

TRACO POWER

2022~2023 | Medical Power Solutions Product Portfolio



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 × MOPP 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 2 × MOPP
- Risk management process according to ISO 14971 including 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

1–60 Watt DC/DC Converters

5–850 Watt AC/DC Power Supplies

Features

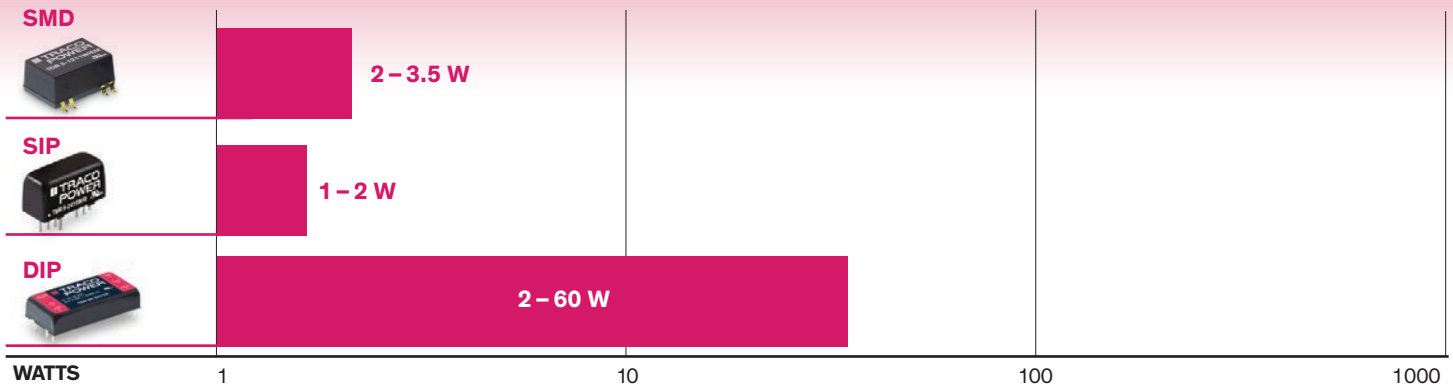
- IEC/EN/ES 60601-1
3rd Edition for 2 × MOPP
- Risk Management ISO 14971
- IPC-A-610 Class 3
High Performance Acceptability
- EMC Emission to IEC 60601-1-2 ed. 4
- Quality Management ISO 13485
- 5-year Warranty

Standards and Directives

- ISO 9001
- ISO 14001
- RoHS
- REACH
- EMC Acc. EN55032
- ErP Directive



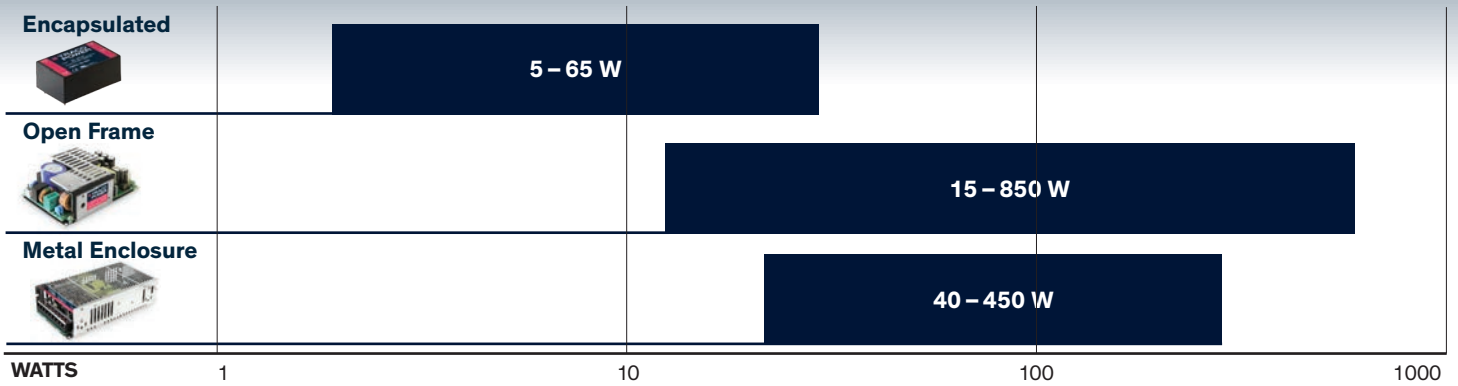
Medical DC/DC Converters



DC/DC CONVERTER INDEX

Watts	Series	Footprint	Mounting	Input	Housing	I/O isolation	Page
1	TRV 1M	SIP-9	PCB	±10%	Encapsulated	5000 VAC2 × MOPP	5
2	TRV 2M	SIP-9	PCB	±10%	Encapsulated	5000 VAC2 × MOPP NEW	6
2	TIM 2	DIP-16	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	6
2	TIM 2SM	DIP-16	SMD	2:01	Encapsulated	5000 VAC2 × MOPP	7
3	THM 3	DIP-24	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	7
3	THM 3WI	DIP-24	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	8
3.5	TIM 3.5	DIP-16	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	8
3.5	TIM 3.5SM	DIP-16	SMD	2:01	Encapsulated	5000 VAC2 × MOPP	9
6	THM 6	DIP-24	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	9
6	TIM 6	DIP-24	PCB	2:01	Encapsulated	5000 VAC2 × MOPP in development	10
6	THM 6WI	DIP-24	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	10
10	THM 10	DIP-24	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	11
10	THM 10WI	DIP-24	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	11
15	THM 15	1.60 × 1.00"	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	12
15	THM 15WI	1.60 × 1.00"	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	12
20	THM 20	1.60 × 1.00"	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	13
20	THM 20WI	1.60 × 1.00"	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	13
30	THM 30	2.00 × 1.00"	PCB	2:01	Encapsulated	5000 VAC2 × MOPP	14
30	THM 30WI	2.00 × 1.00"	PCB	4:01	Encapsulated	5000 VAC2 × MOPP	14
60	THM 60WI	2.28 × 1.45"	PCB	4:01	Encapsulated	5000 VAC2 × MOPP NEW	15

Medical AC/DC Power supplies



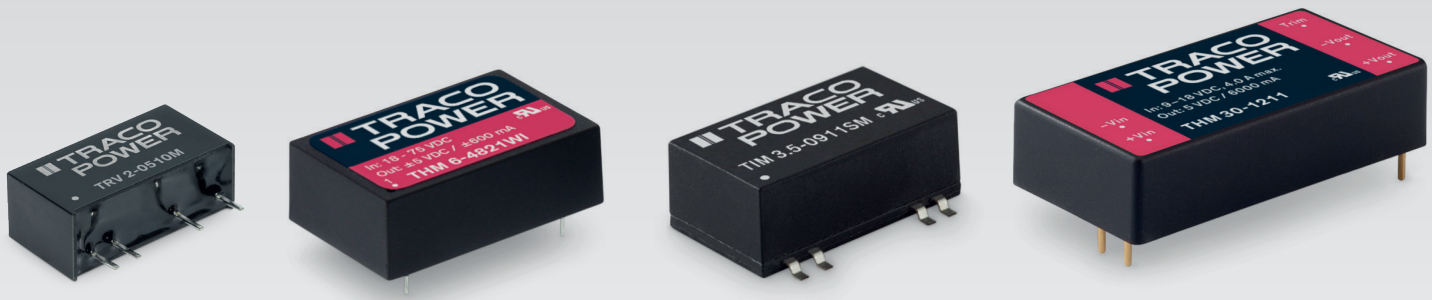
AC/DC POWER SUPPLY INDEX

Watts	Series	Footprint	Mounting	Housing	I/O isolation	Page
5	TMF 05	1.60 × 1.00"	PCB	Encapsulated	4000 VAC 2 × MOPP	16
10	TMF 10	2.00 × 1.00"	PCB	Encapsulated	4000 VAC 2 × MOPP	17
15	TPP 15A-J	2.60 × 1.00"	Chassis	Open frame	4000 VAC 2 × MOPP	17
15	TPP 15A-D	1.50 × 1.00"	PCB	Open frame	4000 VAC 2 × MOPP	18
15	TPP 15-J	2.82 × 1.14"	Chassis	Encapsulated	4000 VAC 2 × MOPP	18
15	TPP 15-D	1.65 × 1.14"	PCB	Encapsulated	4000 VAC 2 × MOPP	19
20	TMF 20	2.16 × 1.78"	PCB	Encapsulated	4000 VAC 2 × MOPP	19
24	TMW 24	2.09 × 2.00"	Chassis	Encapsulated (IP68)	4000 VAC 2 × MOPP NEW	20
24	TMW 24P	2.09 × 2.00"	PCB	Encapsulated (IP68)	4000 VAC 2 × MOPP NEW	20
30	TMF 30	2.52 × 1.80"	PCB	Encapsulated	4000 VAC 2 × MOPP	21
30	TPP 30A-J	3.34 × 1.36"	Chassis	Open frame	4000 VAC 2 × MOPP	21
30	TPP 30A-D	2.74 × 1.10"	PCB	Open frame	4000 VAC 2 × MOPP	22
30	TPP 30-J	3.95 × 1.50"	Chassis	Encapsulated	4000 VAC 2 × MOPP	22
30	TPP 30-D	2.89 × 1.50"	PCB	Encapsulated	4000 VAC 2 × MOPP	23
36	TMW 36	2.09 × 2.00"	Chassis	Encapsulated (IP68)	4000 VAC 2 × MOPP NEW	23
36	TMW 36P	2.09 × 2.00"	PCB	Encapsulated (IP68)	4000 VAC 2 × MOPP NEW	24
40	TPP 40A	3.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP	24
40	TPP 40	3.53 × 2.38"	Chassis	Encased	4000 VAC 2 × MOPP	25
40	TPP 40E-J	4.30 × 2.20"	Chassis	Encapsulated	4000 VAC 2 × MOPP NEW	25
40	TPP 40E-D	3.20 × 2.20"	PCB	Encapsulated	4000 VAC 2 × MOPP NEW	26
65	TPP 65A	3.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP	26
65	TPP 65	3.53 × 2.38"	Chassis	Encased	4000 VAC 2 × MOPP	27
65	TPP 65E-J	4.30 × 2.20"	Chassis	Encapsulated	4000 VAC 2 × MOPP NEW	27
65	TPP 65E-D	3.20 × 2.2"	PCB	Encapsulated	4000 VAC 2 × MOPP NEW	28
100	TPP 100A-J	3.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP	28
100	TPP 100	3.60 × 2.44"	Chassis	Encased	4000 VAC 2 × MOPP	29
150	TPP 150A-J	4.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP	29
150	TPP 150	4.60 × 2.44"	Chassis	Encased	4000 VAC 2 × MOPP	60
180	TPP 180A-M	3.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP NEW	60
180	TPP 180-M	3.60 × 2.44"	Chassis	Encased	4000 VAC 2 × MOPP NEW	31
250	TPP 250A	4.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP in development	31
250	TPP 250A-FK	4.00 × 2.00"	Chassis	Open frame + fan assembly	4000 VAC 2 × MOPP indevelopment	32
300	TPP 300A-M	4.00 × 2.00"	Chassis	Open frame	4000 VAC 2 × MOPP NEW	32
300	TPP 300-M	4.60 × 3.44"	Chassis	Encased	4000 VAC 2 × MOPP NEW	33
450	TPP 450BA	5.00 × 3.00"	Chassis	Open frame	4000 VAC 2 × MOPP	33
450	TPP 450B	5.83 × 3.00"	Chassis	Encased	4000 VAC 2 × MOPP	34
600	TPP 600A	5.00 × 3.00"	Chassis	Open frame	4000 VAC 2 × MOPP in development	34
600	TPP 600A-FK	5.00 × 3.00"	Chassis	Open frame + fan assembly	4000 VAC 2 × MOPP in development	35
850	TPP 850A	6.00 × 4.00"	Chassis	Open frame	4000 VAC 2 × MOPP NEW	35
850	TPP 850A-FK	6.00 × 4.00"	Chassis	Open frame + fan assembly	4000 VAC 2 × MOPP NEW	36

DC/DC converters

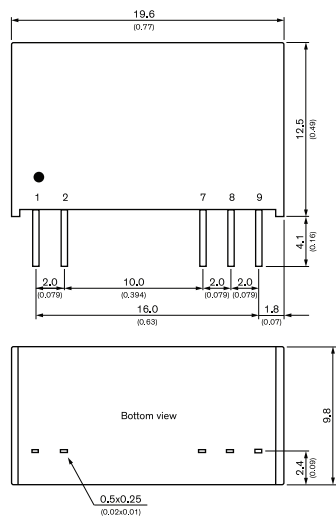
1 – 60 watt

- IEC/EN/ES 60601-1 3rd Edition for 2 × MOPP
- Risk Management ISO 14971
- IPC-A-610 Class 3 High Performance
- EMC Emission acc. to IEC 60601-1-2 ed. 4
- Quality Management ISO 13485
- 5kVAC Reinforced I/O isolation
- <5µA Leakage for BF Rated Applications
- 5-years warranty



TRV 1M

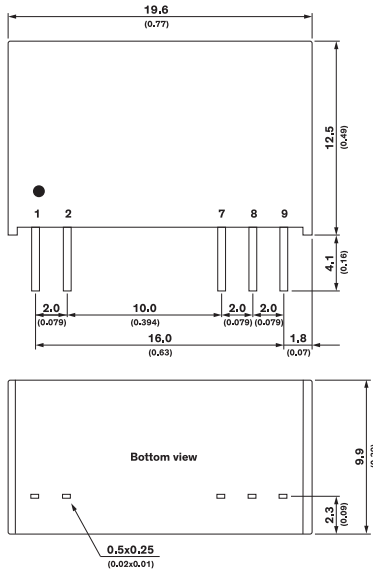
1 Watt



- 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

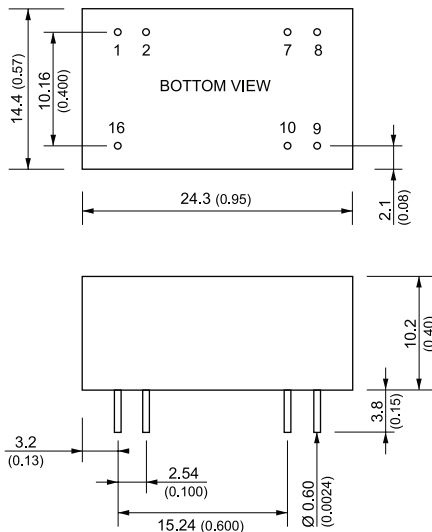
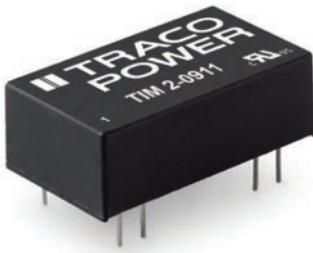
Model	Input	Vout	Iout	Efficiency
TRV 1-0510M	4.5-5.5 VDC	3.3 VDC	303 mA	80 %
TRV 1-0511M	4.5-5.5 VDC	5 VDC	200 mA	82 %
TRV 1-0512M	4.5-5.5 VDC	12 VDC	83 mA	85 %
TRV 1-0513M	4.5-5.5 VDC	15 VDC	67 mA	84 %
TRV 1-0521M	4.5-5.5 VDC	±5 VDC	±100 mA	85 %
TRV 1-0522M	4.5-5.5 VDC	±12 VDC	±42 mA	85 %
TRV 1-0523M	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)
- Low leakage current < 2 µA
- Rated for BF applications
- Short circuit protection
- Operation to 5000m altitude
- 5-year product warranty

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

Model	Input Voltage Range	Output		
		Vnom	Iout	Efficiency
TRV 2-0510M	4.5 – 5.5 VDC (5 VDC nom.)	3.3 VDC	600 mA	78%
TRV 2-0511M		5 VDC	400 mA	81%
TRV 2-0512M		12 VDC	167 mA	83%
TRV 2-0513M		15 VDC	134 mA	83%
TRV 2-0521M		±5 VDC	±200 mA	82%
TRV 2-0522M		±12 VDC	±83 mA	83%
TRV 2-0523M	±15 VDC	±67 mA	81%	
TRV 2-1210M	10.8 – 13.2 VDC (12 VDC nom.)	3.3 VDC	600 mA	79%
TRV 2-1211M		5 VDC	400 mA	81%
TRV 2-1212M		12 VDC	167 mA	84%
TRV 2-1213M		15 VDC	134 mA	83%
TRV 2-1221M		±5 VDC	±200 mA	81%
TRV 2-1222M		±12 VDC	±83 mA	83%
TRV 2-1223M	±15 VDC	±67 mA	82%	
TRV 2-1510M	13.5 – 16.5 VDC (15 VDC nom.)	3.3 VDC	600 mA	79%
TRV 2-1511M		5 VDC	400 mA	81%
TRV 2-1512M		12 VDC	167 mA	84%
TRV 2-1513M		15 VDC	134 mA	83%
TRV 2-1521M		±5 VDC	±200 mA	81%
TRV 2-1522M		±12 VDC	±83 mA	83%
TRV 2-1523M	±15 VDC	±67 mA	80%	
TRV 2-2410M	21.6 – 26.4 VDC (24 VDC nom.)	3.3 VDC	600 mA	78%
TRV 2-2411M		5 VDC	400 mA	80%
TRV 2-2412M		12 VDC	167 mA	82%
TRV 2-2413M		15 VDC	134 mA	82%
TRV 2-2421M		±5 VDC	±200 mA	81%
TRV 2-2422M		±12 VDC	±83 mA	81%
TRV 2-2423M	±15 VDC	±67 mA	80%	



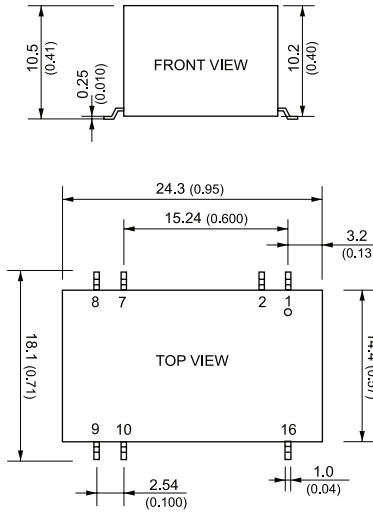
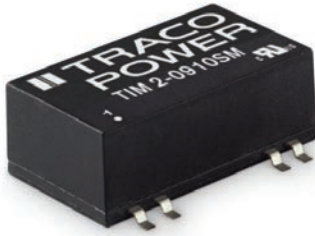
- Compact DIP-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 µA
- -40°C to 95°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
-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

Model	Input Voltage Range	Output		
		Vnom	I _{max}	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
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
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 %

TIM 2SM

2 Watt



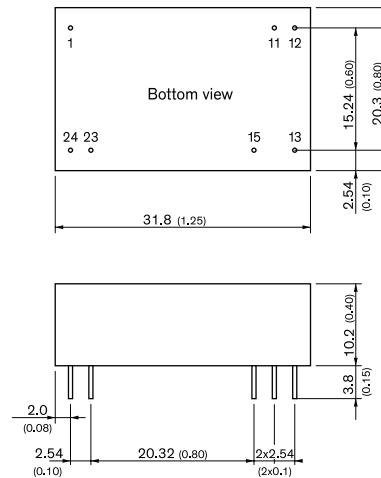
- Compact SMD-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- Operation to 5000m altitude
- Low leakage current < 2 μA
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
-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

THM 3

3 Watt



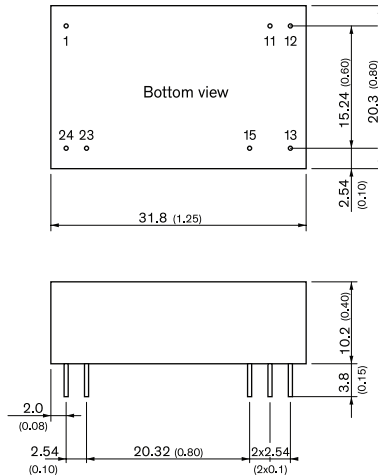
- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current < 2 μA
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2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



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
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
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 %

- 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)

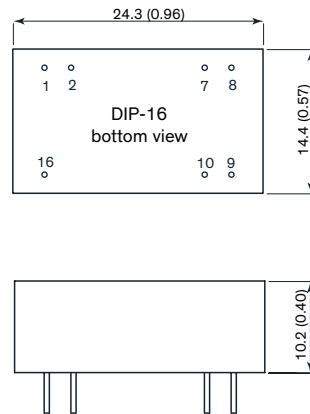
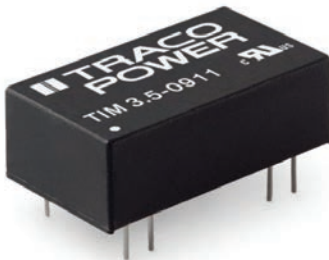
NC: No connection

* 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.

TIM 3.5

3.5 Watt



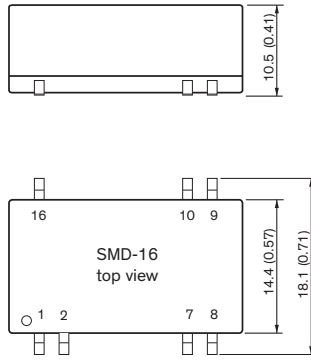
Model	Input Voltage Range	Output		Efficiency	
		Vnom	I _{max}		
TIM 3.5-0911	4.5 - 12 VDC (9 VDC nom.)	5 VDC	700 mA	77 %	
TIM 3.5-0919		9 VDC	389 mA	78 %	
TIM 3.5-0912		12 VDC	292 mA	82 %	
TIM 3.5-0913		15 VDC	234 mA	82 %	
TIM 3.5-0915		24 VDC	146 mA	82 %	
TIM 3.5-0922		± 12 VDC	146 mA	82 %	
TIM 3.5-0923		± 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 %	

- Compact DIP-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)

TIM 3.5SM

3.5 Watt



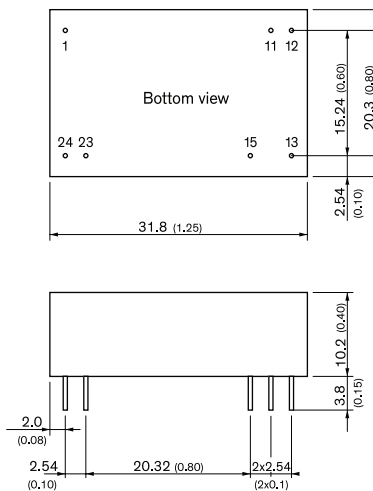
- Compact SMD-16-package
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Operation to 5000m altitude
- Low leakage current < 2 μ A
- Rated for BF applications
- -40°C to 90°C Operating Temperature
- IEC 60601-1-2 4th edition EMC and EN 55032 class A
- 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		\pm 12 VDC	146 mA	82 %
TIM 3.5-0923SM	\pm 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		\pm 12 VDC	146 mA	82 %
TIM 3.5-1223SM	\pm 15 VDC	117 mA	82 %	
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		\pm 12 VDC	146 mA	82 %
TIM 3.5-2423SM	\pm 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		\pm 12 VDC	146 mA	82 %
TIM 3.5-4823SM	\pm 15 VDC	117 mA	82 %	

THM 6

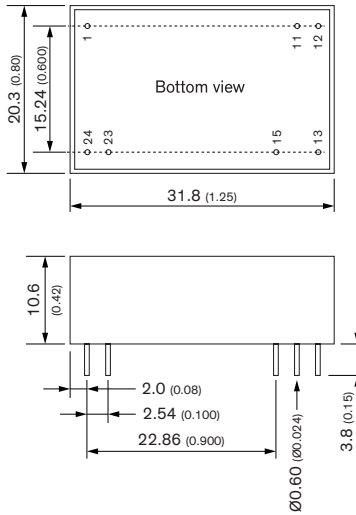
6 Watt



- 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 μ A
- -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)

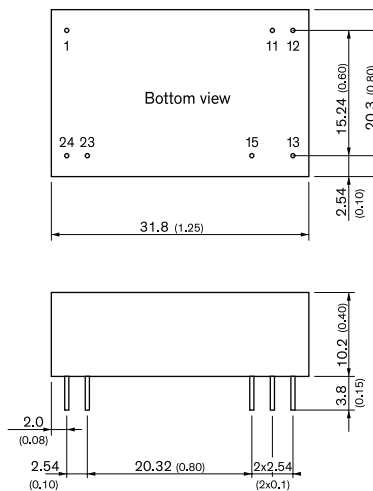
Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 6-0510	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	1800 mA	82 %
THM 6-0511		5 VDC	1200 mA	86 %
THM 6-0512		12 VDC	500 mA	86 %
THM 6-0513		15 VDC	400 mA	88 %
THM 6-0515		24 VDC	250 mA	87 %
THM 6-0521		\pm 5 VDC	600 mA	84 %
THM 6-0522	\pm 12 VDC	250 mA	87 %	
THM 6-0523	\pm 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		\pm 5 VDC	600 mA	85 %
THM 6-1222	\pm 12 VDC	250 mA	89 %	
THM 6-1223	\pm 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		\pm 5 VDC	600 mA	85 %
THM 6-2422	\pm 12 VDC	250 mA	89 %	
THM 6-2423	\pm 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		\pm 5 VDC	600 mA	85 %
THM 6-4822	\pm 12 VDC	250 mA	88 %	
THM 6-4823	\pm 15 VDC	200 mA	87 %	



Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
TIM 6-1211	9 – 18 VDC	5 VDC	1200 mA	84%
TIM 6-1212		12 VDC	500 mA	87%
TIM 6-1213		15 VDC	400 mA	86%
TIM 6-1221		±5 VDC	±600 mA	83%
TIM 6-1222		±12 VDC	±250 mA	87%
TIM 6-1223		±15 VDC	±200 mA	86%
TIM 6-2411	18 – 36 VDC	5 VDC	1200 mA	84%
TIM 6-2412		12 VDC	500 mA	87%
TIM 6-2413		15 VDC	400 mA	87%
TIM 6-2421		±5 VDC	±600 mA	84%
TIM 6-2422		±12 VDC	±250 mA	86%
TIM 6-2423		±15 VDC	±200 mA	86%
TIM 6-4811	36 – 75 VDC	5 VDC	1200 mA	84%
TIM 6-4812		12 VDC	500 mA	87%
TIM 6-4813		15 VDC	400 mA	86%
TIM 6-4821		±5 VDC	±600 mA	83%
TIM 6-4822		±12 VDC	±250 mA	87%
TIM 6-4823		±15 VDC	±200 mA	85%

- 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 95°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	+Vin
11	No Pin	Common
12	-Vout	No Pin
13	+Vout	-Vout
15	No Pin	+Vout
23	-Vout	-Vout
24	-Vout	-Vout



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%	

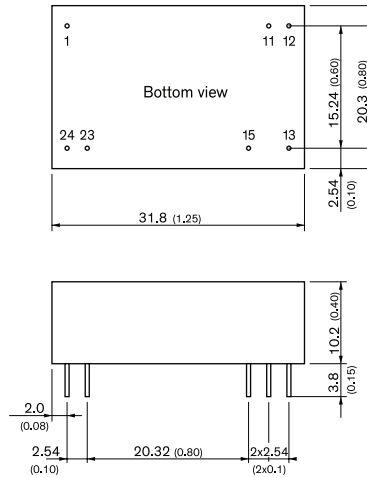
- Ultra wide 4:1 input range
- Compact DIP-24 plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2 μA
- Operating temperature -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)

NC: No connection

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

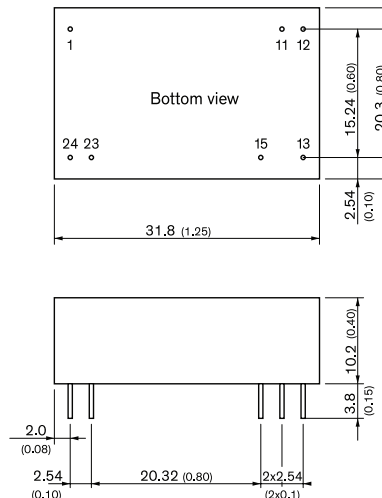
** If Trim is selected there is no pin on the corresponding pin number.



- 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 μA
- Operating temperature -40°C to 90°C
- IEC 60601-1-2 4th edition EMC 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 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 %



- 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)

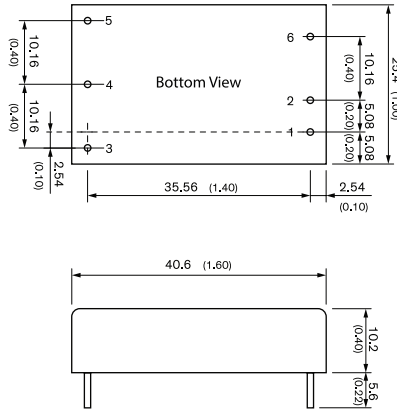
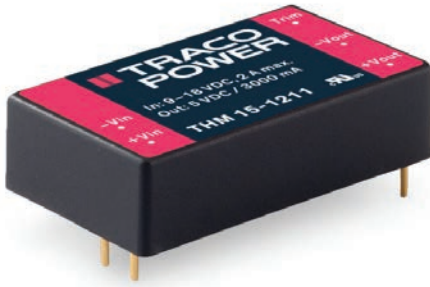
Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 10-0510WI	4.5 - 9 VDC (5 VDC nom.)	3.3 VDC	2500 mA	80 %
THM 10-0511WI		5 VDC	2000 mA	84 %
THM 10-0512WI		12 VDC	830 mA	87 %
THM 10-0513WI		15 VDC	670 mA	87 %
THM 10-0515WI		24 VDC	416 mA	86 %
THM 10-0521WI		± 5 VDC	1000 mA	83 %
THM 10-0522WI		±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



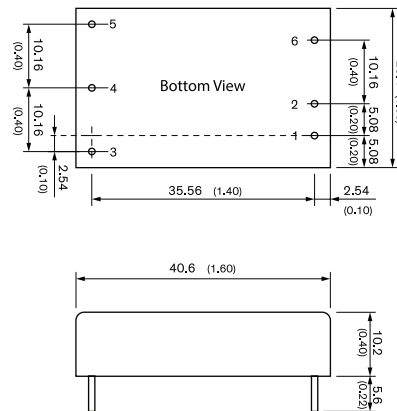
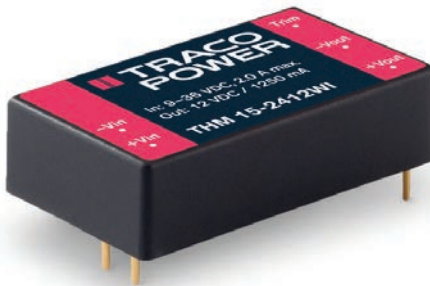
Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 15-1211	9 - 18 VDC (12 VDC nom.)	5 VDC	3000 mA	89 %
THM 15-1212		12 VDC	1250 mA	89 %
THM 15-1213		15 VDC	1000 mA	89 %
THM 15-1215		24 VDC	625 mA	89 %
THM 15-1221		± 5 VDC	1500 mA	86 %
THM 15-1222		± 12 VDC	625 mA	89 %
THM 15-1223	± 15 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 %	

- 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

THM 15WI

15 Watt

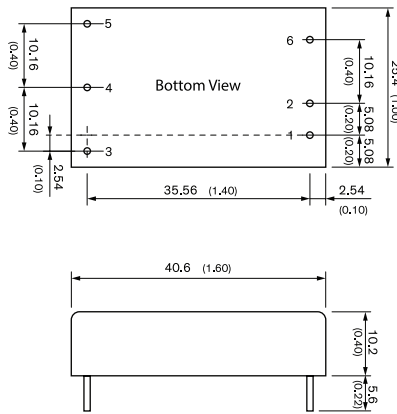
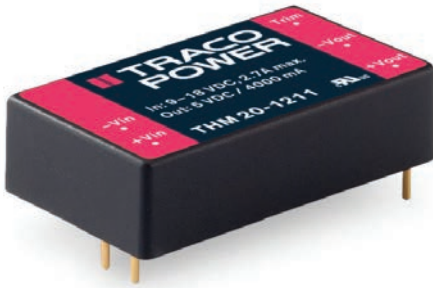


Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 15-2411WI	9 - 36 VDC (24 VDC nom.)	5 VDC	3000 mA	88 %
THM 15-2412WI		12 VDC	1250 mA	89 %
THM 15-2413WI		15 VDC	1000 mA	89 %
THM 15-2415WI		24 VDC	625 mA	88 %
THM 15-2421WI		± 5 VDC	1500 mA	86 %
THM 15-2422WI		± 12 VDC	625 mA	88 %
THM 15-2423WI	± 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.

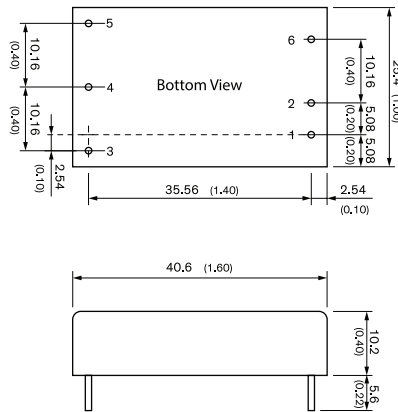


- Wide 2:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 µA
- Operating temperature -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

Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
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 %	

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

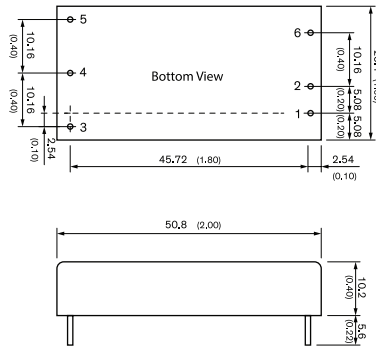


- Ultra wide 4:1 input voltage
- Compact 1.6 x 1" plastic case
- I/O isolation 5000 VAC rated for 250 VAC working voltage
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Low leakage current <2.5 µA
- Operating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

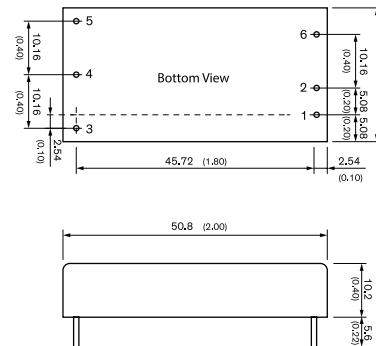
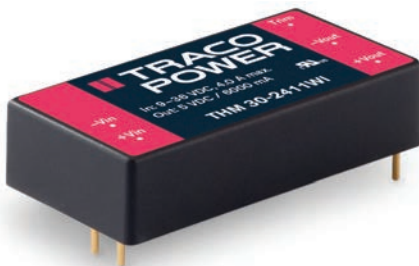
* If remote is not selected there will be no pin.



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 %	

- 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 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

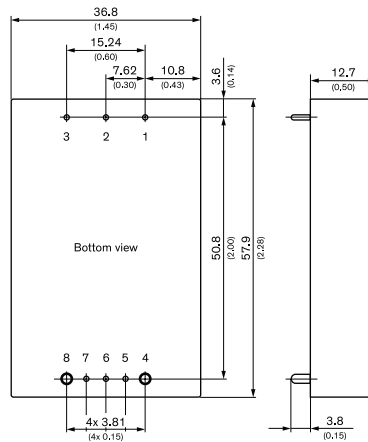


Model	Input Voltage Range	Output		Efficiency
		Vnom	I _{max}	
THM 30-2411WI	9 - 36 VDC (24 VDC nom.)	5 VDC	6000 mA	89 %
THM 30-2412WI		12 VDC	2500 mA	89 %
THM 30-2413WI		15 VDC	2000 mA	91 %
THM 30-2415WI		24 VDC	1250 mA	90 %
THM 30-2421WI		± 5 VDC	3000 mA	86 %
THM 30-2422WI		± 12 VDC	1250 mA	90 %
THM 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.



Model	Input	Vout	Iout	Efficiency
THM 60-2411WI	9 – 36 VDC	5.0 VDC	12.0 A	89 %
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 %

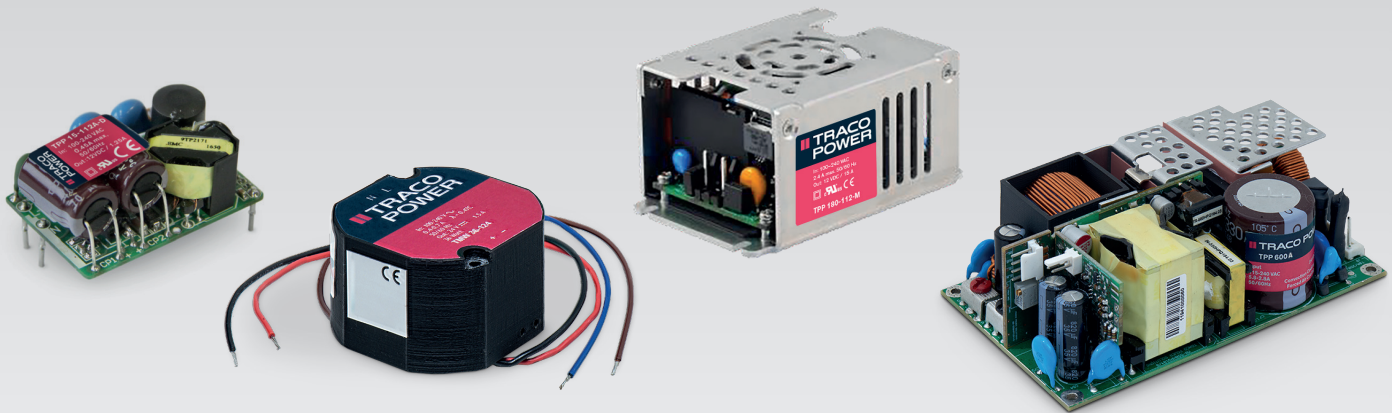
Pinout / Connection		
Pin	Single	Dual
1	–Vin	–Vin
2	Ctrl	Ctrl
3	+Vin	+Vin
4	–Vout	–Vout
5	–Sense	–Sense
6	Trim	Common
7	+Sense	+Sense
8	+Vout	+Vout

- 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

AC/DC converters

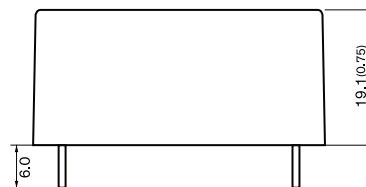
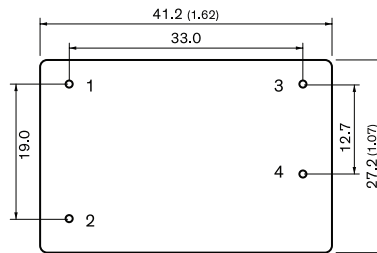
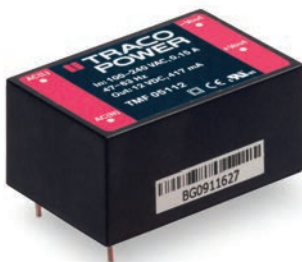
5 – 850 watt

- IEC/EN/ES 60601-1 3rd Edition for 2 × MOPP
- EMC Emission acc. to IEC 60601-1-2 ed. 4
- <100 µA Leakage Current (for BF Applications)
- IPC-A-610 Class 3 High Performance Acceptability
- EN 55032 Class B emissions
- Risk Management ISO 14971
- Quality Management ISO 13485
- 5-year warranty



TMF 05

5 Watt



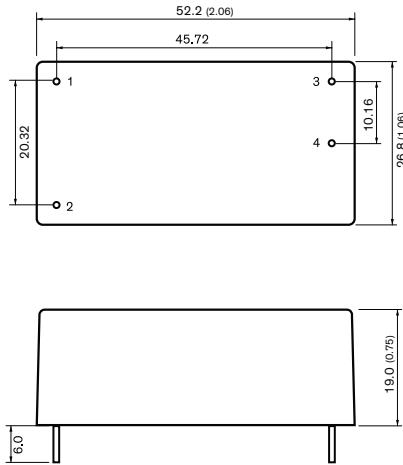
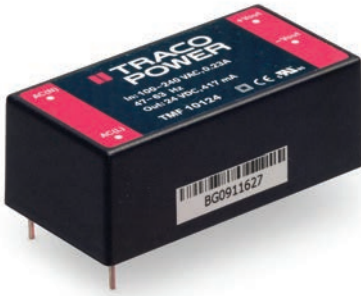
Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 05105	5.0 VDC	1000 mA	77 %
TMF 05112	12 VDC	417 mA	82 %
TMF 05115	15 VDC	333 mA	82 %
TMF 05124	24 VDC	208 mA	82 %

- 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



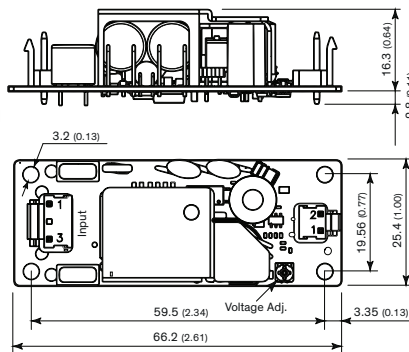
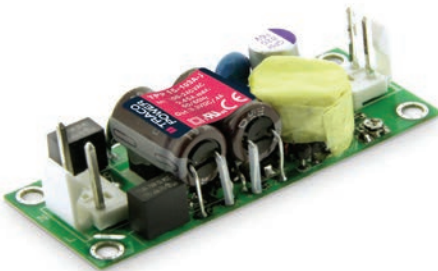
Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 10105	5.0 VDC	2000 mA	79 %
TMF 10112	12 VDC	833 mA	84 %
TMF 10115	15 VDC	666 mA	84 %
TMF 10124	24 VDC	417 mA	84 %

- 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



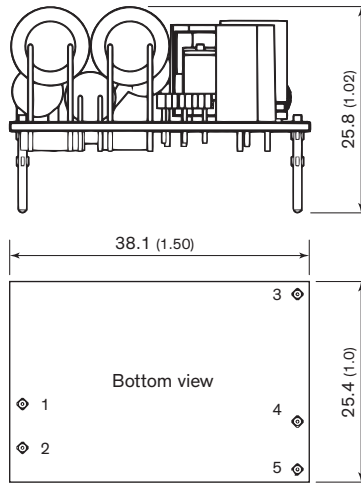
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 15-103A-J	3.3 VDC (2.97 - 3.63 VDC)	4'000 mA	84 %
TPP 15-105A-J	5 VDC (4.5 - 5.5 VDC)	3'000 mA	86 %
TPP 15-109A-J	9 VDC (8.1 - 9.9 VDC)	1'670 mA	86 %
TPP 15-112A-J	12 VDC (10.8 - 13.2 VDC)	1'250 mA	87 %
TPP 15-115A-J	15 VDC (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



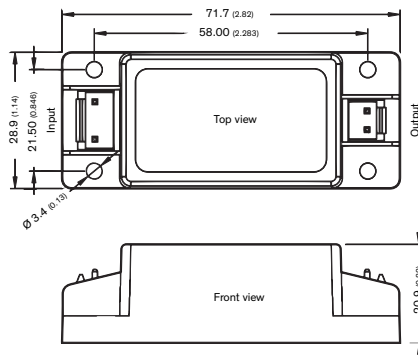
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 15-103A-D	3.3 VDC (2.97 - 3.63 VDC)	4'000 mA	84 %
TPP 15-105A-D	5 VDC (4.5 - 5.5 VDC)	3'000 mA	86 %
TPP 15-109A-D	9 VDC (8.1 - 9.9 VDC)	1'670 mA	86 %
TPP 15-112A-D	12 VDC (10.8 - 13.2 VDC)	1'250 mA	87 %
TPP 15-115A-D	15 VDC (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 μ A
- 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

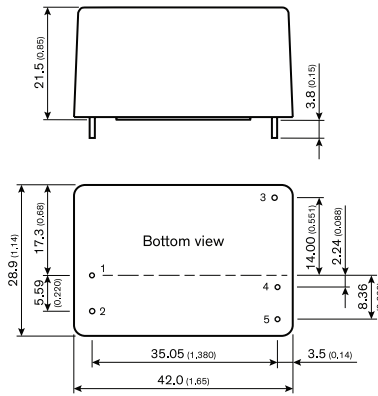
15 Watt



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 μ A
- 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

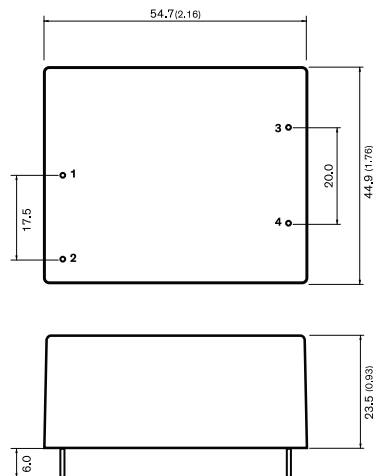
Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	-Vout
3	Neutral	2	+Vout



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

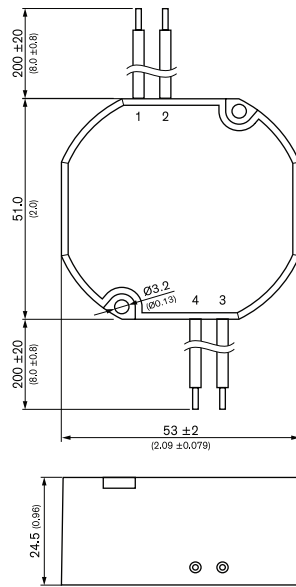
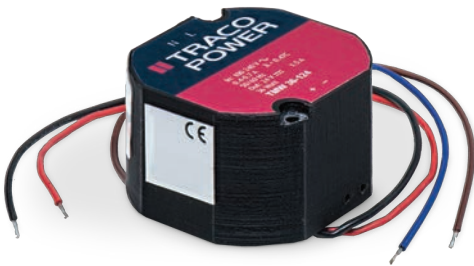
Pin Connections	
Pin	Function
1	Neutral
2	Line
3	Trim
4	-Vout
5	+Vout



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

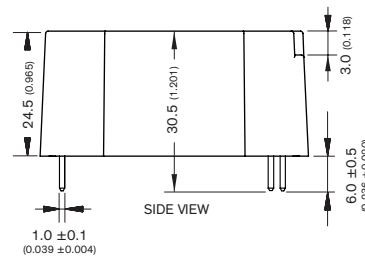
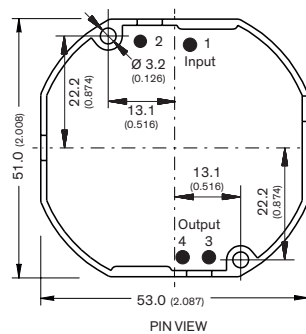
Pinout / Connection	
Pin	Single
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout



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 %

- 2.00 x 2.08" encapsulated chassis mount
- IP68 casing (waterproof & dust resistant)
- 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



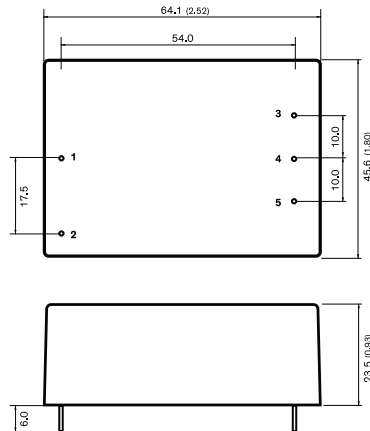
Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TMW 24-105P	5.1 VDC	4000 mA	85%
TMW 24-112P	12 VDC	2000 mA	88%
TMW 24-124P	24 VDC	1000 mA	90%

- 2.00 x 2.08" encapsulated PCB mount
- IP68 casing (waterproof & dust resistant)
- 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	
Pin	Function
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout

TMF 30

30 Watt



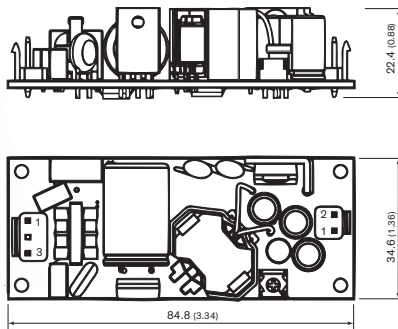
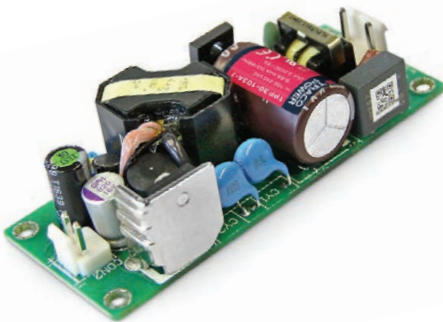
Model	Output Voltage	Output Current (max.)	Efficiency (typ.)
TMF 30105	5.0 VDC	5000 mA	82 %
TMF 30112	12 VDC	2500 mA	88 %
TMF 30115	15 VDC	2000 mA	86 %
TMF 30124	24 VDC	1250 mA	85 %

- 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



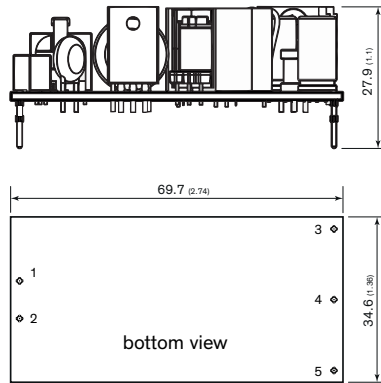
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103A-J	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105A-J	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109A-J	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112A-J	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115A-J	15 VDC (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



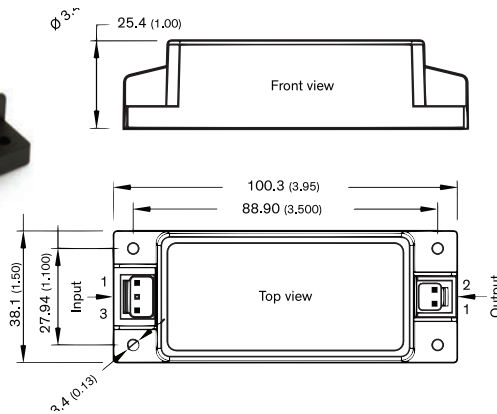
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 30-103A-D	3.3 VDC (2.97 - 3.63 VDC)	6'000 mA	84 %
TPP 30-105A-D	5 VDC (4.5 - 5.5 VDC)	6'000 mA	87 %
TPP 30-109A-D	9 VDC (8.1 - 9.9 VDC)	3'340 mA	88 %
TPP 30-112A-D	12 VDC (10.8 - 13.2 VDC)	2'500 mA	91 %
TPP 30-115A-D	15 VDC (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 μ A
- 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

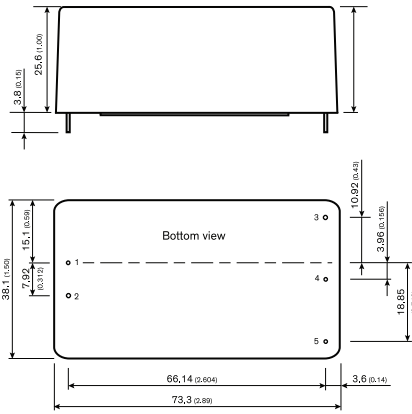
30 Watt



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 μ A
- 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

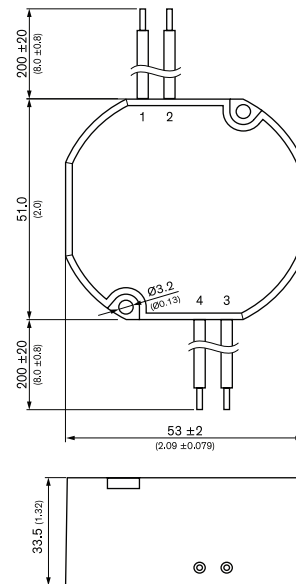
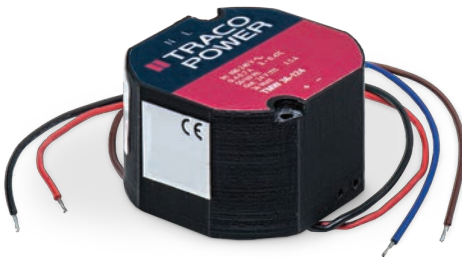
Pin Connectors			
Input		Output	
Pin	Function	Pin	Function
1	Line	1	+Vout
3	Neutral	2	-Vout



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

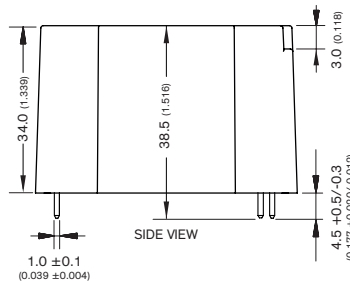
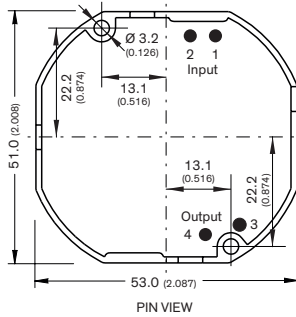
PCB Pinout	
Pin	Function
1	Neutral
2	Line
3	+Vout
4	-Vout



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 %

- 2.00 x 2.08" encapsulated chassis mount
- IP68 casing (waterproof & dust resistant)
- 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	AC (N)	Blue	20AWG/0.52 mm ²
2	AC (L)	Brown	20AWG/0.52 mm ²
3	-Vout	Black	20AWG/0.52 mm ²
4	+Vout	Red	20AWG/0.52 mm ²

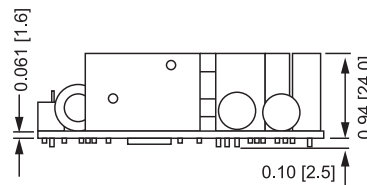
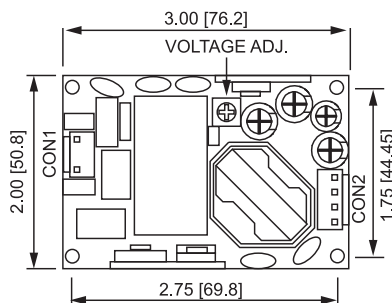


Pinout/Conection

Pin	Function
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout

- 2.00 x 2.08" encapsulated PCB mount
- IP68 casing (waterproof & dust resistant)
- 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

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



Screw Terminal

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

- 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 prepared
- Operating up to 5000m altitude
- ErP compliant (<0.15 W no load)
- 5-year product warranty

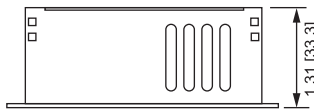
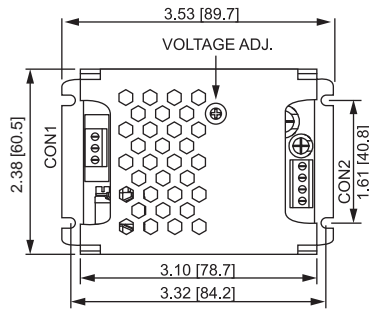
Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 40-105A-J	5 VDC (4.5 - 5.5 VDC)	8000 mA	90 %
TPP 40-112A-J	12 VDC (10.8 - 13.2 VDC)	3340 mA	92 %
TPP 40-124A-J	24 VDC (21.6 - 26.4 VDC)	1670 mA	92 %
TPP 40-148A-J	48 VDC (43.2 - 52.8 VDC)	840 mA	93 %

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



- 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 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)

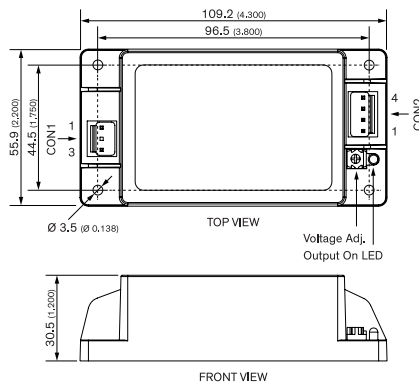
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1	Vout 3
3	Neutral	2, 3	COM
		4, 5	Vout 2
		6	Vout 1

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)

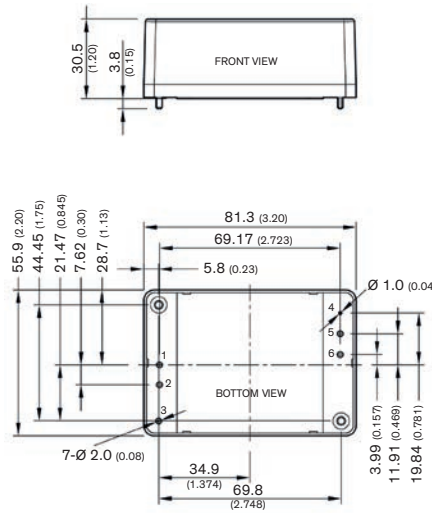


- 4.30 x 2.20" encapsulated chassis mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- IEC 60601-1-2 4th edition EMC
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- Protection class II
- Operating up to 5000m altitude
- Ready to meet ErP directive
- 5-year product warranty

Pin connectors

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

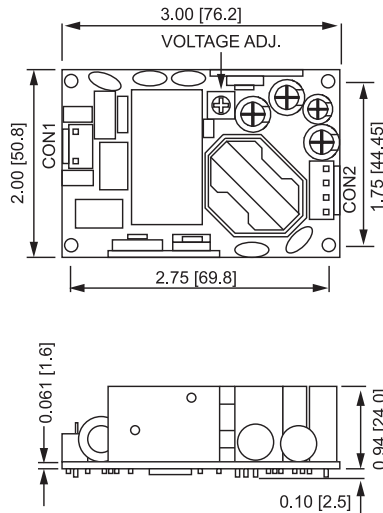
Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 40-105E-J	5 VDC (4.5 – 5.5 VDC)	8000 mA	90%
TPP 40-112E-J	12 VDC (10.8 – 13.2 VDC)	3340 mA	92%
TPP 40-115E-J	15 VDC (13.5 – 16.5 VDC)	2670 mA	92%
TPP 40-124E-J	24 VDC (21.6 – 26.4 VDC)	1670 mA	92%
TPP 40-136E-J	36 VDC (32.4 – 39.6 VDC)	1120 mA	92%
TPP 40-148E-J	48 VDC (43.2 – 52.8 VDC)	840 mA	93%



Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 40-105E-D	5 VDC (4.5 – 5.5 VDC)	8000 mA	90%
TPP 40-112E-D	12 VDC (10.8 – 13.2 VDC)	3340 mA	92%
TPP 40-115E-D	15 VDC (13.5 – 16.5 VDC)	2670 mA	92%
TPP 40-124E-D	24 VDC (21.6 – 26.4 VDC)	1670 mA	92%
TPP 40-136E-D	36 VDC (32.4 – 39.6 VDC)	1120 mA	92%
TPP 40-148E-D	48 VDC (43.2 – 52.8 VDC)	840 mA	93%

- 3.20 x 2.20" encapsulated PCB mount
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 μ A
- 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
- Ready to meet ErP directive
- 5-year product warranty

Pinout	
Pin	Function
1	AC (N)
2	AC (L)
4	Trim
5	-Vout
6	+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.

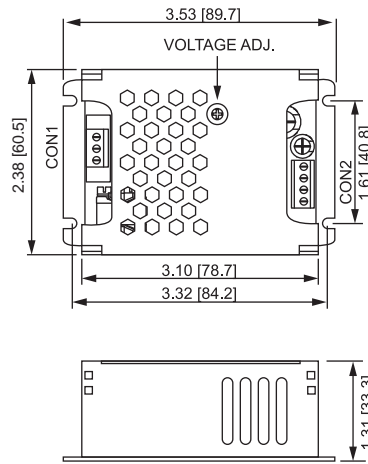
- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 μ A
- Rated for BF applications
- ISO 14971 incl. risk management file
- IPC-A-610 Level 2 acceptance criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II
- Operating up to 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

*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



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

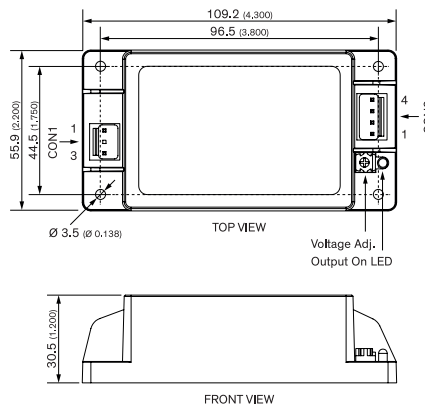
- 3.53 x 2.38" 4-sided enclosure
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 criteria
- IEC 60601-1-2 ed. 4 EMC
- Protection class I and II
- Operating up to 5000m altitude
- 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

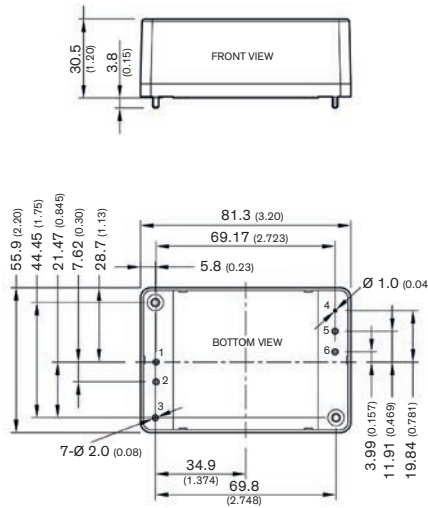


Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 65-105E-J	5 VDC (4.5 – 5.5 VDC)	10'000 mA	90%
TPP 65-112E-J	12 VDC (10.8 – 13.2 VDC)	5420 mA	93%
TPP 65-115E-J	15 VDC (13.5 – 16.5 VDC)	4340 mA	94%
TPP 65-124E-J	24 VDC (21.6 – 26.4 VDC)	2710 mA	94%
TPP 65-136E-J	36 VDC (32.4 – 39.6 VDC)	1810 mA	93%
TPP 65-148E-J	48 VDC (43.2 – 52.8 VDC)	1360 mA	93%

- 4.30 x 2.20" 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
- Ready to meet ErP directive
- 5-year product warranty

Pin connectors

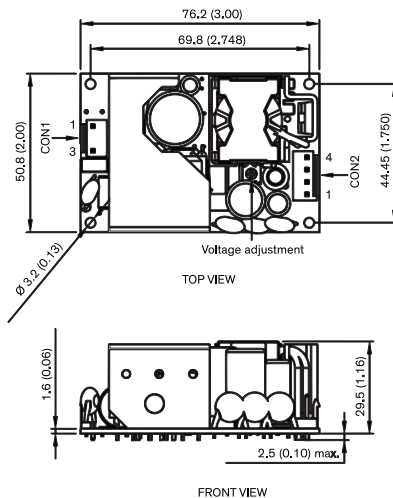
Input (CON1)		Output (CON2)	
Pin	Function	Pin	Function
1	Line	1, 2	-Vout
3	Neutral	3, 4	+Vout



Model	Output Voltage nom. (adjustable)	Output 2	Efficiency
TPP 65-105E-D	5 VDC (4.5 – 5.5 VDC)	10'000 mA	90%
TPP 65-112E-D	12 VDC (10.8 – 13.2 VDC)	5420 mA	93%
TPP 65-115E-D	15 VDC (13.5 – 16.5 VDC)	4340 mA	94%
TPP 65-124E-D	24 VDC (21.6 – 26.4 VDC)	2710 mA	94%
TPP 65-136E-D	36 VDC (32.4 – 39.6 VDC)	1810 mA	93%
TPP 65-148E-D	48 VDC (43.2 – 52.8 VDC)	1360 mA	93%

- 3.20 x 2.20" 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
- Ready to meet ErP directive
- 5-year product warranty

Pinout	
Pin	Function
1	AC (N)
2	AC (L)
3	NC
4	Trim
5	-Vout
6	+Vout



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 %

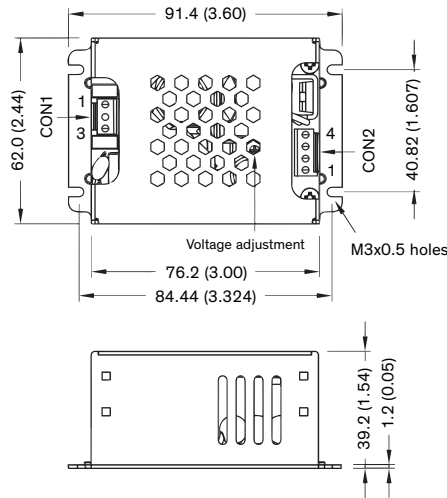
- 2.00 x 3.00" open frame
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- IEC/EN 60601-1-2 4th edition (EMC)
- Low leakage current <75 µA
- Rated for BF applications
- ISO 14971 risk management file
- IPC-A-610 Level 2 acceptance criteria
- Active power factor correction >0.95
- Protection 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

*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

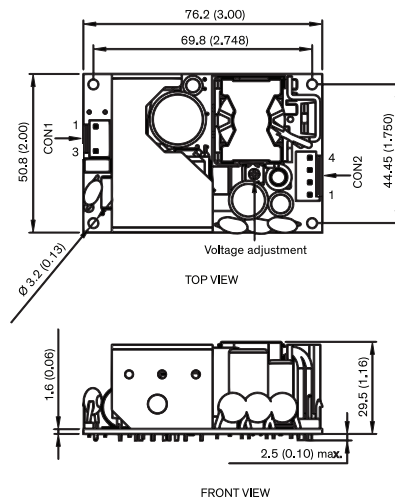
CON2: JST series
mates with JST crimp terminal: BVH-21T-P1.1
and terminal housing: VHR-4N



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 %

- 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



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

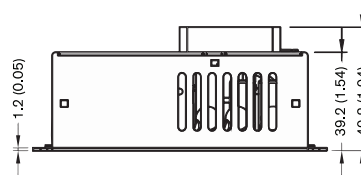
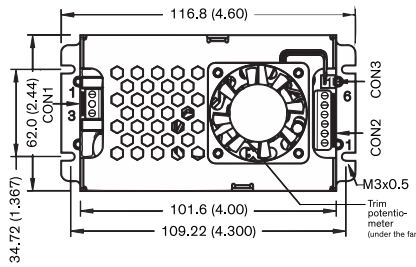
CON2: JST series mates with JST crimp terminal: SVH-21T-P1.1 and terminal housing: VHR-6N

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



- 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

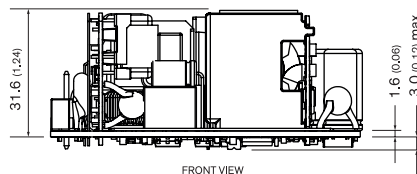
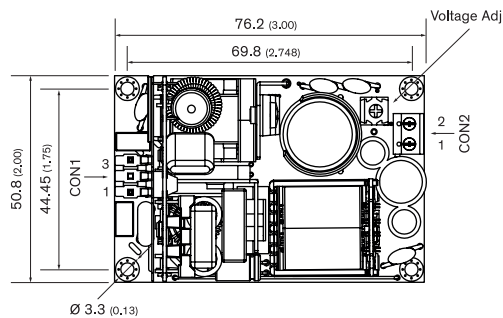
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 150-112	12 VDC (10.8 - 13.2 VDC)	12500 mA	91 %
TPP 150-115	15 VDC (13.5 - 16.5 VDC)	10000 mA	92 %
TPP 150-124	24 VDC (21.6 - 26.4 VDC)	6250 mA	92 %
TPP 150-128	28 VDC (25.2 - 30.8 VDC)	5360 mA	92 %
TPP 150-136	36 VDC (32.4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

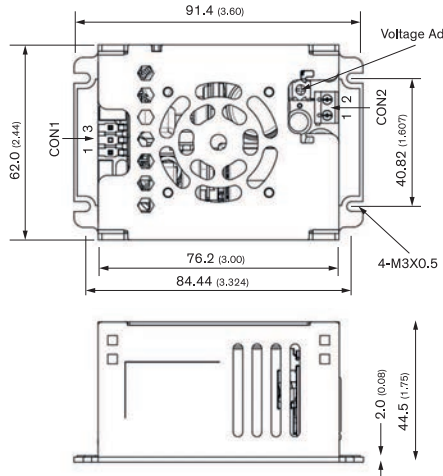
CON3: Molex series mates with Molex crimp terminals: 2759 and Molex housing: 22-01-1022



- 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
- Ready to meet ErP directive
- 5-year product warranty

Pin connectors			
Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	AC (N) / DC-	1	-Vout
3	AC (L) / DC+	2	+Vout

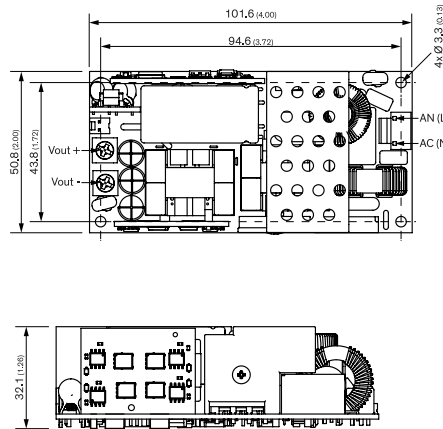
Model	Output Voltage nom.	Output Current max.	Efficiency typ.
TPP 180-112A-M	12 VDC (11.0 - 13.0 VDC)	15 A	92%
TPP 180-115A-M	15 VDC (13.8 - 16.2 VDC)	12 A	92%
TPP 180-124A-M	24 VDC (22.1 - 25.9 VDC)	7.5 A	94%
TPP 180-136A-M	36 VDC (33.1 - 38.9 VDC)	5 A	93%
TPP 180-148A-M	48 VDC (44.2 - 51.8 VDC)	3.75 A	93%
TPP 180-153A-M	53 VDC (48.8 - 57.2 VDC)	3.40 A	93%



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 180-112-M	12 VDC (11.0 – 13.0 VDC)	15 A	92%
TPP 180-115-M	15 VDC (13.8 – 16.2 VDC)	12 A	92%
TPP 180-124-M	24 VDC (22.1 – 25.9 VDC)	7.5 A	94%
TPP 180-136-M	36 VDC (33.1 – 38.9 VDC)	5 A	93%
TPP 180-148-M	48 VDC (44.2 – 51.8 VDC)	3.75 A	93%
TPP 180-153-M	53 VDC (48.8 – 57.2 VDC)	3.40 A	93%

- 3.60 x 2.44" enclosed package
- IEC/EN/ES 60601-1 3rd ed. (2xMOPP)
- IEC/EN/UL 62368-1 approved
- Protection Class I / II prepared
- 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
- Ready to meet ErP directive
- Operating up to 5000m altitude
- 5-year product warranty

Pinout			
CON1		CON2	
Pin	Function	Pin	Function
1	AC (N)/DC-	1	+Vout
3	AC (L)/DC+	2	-Vout

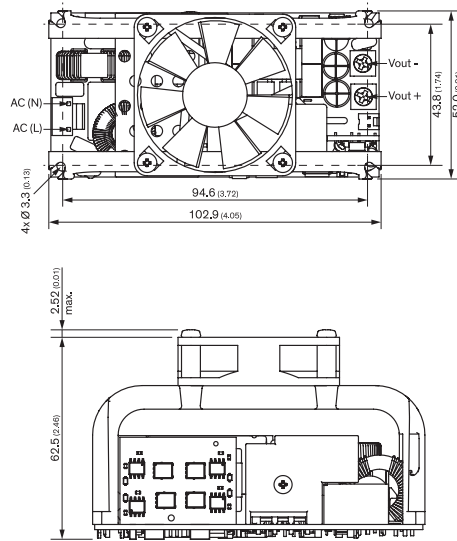


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 250-112A	12 VDC (12 – 12.36 VDC)	20.8 A	tbd
TPP 250-124A	24 VDC (24 – 24.72 VDC)	10.4 A	tbd
TPP 250-128A	28 VDC (28 – 28.84 VDC)	8.9 A	tbd
TPP 250-136A	36 VDC (36 – 37.08 VDC)	7 A	tbd
TPP 250-148A	48 VDC (48 – 49.44 VDC)	5.2 A	tbd

- 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
- High efficiency up to 94%
- Operating up to 5000m altitude
- 5-year product warranty

TPP 250A-FK **NEW – under development**

250 Watt

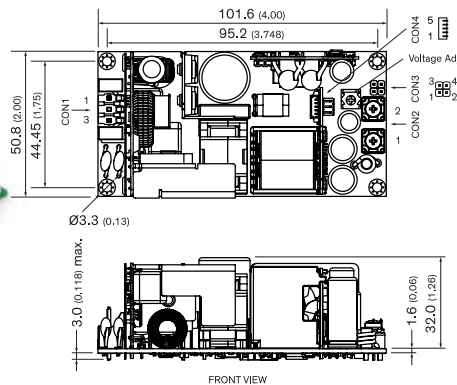


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 250-112A-FK	12 VDC (12 – 12.36 VDC)	20.8 A	tbd
TPP 250-124A-FK	24 VDC (24 – 24.72 VDC)	10.4 A	tbd
TPP 250-128A-FK	28 VDC (28 – 28.84 VDC)	8.9 A	tbd
TPP 250-136A-FK	36 VDC (36 – 37.08 VDC)	7 A	tbd
TPP 250-148A-FK	48 VDC (48 – 49.44 VDC)	5.2 A	tbd

- 2.00 x 4.00" open-frame + fan assembly
- 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
- High efficiency up to 94%
- Operating up to 5000m altitude
- 5-year product warranty

TPP 300A-M **NEW!**

300 Watt

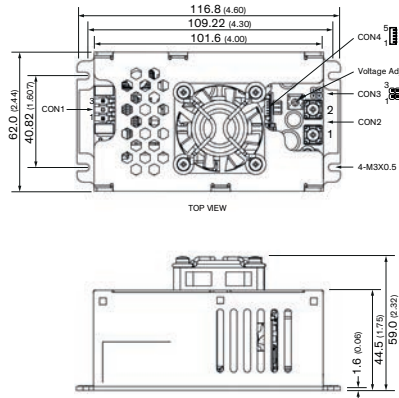


Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 300-112A-M	12 VDC (10.8 – 13.2 VDC)	25 A	91%
TPP 300-115A-M	15 VDC (13.5 – 16.5 VDC)	20 A	92%
TPP 300-124A-M	24 VDC (21.6 – 26.4 VDC)	12.5 A	93%
TPP 300-136A-M	36 VDC (32.4 – 39.6 VDC)	8.3 A	93%
TPP 300-148A-M	48 VDC (43.2 – 52.8 VDC)	6.25 A	93%
TPP 300-153A-M	53 VDC (47.7 – 58.3 VDC)	5.67 A	93%

- 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

Input		Output	
CON1		CON2	
Pin	Function	Pin	Function
1	AC (L) / DC (+)	1	+Vout
3	AC (N) / DC (-)	2	-Vout

Auxiliary		Auxiliary	
CON3		CON4	
Pin	Function	Pin	Function
1	+Fan	1	+Standby
2	-Fan	2	-Standby
3	+Sense	3	PG
4	-Sense	4	-Remote
		5	+Remote



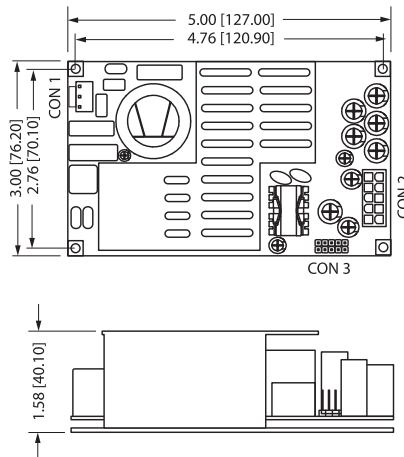
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 300-112-M	12 VDC (10.8 – 13.2 VDC)	25 A	91%
TPP 300-115-M	15 VDC (13.5 – 16.5 VDC)	20 A	91%
TPP 300-124-M	24 VDC (21.6 – 26.4 VDC)	12.5 A	93%
TPP 300-136-M	36 VDC (32.4 – 39.6 VDC)	8.3 A	93%
TPP 300-148-M	48 VDC (43.2 – 52.8 VDC)	6.25 A	93%
TPP 300-153-M	53 VDC (47.7 – 58.3 VDC)	5.67 A	93%

- 300 Watt enclosed power supply in 4.6" x 2.44" package
- IEC/EN/ES 60601-1 3rd ed. 2 x MOPP and IEC/EN/UL 62368-1
- Low leakage current <100 µA rated for BF applications
- Risk management process according to ISO 14971 incl. risk management file
- Acceptance criteria for electronic assemblies acc. to IPC-A-610 Level 3
- EMC compliance according to IEC 60601-1-2 ed. 4
- Protection class II prepared
- Operating up to 5000 m altitude
- Ready to meet ErP directive
- 5-year product warranty

4 AWG

- 2.40 x 4.60 enclosed with fan package
- <100 µA rated for BF applications
- Protection class II prepared
- Ready to meet ErP directive
- 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		Output	
CON1			
Pin	Function	Pin	Function
1	AN (N)	1	+Vout
2	-	2	-Vout
3	AC (L)		
Auxiliary		Auxiliary	
CON3			
Pin	Function	CON4	
1	+Fan	Pin	Function
2	-Fan	1	+Standby
3	+Sense	2	-Standby
4	-Sense	3	PG
		4	Control
		5	Remote



Model	Output Voltage nom. (adjustable)	Output Current max. (Forced air)	Efficiency typ.
TPP 450-112BA-M	12 VDC (11.0-13.0 VDC)	37.50 A	91%
TPP 450-115BA-M	15 VDC (13.8-16.2 VDC)	30.00 A	92%
TPP 450-124BA-M	24 VDC (22.1-25.9 VDC)	18.75 A	93%
TPP 450-128BA-M	28 VDC (25.8-30.2 VDC)	16.10 A	93%
TPP 450-136BA-M	36 VDC (33.1-38.9 VDC)	12.50 A	93%
TPP 450-148BA-M	48 VDC (44.2-51.8 VDC)	9.40 A	94%
TPP 450-153BA-M	53 VDC (48.8-57.2 VDC)	8.55 A	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)

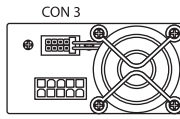
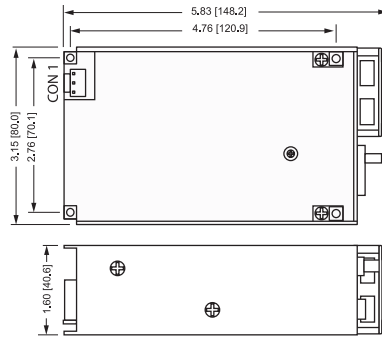
CON1:
 Molex housing:
 09-50-8031
 Molex crimp terminals:
 2478,6838,45570

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

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

- 3.00 x 5.00" open frame
- 450W with forced air cooling
- Protection Class I / II prepared
- 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		Auxiliary	
CON1			
Pin	Function	Pin	Function
1	AC (L)	1	+Fan
3	AC (N)	2	+Sense
		3	+Remote
		4	PG
		5	+Standby
		6	-Fan
		7	-Sense
		8	-Remote
		9	No Pin
		10	-Standby
Output			
CON2			
Pin*	Function		
1-5	+Vout		
6-10	-Vout		



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

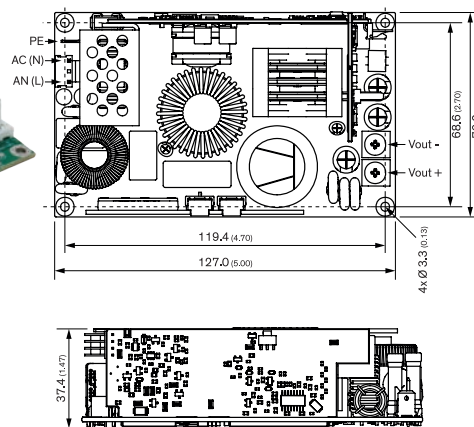
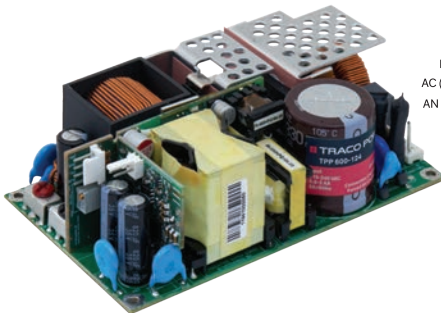
Molex housing:
90143-0010
Molex crimp terminals:
90119

- 3.15 x 5.83" enclosed + fan
- 450W up to 65°C without derating
- Protection Class I / II prepared
- 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
- Class I Low leakage current <100 µA
- Rated for BF applications
- 5 Vsb, On/Off, Power Good Signal, 12 V variable speed fan
- Operating up to 5000m altitude
- 5-year product warranty

Input CON1	
Pin	Function
1	AC (L)
3	AC (N)

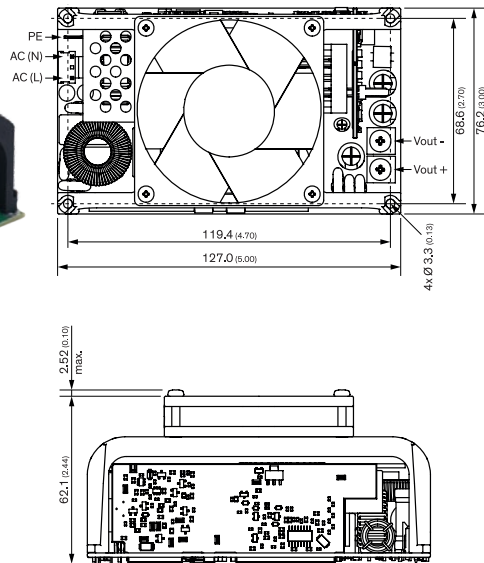
Auxiliary CON3	
Pin	Function
1	+Fan
2	+Sense
3	+Remote
4	PG
5	+Standby
6	-Fan
7	-Sense
8	-Remote
9	No Pin
10	-Standby

Output CON2	
Pin*	Function
1-5	+Vout
6-10	-Vout



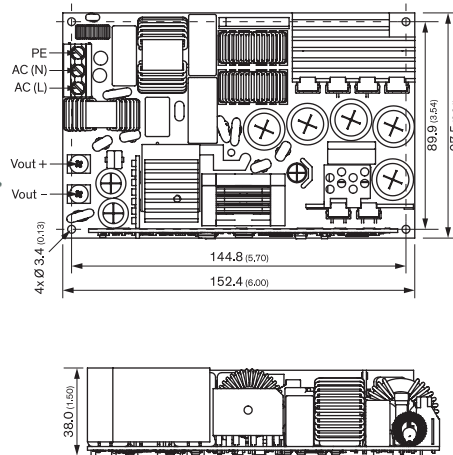
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 600-124A	24 VDC (24 - 24.72 VDC)	25 A	tbd
TPP 600-128A	28 VDC (28 - 28.84 VDC)	21.4 A	tbd
TPP 600-136A	36 VDC (36 - 37.08 VDC)	16.7 A	tbd
TPP 600-148A	48 VDC (48 - 49.44 VDC)	12.5 A	tbd

- 3.00 x 5.00" open frame
- 600W with forced air cooling
- Up to 300W convection cooled
- Protection Class I / II prepared
- 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
- 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



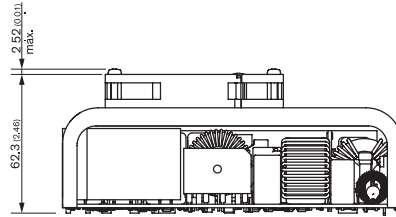
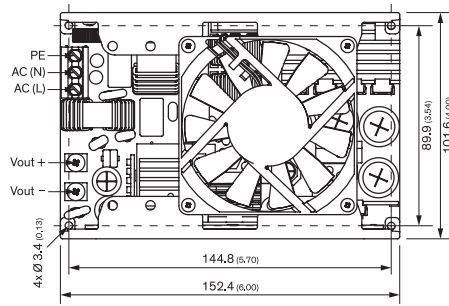
Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 600-124A-FK	24 VDC (24 – 24.72 VDC)	25 A	tbd
TPP 600-128A-FK	28 VDC (28 – 28.84 VDC)	21.4 A	tbd
TPP 600-136A-FK	36 VDC (36 – 37.08 VDC)	16.7 A	tbd
TPP 600-148A-FK	48 VDC (48 – 49.44 VDC)	12.5 A	tbd

- 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



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 850-124A	24 VDC (24 – 24.72 VDC)	35.4 A	tbd
TPP 850-128A	28 VDC (28 – 28.84 VDC)	30.4 A	tbd
TPP 850-136A	36 VDC (36 – 37.08 VDC)	23.6 A	tbd
TPP 850-148A	48 VDC (48 – 49.44 VDC)	17.7 A	tbd

- 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



Model	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TPP 850-124A-FK	24 VDC (24 – 24.72 VDC)	35.4 A	tbd
TPP 850-128A-FK	28 VDC (28 – 28.84 VDC)	30.4 A	tbd
TPP 850-136A-FK	36 VDC (36 – 37.08 VDC)	23.6 A	tbd
TPP 850-148A-FK	48 VDC (48 – 49.44 VDC)	17.7 A	tbd

- 4.00 x 6.00" open frame + top fan assembly
- 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

Quality that Saves Lives

The TRACO POWER power supply solutions are ideally suited for any situations that require the highest reliability with a limited amount of available space.



MEDICAL TECHNOLOGY

When developing medical devices, special emphasis is placed on the protection of both the patient and the operator. Therefore, the uncompromising reliability of all components is of particular importance. Our carefully developed products meet all important medical safety standards, thereby ensuring the protection of the patient in accordance with MOPP (Means of Patient Protection) as well as the medical personnel in accordance with MOOP (Means of Operator Protection).

CERTIFIED RELIABILITY

- Wide-ranging portfolio of AC/DC power supplies (5 to 850 watts) and DC/DC converters (1 to 60 watts)
- Certified according to IEC/EN/ES 60601-1 (medical electrical devices, 3rd edition) and IEC/EN/ES 60601-1-2 (EMC for medical devices, 4th edition)
- Risk management according to ISO 14971 (including product-oriented Risk Management File)
- Design and production according to ISO 13485 Quality Management System
- 5-year warranty

2XMOPP Rated & BF Compliant Medical Grade DC/DC Converters

18 Product Families, 1 ~ 60 Watt Converters
Industry Leading Performance and Packaging



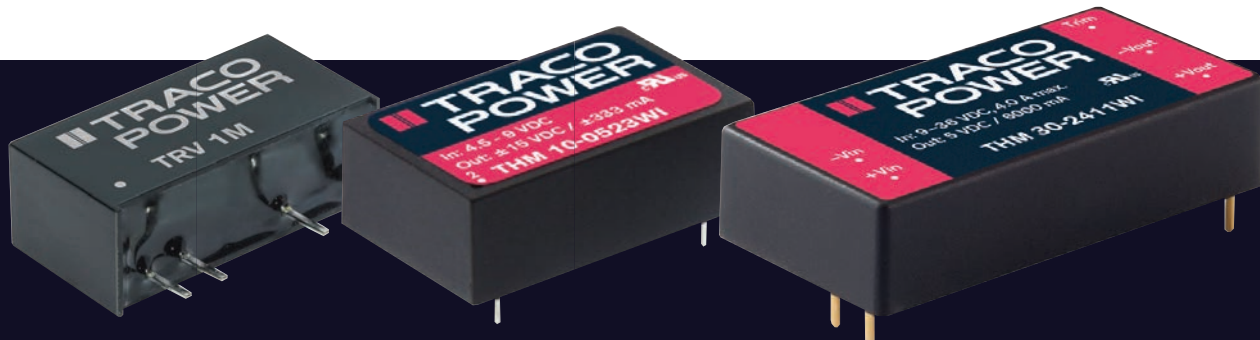
Electrical Characteristics

- I/O isolation 5000 VACrms | 250 VACrms working voltage
- Low leakage current < 2.5 μ A
- Extended operating temperature range -40°C to +80°C
- Operating up to 5000m altitude
- 5 year product warranty

Safety + Compliance

- 2XMOPP | BF Compliant Applications
- IEC/EN/ES 60601-1 3rd Edition Approved
- EMC to IEC 60601-1-2 4th ed. and EN55032 class A
- Risk management file according to ISO 14971

Series	Output Power	Input Voltage Range	Output Voltage	I/O Isolation	Insulation System	Package	Size (L x W) Dimensions in mm (inch)
TRV 1M	1 Watt	4.5-5.5, 9.6-14.4, 12-18, 19.2-28.8 VDC	3.3, 5, 12, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	SIP-9, THD	19.6 x 9.9 (0.77 x 0.39)
TIM 2	2 Watt	4.5-12, 9-18, 18-36, 36-75 VDC	3.3, 5, 9, 12, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP-16, THD	24.3 x 14.4 (0.95 x 0.57)
TIM 2SM						DIP-16, SMD	24.3 x 18.1 (0.95 x 0.71)
THM 3	3 Watt	4.5-9, 9-18, 18-36, 36-75 VDC	3.3, 5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP-24, THD	31.8 x 20.3 (1.25 x 0.80)
THM 3WI		4.5-9, 9-36, 18-75 VDC					
TIM 3.5	3.5 Watt	4.5-12, 9-18, 18-36, 36-75 VDC	5, 9, 12, 15, 24, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP-16, THD	24.3 x 14.4 (0.95 x 0.57)
TIM 3.5SM						DIP-16, SMD	24.3 x 18.1 (0.95 x 0.71)
THM 6	6 Watt	4.5-9, 9-18, 18-36, 36-75 VDC	3.3, 5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP-24, THD	31.8 x 20.3 (1.25 x 0.80)
THM 6WI		4.5-9, 9-36, 18-75 VDC					
THM 10	10 Watt	4.5-9, 9-18, 18-36, 36-75 VDC	3.3, 5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP-24, THD	31.8 x 20.3 (1.25 x 0.80)
THM 10WI		4.5-9, 9-36, 18-75 VDC					
THM 15	15 Watt	9-18, 18-36, 36-75 VDC	5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP, THD	40.6 x 25.4 (1.60 x 1.00)
THM 15WI		9-36, 18-75 VDC					
THM 20	20 Watt	9-18, 18-36, 36-75 VDC	5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP, THD	40.6 x 25.4 (1.60 x 1.00)
THM 20WI		9-36, 18-75 VDC					
THM 30	30 Watt	9-18, 18-36, 36-75 VDC	5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP, THD	50.8 x 25.4 (2.00 x 1.00)
THM 30WI		9-36, 18-75 VDC					
THM 60	60 Watt	9-18, 18-36, 36-75 VDC	5, 12, 15, 24, \pm 5, \pm 12, \pm 15 VDC	5000 VACrms 250 VACrms working voltage	Reinforced	DIP, THD	57.9 x 36.8 (2.28 x 1.45)



TRACO POWER

TRACO POWER dedicated to design and production of high quality, state-of-the-art DC / DC & AC / DC power conversion products. Our mission is to provide optimal power supply solutions for specific applications with regard to performance, quality, cost and functionality.

TRACO POWER stocks an average of USD 25+ million in available finished goods inventory for immediate shipment through our distribution partners.

TRACO POWER offers extended product life-cycles, typically 10+ years, and our products are supported by a 3 or 5 year product warranty. We understand our customers require a high quality solution as well as a diverse product offering, availability from stock, extended life-cycles and a strong commitment to quality in the form of extended warranty to support their business.

Our other selection guides / catalogues



International Office
Traco Electronic AG
Sihlbruggstrasse 111
6340 Baar
Switzerland

P +41 43 311 45 11
F +41 43 311 45 45
info@tracopower.com

North America Office
Traco Power North America, Inc.
2025 Gateway Place #330
San Jose, CA 95110
USA

P +1 (408) 916-4570
F +1 (408) 916-4571
salesusa@tracopower.com

French Office
Traco Power France
17, rue de la Vanne
92120 Montrouge
France

M +33 (0)6 72 11 52 21
info@tracopower.fr

German Office
Traco Electronic GmbH
Oskar-Messter-Str. 20a
85737 Ismaning/München
Germany

P +49 89 96 11 82-0
F +49 89 96 11 82-20
info@tracopower.de

Design & Development
Traco Power Solutions Ltd.
Whitemill Industrial Estate
Whitemill Road, Wexford
Y35 YH66, Ireland

P +353 53 9167 700
F +353 53 9167 701
info@tracopower.ie