mA	86 %
TPP 15-109-J	9 VDC	1'670 mA	86 %
TPP 15-112-J	12 VDC	1'250 mA	87 %
TPP 15-115-J	15 VDC	1'000 mA	87 %
TPP 15-124-J	24 VDC	625 mA	88 %
TPP 15-136-J	36 VDC	417 mA	88 %
TPP 15-148-J	48 VDC	313 mA	89 %

- 2.82 x 1.14" encapsulated chassis mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant (<75 mW no load)
- 5-year product warranty

Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	-Vout
3	Neutral	2	+Vout

TPP 15-D **15 Watt**

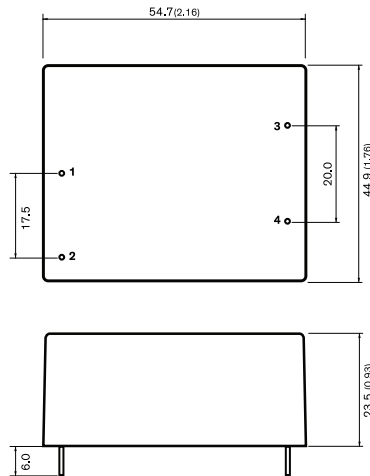


Model	Output Voltage nom. *	*adjustable	Output Current max.	Efficiency typ.
TPP 15-103-D	3.3 VDC	2.97 - 3.63 VDC	4'000 mA	84 %
TPP 15-105-D	5 VDC	4.5 - 5.5 VDC	3'000 mA	86 %
TPP 15-109-D	9 VDC	8.1 - 9.9 VDC	1'670 mA	86 %
TPP 15-112-D	12 VDC	10.8 - 13.2 VDC	1'250 mA	87 %
TPP 15-115-D	15 VDC	13.5 - 16.5 VDC	1'000 mA	87 %
TPP 15-124-D	24 VDC	21.6 - 26.4 VDC	625 mA	88 %
TPP 15-136-D	36 VDC	32.4 - 39.6 VDC	417 mA	88 %
TPP 15-148-D	48 VDC	43.2 - 52.8 VDC	313 mA	89 %

- 1.65 x 1.14" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant (<75 mW no load)
- 5-year product warranty

Pin Connections	
Pin	Function
1	Neutral
2	Line
3	Trim
4	-Vout
5	+Vout

TMF 20 **20 Watt**

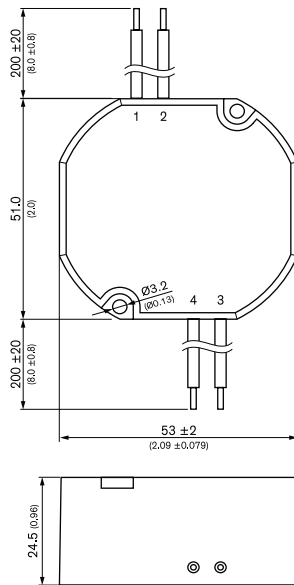
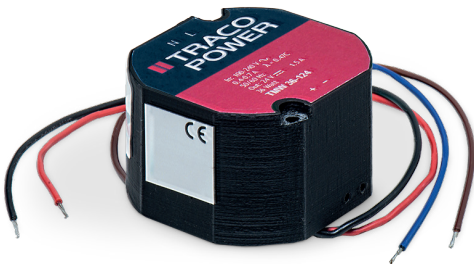


Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 20105	5.0 VDC	3600 mA	78 %
TMF 20112	12 VDC	1667 mA	84 %
TMF 20115	15 VDC	1333 mA	84 %
TMF 20124	24 VDC	833 mA	84 %

- 2.16 x 1.76" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- IPC-A-610 Level 3 Criteria
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -25°C to +70°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection	
Pin	Single
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout

TMW 24 **NEW - under development** **24 Watt**

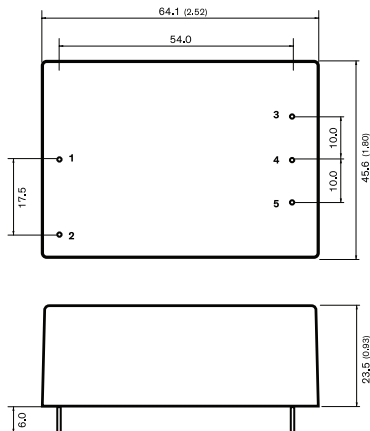


Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TMW 24-105	5 VDC	4000 mA	85 %
TMW 24-112	12 VDC	2000 mA	85 %
TMW 24-124	24 VDC	1600 mA	90 %

- Fully encapsulated power supplies in IP68 casing with flying leads
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- Effortless flush box mounting
- Fire safety for furniture
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -20°C to +80°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection			
Pin	Wire	Color	Type
1	Vac IN (N)	Blue	20AWG/0.52mm ²
2	Vac IN (L)	Brown	20AWG/0.52mm ²
3	-Vout	Black	20AWG/0.52mm ²
4	+Vout	Red	20AWG/0.52mm ²

TMF 30 **30 Watt**

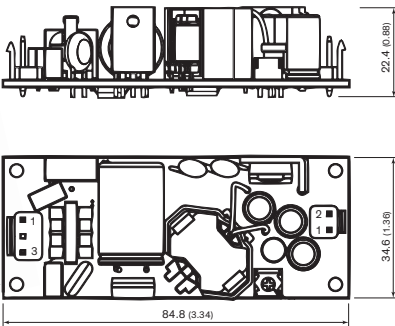
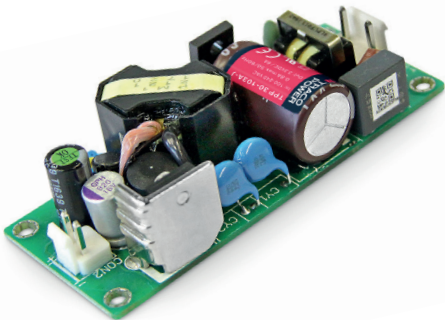


Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 30105	5.0 VDC	5000 mA	82 %
TMF 30112	12 VDC	2500 mA	88 %
TMF 30115	15 VDC	2000 mA	86 %
TMF 30124	24 VDC	1250 mA	85 %

- 2.52 x 1.80" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- IPC-A-610 Level 3 Criteria
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -25°C to +70°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection	
Pin	Single
1	AC (N)
2	AC (L)
3	-Vout
4	No Pin
5	+Vout

TPP 30A-J **30 Watt**

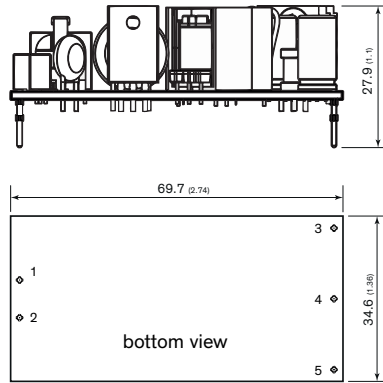
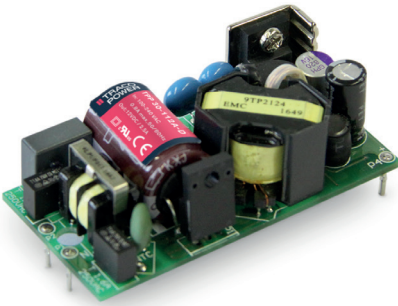


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103A-J	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105A-J	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109A-J	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112A-J	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115A-J	15 VDC (13.5 - 16.5 VDC)	2'000 mA	91 %
TPP 30-124A-J	24 VDC (21.6 - 26.4 VDC)	1'250 mA	90 %
TPP 30-136A-J	36 VDC (32.4 - 39.6 VDC)	840 mA	90 %
TPP 30-148A-J	48 VDC (43.2 - 52.8 VDC)	630 mA	92 %

- 3.34 x 1.36" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- ISO 14971 risk management file
- Low leakage current <75 µA
- Rated for BF applications
- IPC-A-610 Level 2 criteria
- Protection class I and II
- Operating up to 5000m altitude
- ErP compliant (<60 mW no load)
- 5-year product warranty

Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	+Vout
3	Neutral	2	-Vout

TPP 30A-D **30 Watt**

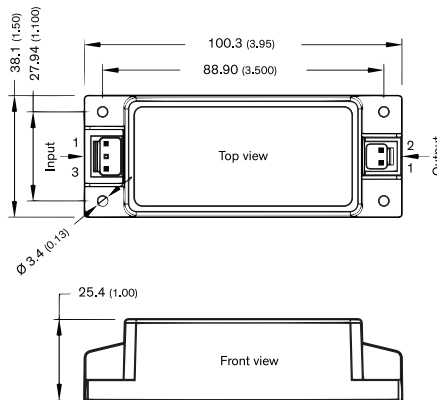


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103A-D	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105A-D	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109A-D	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112A-D	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115A-D	15 VDC (13.5 - 16.5 VDC)	2'000 mA	91 %
TPP 30-124A-D	24 VDC (21.6 - 26.4 VDC)	1'250 mA	90 %
TPP 30-136A-D	36 VDC (32.4 - 39.6 VDC)	840 mA	90 %
TPP 30-148A-D	48 VDC (43.2 - 52.8 VDC)	630 mA	92 %

- 2.74 x 1.36" open frame (PCB mount)
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant (<60 mW no load)
- 5-year product warranty

PCB Pinout	
Pin	Function
1	Neutral
2	Line
3	+Vout
4	-Vout
5	Trim

TPP 30-J **30 Watt**

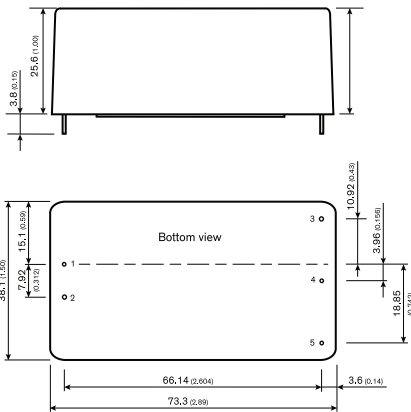


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103-J	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105-J	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109-J	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112-J	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115-J	15 VDC (13.5 - 16.5 VDC)	2'000 mA	91 %
TPP 30-124-J	24 VDC (21.6 - 26.4 VDC)	1'250 mA	90 %
TPP 30-136-J	36 VDC (32.4 - 39.6 VDC)	840 mA	90 %
TPP 30-148-J	48 VDC (43.2 - 52.8 VDC)	630 mA	92 %

- 3.95 x 1.50" encapsulated chassis mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant(<60 mW no load)
- 5-year product warranty

Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	+Vout
3	Neutral	2	-Vout

TPP 30-D **30 Watt**

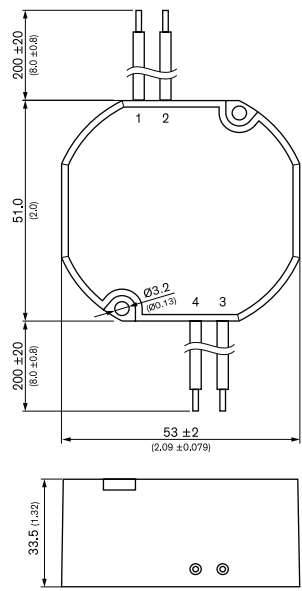
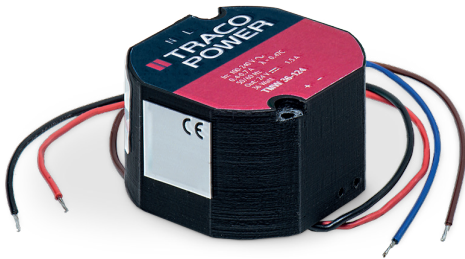


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103-D	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105-D	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109-D	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112-D	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115-D	15 VDC (13.5 - 16.5 VDC)	2'000 mA	91 %
TPP 30-124-D	24 VDC (21.6 - 26.4 VDC)	1'250 mA	90 %
TPP 30-136-D	36 VDC (32.4 - 39.6 VDC)	840 mA	90 %
TPP 30-148-D	48 VDC (43.2 - 52.8 VDC)	630 mA	92 %

- 2.89 x 1.50" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- Protection class II
- Operating up to 5000m altitude
- ErP compliant(<60 mW no load)
- 5-year product warranty

PCB Pinout	
Pin	Function
1	Neutral
2	Line
3	+Vout
4	-Vout

TMW 36 **NEW - under development** **36 Watt**

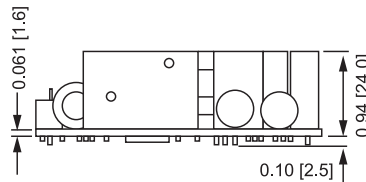
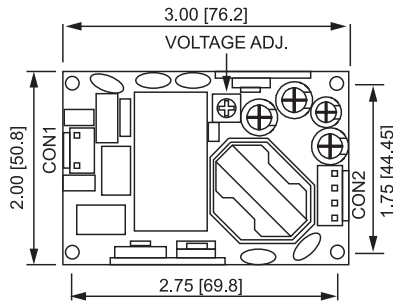
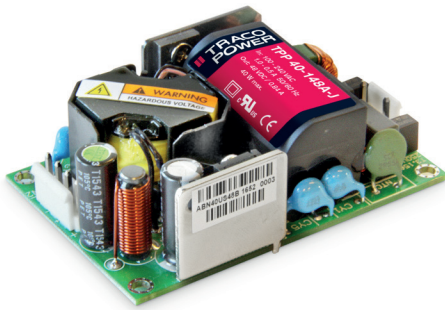


Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TMW 36-112	12 VDC	3.0 A	87 %
TMW 36-124	24 VDC	1.5 A	88 %

- Fully encapsulated power supplies in IP68 casing with flying leads
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- ISO 14971 risk management file
- Effortless flush box mounting
- Fire safety for furniture
- Low leakage current <100 µA
- Rated for BF applications
- Operating temperature -20°C to +80°C
- Protection against short-circuit, over load and over voltage
- Protection class II prepared
- 5 year product warranty

Pinout / Connection			
	Wire	Color	Type
1	Vac IN (N)	Blue	20AWG/0.52mm ²

TPP 40A **40 Watt**



- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 μ A
- Rated for BF applications
- ISO 14971 incl. risk management file
- IPC-A-610 Level 2 acceptance criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II prepared
- Operating up to 5000m altitude
- ErP compliant (<0.15 W no load)
- 5-year product warranty

Screw Terminal			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 40-105A-J	5 VDC (4.5 - 5.5 VDC)	8000 mA	90 %
TPP 40-112A-J	12 VDC (10.8 - 13.2 VDC)	3340 mA	92 %
TPP 40-124A-J	24 VDC (21.6 - 26.4 VDC)	1670 mA	92 %
TPP 40-148A-J	48 VDC (43.2 - 52.8 VDC)	840 mA	93 %

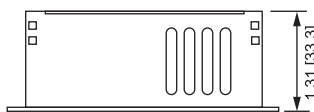
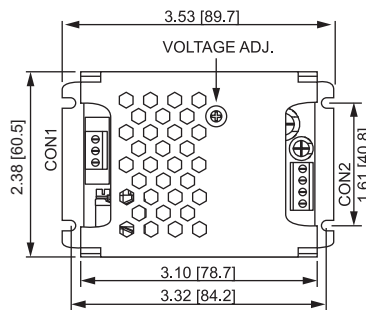
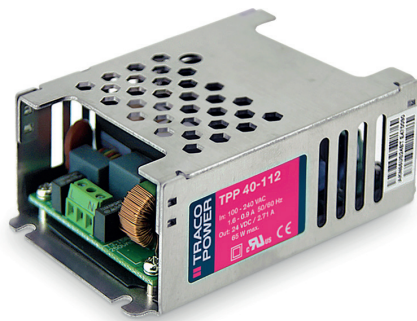
Note - Other output models are available on request.

*Terminal rated for 7 A max. (at higher current connection has to be split)

CON1: JST series
mates with JST crimp terminal: BVH-21T-P1.1
and terminal housing: VHR-3N

CON2: JST series
mates with JST crimp terminal: BVH-21T-P1.1
and terminal housing: VHR-4N

TPP 40 **40 Watt**



- 3.53 x 2.38" 4-sided enclosure
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 μ A
- Rated for BF applications
- ISO 14971 incl. risk management file
- IPC-A-610 Level 2 acceptance criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II prepared
- Operating up to 5000m altitude
- ErP compliant (<0.15 W no load)
- 5-year product warranty

Screw Terminal (Single Output Models)			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

Screw Terminal (Multi Output Models)			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1	Vout 3
3	Neutral	2, 3	COM
		4, 5	Vout 2
		6	Vout 1

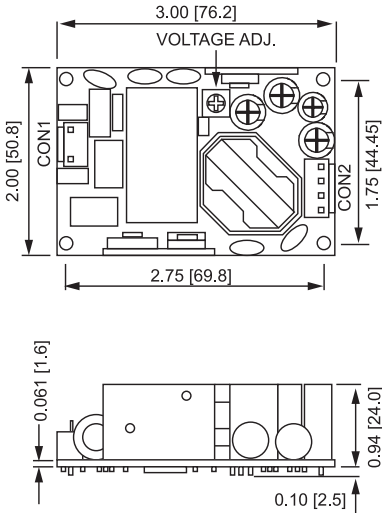
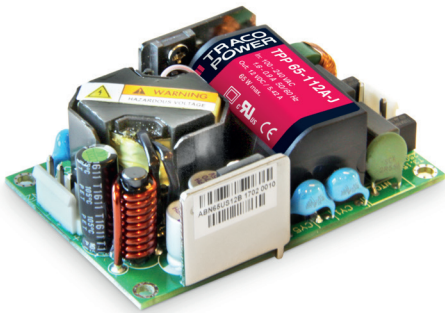
Model	Vout	Iout	Efficiency
TPP 40-105	5 VDC	8.00 A	90 %
TPP 40-112	12 VDC	3.34 A	92 %
TPP 40-115	15 VDC	2.67 A	92 %
TPP 40-124	24 VDC	1.67 A	92 %
TPP 40-221	+12/+5 VDC	3.34/6.00 A	89 %
TPP 40-231	+15/+5 VDC	2.67/6.00 A	89 %
TPP 40-251	+24/+5 VDC	1.67/6.00 A	86 %
TPP 40-321M2	+12/+5/-12 VDC	3.34/6.00/0.50 A	88 %
TPP 40-331M3	+15/+5/-15 VDC	2.67/6.00/0.50 A	88 %
TPP 40-3512	+24/+5/+12 VDC	1.67/6.00/0.50 A	96 %

Note
- Total Power must not exceed 40 W.
- Other output models are available on request.
- Multi output models have a common ground.

Note (Dimensions)
- Multi output models 102.4 (4.03) length, 34.5 (1.36) height

* Terminal rated for 10 A max. (at higher current connection has to be split)

TPP 65A **65 Watt**



- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 incl. risk management file
- IPC-A-610 Level 2 acceptance criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II
- Operating up to 5000m altitude
- ErP compliant (<0.15 W no load)
- 5-year product warranty

Screw Terminal			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 65-105A-J	5 VDC (4.5 - 5.5 VDC)	10000 mA	90 %
TPP 65-112A-J	12 VDC (10.8 - 13.2 VDC)	5420 mA	93 %
TPP 65-124A-J	24 VDC (21.6 - 26.4 VDC)	2710 mA	94 %
TPP 65-148A-J	48 VDC (43.2 - 52.8 VDC)	1360 mA	93 %

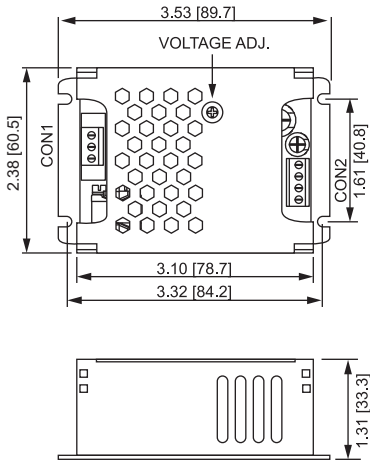
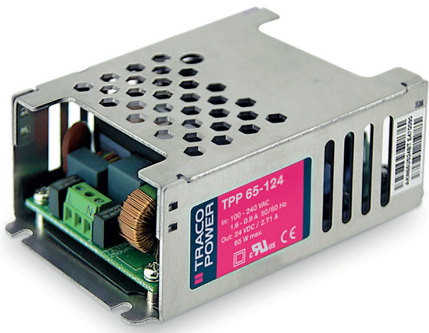
Note
- Other output models are available on request.

*Terminal rated for 7 A max. (at higher current connection has to be split)

CON1: JST series mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-3N

CON2: JST series mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-4N

TPP 65 **65 Watt**



- 3.53 x 2.38" 4-sided enclosure
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II
- Operating up to 5000m altitude
- ErP compliant (<0.15 W no load)
- 5-year product warranty

Screw Terminal (Single Output Models)			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

Screw Terminal (Multi Output Models)			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1	Vout 3
3	Neutral	2, 3	COM
		4, 5	Vout 2
		6	Vout 1

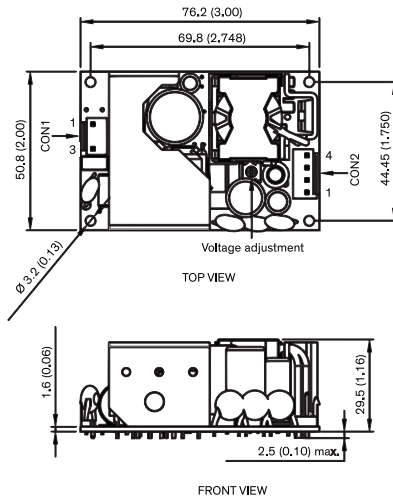
Model	Vout	Iout	Efficiency
TPP 65-105	5 VDC	10.00 A	90 %
TPP 65-112	12 VDC	5.42 A	93 %
TPP 65-115	15 VDC	4.34 A	94 %
TPP 65-124	24 VDC	2.71 A	94 %
TPP 65-221	+12/+5 VDC	5.42/8.00 A	90 %
TPP 65-231	+15/+5 VDC	4.34/8.00 A	91 %
TPP 65-251	+24/+5 VDC	2.71/8.00 A	89 %
TPP 65-321M2	+12/+5/-12 VDC	5.42/8.00/0.60 A	89 %
TPP 65-331M3	+15/+5/-15 VDC	4.34/8.00/0.60 A	90 %
TPP 65-3512	+24/+5/+12 VDC	2.71/8.00/0.60 A	89 %

Note
- Total Power must not exceed 65 W.
- Other output models are available on request.
- Multi output models have a common ground.

Note (Dimensions)
- Multi output models 102.4 (4.03) length, 34.5 (1.36) height

* Terminal rated for 10 A max. (at higher current connection has to be split)

TPP 100A-J **100 Watt**



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 100-112-J	12 VDC (10.8 - 13.2 VDC)	8340 mA	91 %
TPP 100-115-J	15 VDC (13.5 - 16.5 VDC)	6670 mA	92 %
TPP 100-124-J	24 VDC (21.6 - 26.4 VDC)	4170 mA	92 %
TPP 100-128-J	28 VDC (25.2 - 30.8 VDC)	3580 mA	92 %
TPP 100-136-J	36 VDC (32.4 - 39.6 VDC)	2780 mA	91 %
TPP 100-148-J	48 VDC (43.2 - 52.8 VDC)	2090 mA	91 %

*Terminal rated for 7 A max. (at higher current connection has to be split)

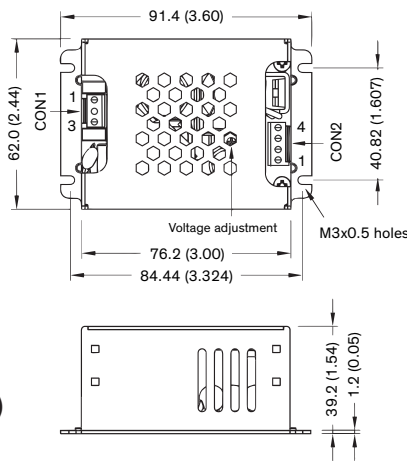
CON1: JST series
mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-3N

CON2: JST series
mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-4N

- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- ErP compliant (<0.3 W no load)
- 5-year product warranty

Screw Terminal			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

TPP 100 **100 Watt**



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 100-112	12 VDC (10.8 - 13.2 VDC)	8340 mA	91 %
TPP 100-115	15 VDC (13.5 - 16.5 VDC)	6670 mA	92 %
TPP 100-124	24 VDC (21.6 - 26.4 VDC)	4170 mA	92 %
TPP 100-128	28 VDC (25.2 - 30.8 VDC)	3580 mA	92 %
TPP 100-136	36 VDC (32.4 - 39.6 VDC)	2780 mA	91 %
TPP 100-148	48 VDC (43.2 - 52.8 VDC)	2090 mA	91 %

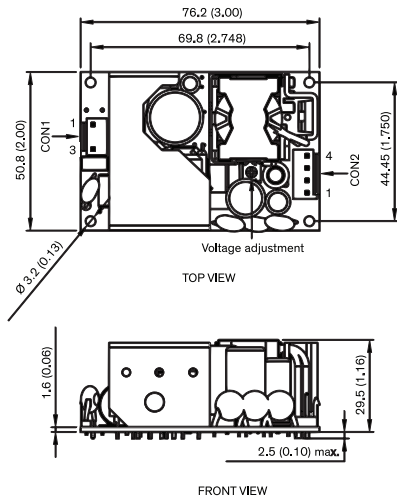
CON1: JST series
mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-3N

CON2: JST series
mates with JST crimp terminal: BVH-21T-P1.1 and terminal housing: VHR-4N

- 3.60 x 2.44" enclosed
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- Operating up to 5000m altitude
- ErP compliant (<0.3 W no load)
- 5-year product warranty

Screw Terminal			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

TPP 150A-J 150 Watt



Model	Output Voltage nom. (adjustable)	Output Current max. (Forced air cooling)	Efficiency typ.
TPP 150-112-J	12 VDC (10.8 - 13.2 VDC)	12'500 mA	91 %
TPP 150-115-J	15 VDC (13.5 - 16.5 VDC)	10'000 mA	92 %
TPP 150-124-J	24 VDC (21.6 - 26.4 VDC)	6'250 mA	92 %
TPP 150-128-J	28 VDC (25.2 - 30.8 VDC)	5'360 mA	92 %
TPP 150-136-J	36 VDC (32.4 - 39.6 VDC)	4'170 mA	92 %
TPP 150-148-J	48 VDC (43.2 - 52.8 VDC)	3'130 mA	92 %

Output Current max. (Natural convection):
 8340 mA
 7340 mA
 4590 mA
 3930 mA
 3060 mA
 2090 mA

*Terminal rated for 7 A max. (at higher current connection has to be split)

CON1: JST series mates with JST crimp terminal: SVH-21T-P1.1 and terminal housing: VHR-3N

CON2: JST series mates with JST crimp terminal: SVH-21T-P1.1 and terminal housing: VHR-6N

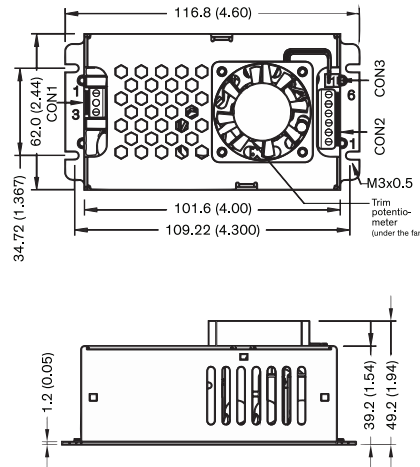
CON3: Molex series mates with Molex crimp terminals: 2759 and Molex housing: 22-01-1022

- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- Low leakage current <100 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- Operating up to 5000m altitude
- ErP compliant (<0.3 W no load)
- 5-year product warranty

Pin connectors			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1-3	-Vout
3	Neutral	4-6	+Vout

Input (CON3)	
Pin	Function
1	-Fan
2	+Fan

TPP 150 150 Watt



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 150-112	12 VDC (10.8 - 13.2 VDC)	12500 mA	91 %
TPP 150-115	15 VDC (13.5 - 16.5 VDC)	10000 mA	92 %
TPP 150-124	24 VDC (21.6 - 26.4 VDC)	6250 mA	92 %
TPP 150-128	28 VDC (25.2 - 30.8 VDC)	5360 mA	92 %
TPP 150-136	36 VDC (32.4 - 39.6 VDC)	4170 mA	92 %
TPP 150-148	48 VDC (43.2 - 52.8 VDC)	3130 mA	92 %

*Terminal rated for 7 A max. (at higher current connection has to be split)

CON1: Screw Terminal

CON2: Screw Terminal

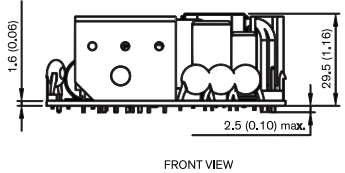
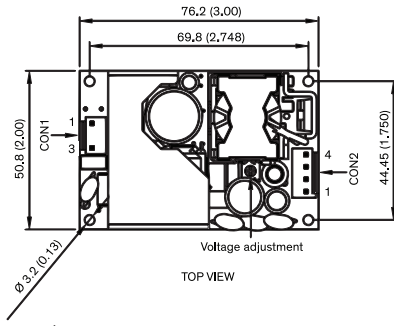
CON3: Molex series mates with Molex crimp terminals: 2759 and Molex housing: 22-01-1022

- 4.60 x 2.44" enclosed with fan
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- Low leakage current <100 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- Operating up to 5000m altitude
- ErP compliant (<0.3 W no load)
- 5-year product warranty

Pin connectors			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1-3	-Vout
3	Neutral	4-6	+Vout

Input (CON3)	
Pin	Function
1	-Fan
2	+Fan

TPP 180A **NEW - under development** **180 Watt**

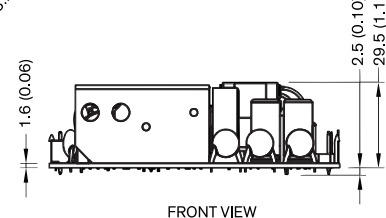
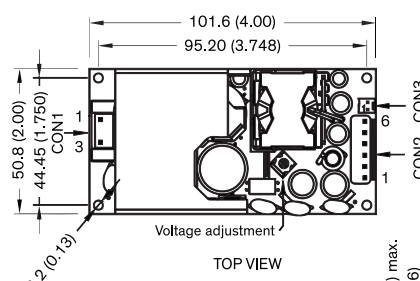


Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	12 VDC	15 A	TBD
TBD	15 VDC	12 A	TBD
TBD	24 VDC	7.5 A	TBD
TBD	28 VDC	6.4 A	TBD
TBD	36 VDC	5 A	TBD
TBD	48 VDC	3.75 A	TBD

- Ultra compact 2.00 x 3.00" open-frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <100 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- High efficiency (ErP ready)
- Operating up to 5000m altitude
- 5-year product warranty

Screw Terminal			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout

TPP 300A **NEW - under development** **300 Watt**



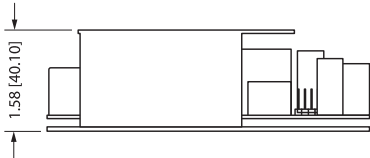
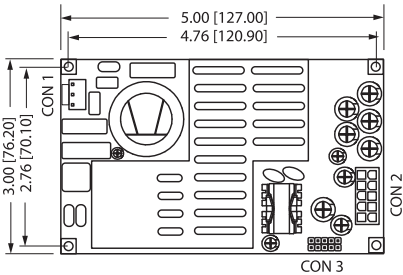
Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	12 VDC	25 A	TBD
TBD	15 VDC	20 A	TBD
TBD	24 VDC	12.5 A	TBD
TBD	28 VDC	10.7 A	TBD
TBD	36 VDC	8.3 A	TBD
TBD	48 VDC	3.6.25 A	TBD

- Ultra compact 2.00 x 4.00" open-frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <100 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection class I and II prepared
- High efficiency (ErP ready)
- Operating up to 5000m altitude
- 5-year product warranty

Pin connectors			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1-3	-Vout
3	Neutral	4-6	+Vout

Input (CON3)	
Pin	Function
1	-Fan
2	+Fan

TPP 450A **450 Watt**



- 3.00 x 5.00" open frame
- 450W with forced air cooling
- Up to 320W conduction cooled
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- ISO 14971 risk management file
- IPC-A-610 class 3 criteria
- 5 Vsb, 12 V fan, On/Off, Power Good Signal, variable fan speed
- Operating up to 5000m altitude
- 5-year product warranty

Input CON1		Auxiliary CON3	
Pin	Function	Pin	Function
1	AC (L)	1	+Fan
3	AC (N)	2	+Sense
Output CON2		3	+Remote
Pin*	Function	4	PG
1-5	+Vout	5	+Standby
6-10	-Vout	6	-Fan
		7	-Sense
		8	-Remote
		9	No Pin
		10	-Standby

Model	Output Voltage nom. (adjustable)	Output Current max. (Forced air cooling)	Efficiency typ.
TPP 450-112A-M	12 VDC (11.0 - 13.0 VDC)	37'500 mA	91 %
TPP 450-115A-M	15 VDC (13.8 - 16.2 VDC)	30'000 mA	92 %
TPP 450-124A-M	24 VDC (22.1 - 25.9 VDC)	18'750 mA	93 %
TPP 450-128A-M	28 VDC (25.8 - 30.2 VDC)	16'100 mA	93 %
TPP 450-136A-M	36 VDC (33.1 - 38.9 VDC)	12'500 mA	93 %
TPP 450-148A-M	48 VDC (44.2 - 51.8 VDC)	9'400 mA	94 %
TPP 450-153A-M	53 VDC (48.8 - 57.2 VDC)	8'550 mA	94 %

Output Current max. (Natural convection):
 20'800 mA
 16'600 mA
 13'300 mA
 11'400 mA
 8'900 mA
 6'650 mA
 6'050 mA

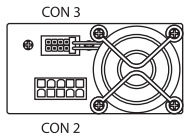
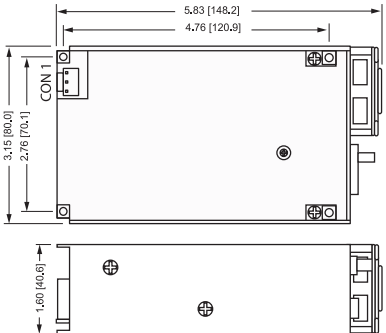
*Terminal rated for 13 A max. (at higher current connection has to be split)

CON1:
 Molex housing: 09-50-8031
 Molex crimp terminals: 2478,6838,45570

CON2:
 Molex housing: 39-01-2105
 Molex crimp terminals: 5556,45750

CON3:
 Molex housing: 90143-0010
 Molex crimp terminals: 90119

TPP 450 **450 Watt**



- 3.15 x 5.83" enclosed + fan
- 450W up to 65°C without derating
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- ISO 14971 risk management file
- IPC-A-610 class 3 criteria
- 5 Vsb, 12 V fan, On/Off, Power Good Signal, variable fan speed
- Operating up to 5000m altitude
- 5-year product warranty

Input CON1		Auxiliary CON3	
Pin	Function	Pin	Function
1	AC (L)	1	+Fan
3	AC (N)	2	+Sense
Output CON2		3	+Remote
Pin*	Function	4	PG
1-5	+Vout	5	+Standby
6-10	-Vout	6	-Fan
		7	-Sense
		8	-Remote
		9	No Pin
		10	-Standby

Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 450-112-M	12 VDC (11.0 - 13.0 VDC)	37'500 mA	91 %
TPP 450-115-M	15 VDC (13.8 - 16.2 VDC)	30'000 mA	92 %
TPP 450-124-M	24 VDC (22.1 - 25.9 VDC)	18'750 mA	93 %
TPP 450-128-M	28 VDC (25.8 - 30.2 VDC)	16'100 mA	93 %
TPP 450-136-M	36 VDC (33.1 - 38.9 VDC)	12'500 mA	93 %
TPP 450-148-M	48 VDC (44.2 - 51.8 VDC)	9'400 mA	94 %
TPP 450-153-M	53 VDC (48.8 - 57.2 VDC)	8'550 mA	94 %

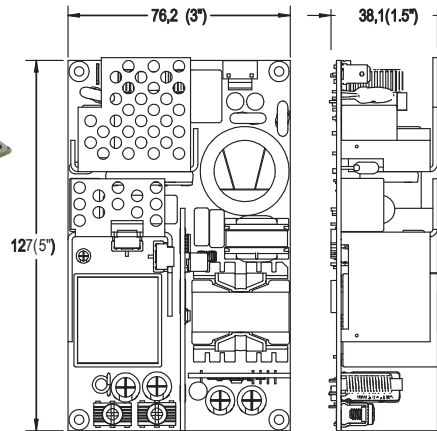
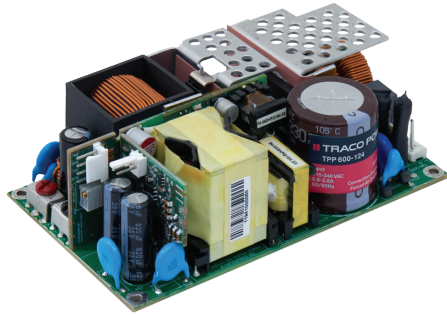
*Terminal rated for 13 A max. (at higher current connection has to be split)

CON1:
 Molex housing: 09-50-8031
 Molex crimp terminals: 2478,6838,45570

CON2:
 Molex housing: 39-01-2105
 Molex crimp terminals: 5556,45750

CON3:
 Molex housing: 90143-0010
 Molex crimp terminals: 90119

TPP 600A **NEW - under development** 600 Watt



Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	24 VDC	25.0 A	94%
TBD	28 VDC	21.4 A	
TBD	36 VDC	16.7 A	
TBD	48 VDC	12.5 A	

- 3.00 x 5.00" open frame
- 600W with forced air cooling
- Up to 300W convection cooled
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th ed. (EMC)
- ISO 14971 risk management file
- Protection class I / II prepared
- Class I Low leakage current <100 µA
- Typical efficiency 94%
- ErP compliant (<0.5 W no load)
- 5Vsb, 12V smart fan, Remote On/Off, AC OK and DC OK signals

Input	
J8	
Pin	Function
1	AC (L)
3	AC (N)

Output	
J5 / J6	
Pin*	Function
RED	+Vout
BLK	-Vout

Auxiliary	
J3	
Pin	Function
1	+5V
2	COMM
3	+Remote
4	DC OK

Fan	
J4	
Pin	Function
1	+12V
2	Return

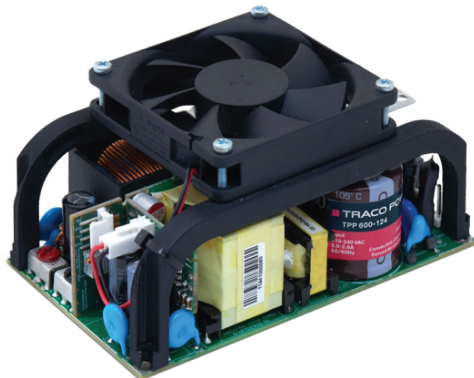
Input Connector:
 J8 = Molex KK 396, PCB Header 41791
 (PE : J1) = (PE 6.3x0.8mm DIN 46244 Vertical Tab)

Output Connector(s) :
 J5, J6 = Keystone 8199-X

Signal Connector :
 J3 = TE MTA-100, PCB Header 640457-4

FAN Connector
 J4 = Molex KK 254, PCB Header 22-27-2021

TPP 600 **NEW - under development** 600 Watt



- 3.00 x 5.00" open frame + top fan
- 600W with top-mount fan
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th ed. (EMC)
- ISO 14971 risk management file
- Protection class I / II prepared
- Class I Low leakage current <100 µA
- Typical efficiency 94%
- ErP compliant (<0.5 W no load)
- 5Vsb, 12V smart fan, Remote On/Off, AC OK and DC OK signals

Input	
J8	
Pin	Function
1	AC (L)
3	AC (N)

Output	
J5 / J6	
Pin*	Function
RED	+Vout
BLK	-Vout

Auxiliary	
J3	
Pin	Function
1	+5V
2	COMM
3	+Remote
4	DC OK

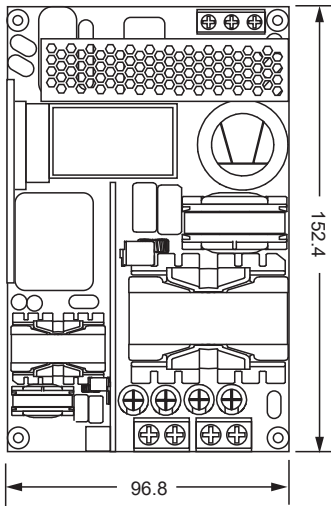
Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	24 VDC	25.0 A	94%
TBD	28 VDC	21.4 A	
TBD	36 VDC	16.7 A	
TBD	48 VDC	12.5 A	

Input Connector:
 J8 = Molex KK 396, PCB Header 41791
 (PE : J1) = (PE 6.3x0.8mm DIN 46244 Vertical Tab)

Output Connector(s) :
 J5, J6 = Keystone 8199-X

Signal Connector :
 J3 = TE MTA-100, PCB Header 640457-4

TPP 850A **NEW - under development** 850 Watt

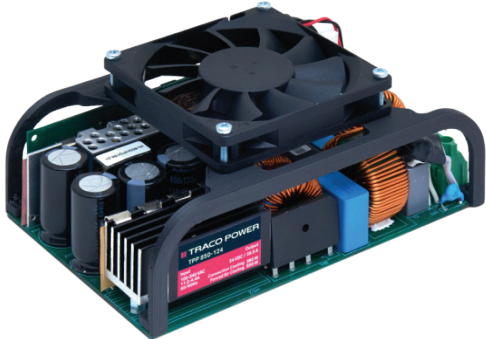


Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	24 VDC	35.4 A	94%
TBD	28 VDC	30.3 A	
TBD	36 VDC	23.6 A	
TBD	48 VDC	17.7 A	

- 4.00 x 6.00" open frame
- 850W with forced air cooling
- Up to 360W convection cooled
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th ed. (EMC)
- ISO 14971 risk management file
- Typical efficiency 94%
- ErP compliant (<0.5 W no load)
- Protection class I / II prepared
- Class I Low leakage current <100 µA
- 5Vsb, 12V smart fan, Remote On/Off, AC OK and DC OK signals

Auxiliary	
J3	
Pin	Function
1	+5V
2	Common
3	PWM Fan
4	DC OK
5	Remote
6	Common
7	+5V

TPP 850 **NEW - under development** 850 Watt



Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TBD	24 VDC	35.4 A	94%
TBD	28 VDC	30.3 A	
TBD	36 VDC	23.6 A	
TBD	48 VDC	17.7 A	

- 4.00 x 6.00" open frame + top fan
- 850W with top-mount fan
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th ed. (EMC)
- ISO 14971 risk management file
- Typical efficiency 94%
- ErP compliant (<0.5 W no load)
- Protection class I / II prepared
- Class I Low leakage current <100 µA
- 5Vsb, 12V smart fan, Remote On/Off, AC OK and DC OK signals

Auxiliary	
J3	
Pin	Function
1	+5V
2	Common
3	PWM Fan
4	DC OK
5	Remote
6	Common
7	+5V

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