2019 | 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 35 years experience we are dedicated to the design and manufacturing of high quality DC/DC and AC/DC power conversion products.

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

TRACO POWER products for applied versus non-applied medical requirements

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

For applied parts sections of medical equipment, the clearance and creepage distances, as well as a secondary isolation barrier are required to further isolate the patient from potentially high voltages (2×MOPP is means of patient protection). The isolation barrier may be satisfied using Traco Power medical rated 2×MOPP AC/DC power supplies or DC/DC converters.

Even this reinforced insulation system does not unconditionally qualify a power supply unit and DC/DC converter for medical applications. Particular and collateral standards also require that a risk/quality management System be in place at the component level, especially for safety critical applications.

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

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

**NEW**
- TIM 2(SM) Series .......... 2 Watt in DIP-16 or SMD package ........................................... 4
- TIM 3.5(SM) Series ............ 3.5 Watt in DIP-16 or SMD package ........................................... 4
- THM 3(WI) Series ............. 3 Watt in DIP-24 package .................................................. 4
- THM 6(WI) Series .............. 6 Watt in DIP-24 package ................................................... 5
- THM 10(WI) Series ............ 10 Watt in DIP-24 package ................................................... 5
- THM 15(WI) Series .......... 15 Watt in 1.6” x 1” package ................................ ............... 5
- THM 20(WI) Series .......... 20 Watt in 1.6” x 1” package ................................ ............... 6
- THM 30(WI) Series .......... 30 Watt in 2” x 1” package ................................ ............... 6

**AC/DC Power Supplies**

- TMF 05 Series ............... 5 Watt encapsulated power module ........................................... 7
- TMF 10 Series ............... 10 Watt encapsulated power module ........................................... 7
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- TMF 20 Series ............... 20 Watt encapsulated power module ........................................... 9
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- **NEW** TPP 30 Series ............ 30 Watt open frame/encapsulated power module ................. 9-10
- TPP 40 Series ............... 40 Watt open frame/encased power supply ............................... 11
- TPP 65 Series ............... 65 Watt open frame/encased power supply ............................... 11-12
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- TPP 150 Series ............. 150 Watt open frame/encased power supply .............................. 13
- **NEW** TPP 180 Series .......... 180 Watt open frame power supply ................................. 13
- **NEW** TPP 300 Series ............ 300 Watt open frame power supply ................................. 14
- **NEW** TPP 450 Series .......... 450 Watt open frame/encased power supply ........................... 14
TIM 2(SM) Series  
NEW  
2 Watt DC/DC converter in DIP or SMD package

- 3:1 input voltage with extended low input range:
  4.5-12, 9-18, 18-36, 36-75
- Output voltages:
  3.3, 5.0, 12, 15, 24, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current <2 µA
- Input filter to meet EN 55032 class A

TIM 3.5(SM) Series  
NEW  
3.5 Watt DC/DC converter in DIP-16 package

- 2:1 input voltage with extended low input range:
  4.5-12, 9-18, 18-36, 36-75
- Output voltages:
  5.0, 12, 15, 24, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current <2 µA
- Input filter to meet EN 55032 class A

THM 3(WI) Series  
3 Watt DC/DC converter in DIP-24 package

- THM 3: 2:1 input voltage ranges
  4.5-9, 9-18, 18-36, 36-75
THM 3WI: 4:1 input voltage ranges
  4.5-9, 9-36, 18-75 VDC
- Output voltages:
  3.3, 5.0, 12, 15, 24, ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current <2 µA
- Very high efficiency up to 87%
- Extended operating temperature range –40°C to 80°C at full load.
- Input filter to meet EN 55032 class A
THM 6(WI) Series

- THM 6: 2:1 input voltage ranges
  4.5-9, 9-18, 18-36, 36-75
- THM 6WI: 4:1 input voltage ranges
  4.5-9, 9-36, 18-75 VDC
- Output voltages:
  3.3, 5.0, 12, 15, 24, ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current <2 µA
- Very high efficiency up to 88%
- Extended operating temperature range
  –40°C to 70°C at full load.
- Input filter to meet EN 55032 class A

www.tracopower.com/overview/thm6  www.tracopower.com/overview/thm6wi

THM 10(WI) Series

- THM 10: 2:1 input voltage ranges
  4.5-9, 9-18, 18-36, 36-75
- THM 10WI: 4:1 input voltage ranges
  4.5-9, 9-36, 18-75 VDC
- Output voltages:
  3.3, 5.0, 12, 15, 24, ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current <2 µA
- Very high efficiency up to 89%
- Input filter to meet EN 55032 class A

www.tracopower.com/overview/thm10  www.tracopower.com/overview/thm10wi

THM 15(WI) Series

- THM 15: 2:1 input voltage ranges:
  9-18, 18-36, 36-75
- THM 15WI: 4:1 input voltage ranges:
  9-36, 18-75
- Output voltages:
  5.0, 12, 15, 24 VDC adjust. ±10%
  ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for 250 VACrms working voltage
- Low leakage current
- Very high efficiency up to 90%

www.tracopower.com/overview/thm15  www.tracopower.com/overview/thm15wi
THM 20(WI) Series

- THM 20: 2:1 input voltage ranges:
  9-18, 18-36, 36-75
- THM 20WI: 4:1 input voltage ranges:
  9-36, 18-75
- Output voltages:
  5.0, 12, 15, 24 VDC adjust. ±10%
  ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for
  250 VACrms working voltage
- Low leakage current
- Very high efficiency up to 90%

THM 30(WI) Series

- THM 30: 2:1 input voltage ranges:
  9-18, 18-36, 36-75
- THM 30WI: 4:1 input voltage ranges:
  9-36, 18-75
- Output voltages:
  5.0, 12, 15, 24 VDC adjust. ±10%
  ±5, ±12, ±15 VDC
- I/O isolation 5000 VACrms rated for
  250 VACrms working voltage
- Low leakage current
- Very high efficiency up to 90%

20 Watt DC/DC converter in 1.6“ x 1“ package

30 Watt DC/DC converter in 2“ x 1“ package
TMF 05 Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages: 5.0, 12, 15, 24 VDC
- Fully encapsulated ultra compact plastic casing for PCB mount
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –25°C to 70°C.
- Input filter to meet EN 55032 class B

www.tracopower.com/overview/tmf05

TMF 10 Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages: 5.0, 12, 15, 24 VDC
- Fully encapsulated ultra compact plastic casing for PCB mount
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –25°C to 70°C.
- Input filter to meet EN 55032 class B

www.tracopower.com/overview/tmf10

TPP 15A-J Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 48 VDC
- Protection class II prepared
- Low leakage current <75 µA
- Operating temperature range –40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or with Pin-connector (-J)

www.tracopower.com/overview/1pp15a-j
TPP 15A-D Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 48 VDC
- Protection class II prepared
- Low leakage current <75 µA
- Operating temperature range −40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or with Pin-connector (-J)

www.tracopower.com/overview/tpp15a-d

TPP 15-J Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 48 VDC
- Protection class II prepared
- Low leakage current <75 µA
- Operating temperature range −40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or for chassis mount (-J)

www.tracopower.com/overview/tpp15-j

TPP 15-D Series

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 48 VDC
- Protection class II prepared
- Low leakage current <75 µA
- Operating temperature range −40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or for chassis mount (-J)

www.tracopower.com/overview/tpp15-d
**TMF 20 Series**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages: 5.0, 12, 15, 24 VDC
- Fully encapsulated ultra compact plastic casing for PCB mount
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –25°C to 70°C.
- Input filter to meet EN 55032 class B

**20 Watt AC/DC power module**

![20 Watt AC/DC power module](www.tracopower.com/overview/tmf20)

**TMF 30 Series**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages: 5.0, 12, 15, 24 VDC
- Fully encapsulated ultra compact plastic casing for PCB mount
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –25°C to 70°C.
- Input filter to meet EN 55032 class B

**30 Watt AC/DC power module**

![30 Watt AC/DC power module](www.tracopower.com/overview/tmf30)

**TPP 30A-J Series**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 36, 48 VDC
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or with Pin-connector (-J)

**30 Watt AC/DC open frame power supply**

![30 Watt AC/DC open frame power supply](www.tracopower.com/overview/tpp30a-j)
### TPP 30A-D Series

**NEW**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 36, 48 VDC
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or with Pin-connector (-J)

**30 Watt AC/DC open frame power supply**

![TPP 30A-D Series Diagram](www.tracopower.com/overview/tpp30a-d)

### TPP 30-J Series

**NEW**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 36, 48 VDC
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or for chassis mount (-J)

**30 Watt AC/DC encapsulated power supply**

![TPP 30-J Series Diagram](www.tracopower.com/overview/tpp30-j)

### TPP 30-D Series

**NEW**

- Universal input 90-264 VAC and 120-370 VDC
- Output voltages adjust ±10%: 3.3, 5.0, 12, 15, 24, 36, 48 VDC
- Protection class II prepared
- Low leakage current <100 µA
- Operating temperature range –40°C to 85°C.
- Input filter to meet EN 55032 class B
- Available for PCB mount (-D) or for chassis mount (-J)

**30 Watt AC/DC encapsulated power supply**

![TPP 30-D Series Diagram](www.tracopower.com/overview/tpp30-d)
TPP 40A Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages (Vout1 adjust. ±10%)
  - single: 5.0, 12, 24, 48 VDC
- Highest efficiency (ErP ready)
- Protection class I & II prepared
- Low leakage current <75 µA
- Optional: individual output voltage

www.tracopower.com/overview/tpp40a

TPP 40 Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages (Vout1 adjust. ±10%)
  - single: 5.0, 12, 15, 24, 48 VDC
  - dual: 12/5, 15/5, 24/5 VDC
  - triple: ±12/5, ±15/5, 24/5/12 VDC
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: DIN-rail, individual output voltages

www.tracopower.com/overview/tpp40

TPP 65A Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages (Vout1 adjust. ±10%)
  - single: 5.0, 12, 15, 24, 48 VDC
  - dual: 12/5, 15/5, 24/5 VDC
  - triple: ±12/5, ±15/5, 24/5/12 VDC
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: individual output voltages

www.tracopower.com/overview/tpp65a
TPP 65 Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages (Vout1 adjust. ±10%)
  - single: 5.0, 12, 15, 24, 48 VDC
  - dual: 12/5, 15/5, 24/5 VDC
  - triple: ±12/5, ±15/5, 24/5/12 VDC
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: Open frame, DIN-rail, individual output voltages

TPP 100A Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%
  - 12, 15, 24, 28, 36, 48 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: individual output voltages

TPP 100 Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%
  - 12, 15, 24, 28, 36, 48 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: DIN-rail, individual output voltages
TPP 150A Series

NEW

150 Watt AC/DC open frame power supply

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: individual output voltages

www.tracopower.com/overview/tpp150a-j

TPP 150 Series

150 Watt AC/DC metal enclosure power supply

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class II prepared
- Low leakage current <75 µA
- Optional: DIN-rail, individual output voltages

www.tracopower.com/overview/tpp150

TPP 180A Series

NEW

180 Watt AC/DC open frame power supply

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48 VDC
- Ultra compact design, high power density in 3” x 2” package
- Protection class II prepared
- Low leakage current <100 µA
- Highest efficiency (ErP ready)
- Active power factor correction

www.tracopower.com/overview/tpp180a
TPP 300A Series

- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48 VDC
- Ultra compact design, high power density in 3” x 2” package
- Protection class II prepared
- Low leakage current <100 µA
- Highest efficiency (ErP ready)
- Active power factor correction

www.tracopower.com/overview/tpp300a

TPP 450A Series

- High power density 3” x 5”
- 450 Watt with forced air cooling 320 Watt convection cooled without derating up to 50°C
- Additional IT (UL 62368-1) approvals
- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48, 53 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class I
- Low leakage current <100 µA
- Auxiliary output for fan

www.tracopower.com/overview/tpp450a

TPP 450 Series

- High power density 3” x 5.8”
- 450 Watt up to 65°C without derating 320 Watt fanless operation without derating up to 50°C
- Additional IT (UL 62368-1) approvals
- Universal input 85-264 VAC and 120-370 VDC
- Output voltages adjustable ±10%: 12, 15, 24, 28, 36, 48, 53 VDC
- Active power factor correction
- Highest efficiency (ErP ready)
- Protection class I
- Low leakage current <100 µA
- Temperature controlled fan

www.tracopower.com/overview/tpp450
With our design house

TRACO POWER SOLUTIONS Ltd.

we have the facility to expeditiously design customized power supplies and to manufacture prototypes and pre-series.

Our competences & services

- Research & design
- Commercial and technical support
- Pre-compliance safety and EMI test
- Mechanical and thermodynamic tests

- HALT and performance test
- 100% functional testing and burn-in
- Project attendance with external test and certification authorities
- Production of OEM and white label power supplies
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 15+ 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 medical products are supported by a 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.