

Need recognition

CONTACT AN APPLICATION SPECIALIST

A "Medical & Healthcare Healthcare" product may not be required. Our Application Specialists help you find the right solutions, including

- Selected Industrial Automation component
- Market specific standard component
- Application specific solution

Diagnosing, treating, or monitoring a patient and/or patient applied device?

GOOD TO KNOW

The medical industry knows some of the most stringent requirements for the safety of electrical devices. All Traco Power Medical & Healthcare products are IEC/EN/ES 60601-1 certified to ensure highest safety and performance.

The IEC/EN/ES 60601-1 standard addresses risks such as:

- Electrical shocks
- Mechanical hazards
- Radiation
- Patient and operator safety under normal operating conditions
- Patient and operator safety under single fault conditions

CONSULT MEDICAL & HEALTHCARE DC/DC CONVERTER PRODUCT SELECTION GUIDE

Are you in need for an DC/DC converter? We have another guide for that: You can find our Medical & Healthcare DC/DC Converter Product Selection Guide and other useful supporting documentation and application notes on www.tracopower.com

AC/DC Power supply?

GOOD TO KNOW

AC/DC converters are commonly referred to as power supplies and are directly connected to an alternating current grid. The vast majority of high power converters in Medical & Healthcare applications is AC/DC. Traco Power Medical & Healthcare AC/DC power supplies present a reliable, safe, efficient, compact and cost effective way of providing power to your application.

CONTACT AN APPLICATION SPECIALIST

Do you already have a safety-critical isolation "downstream" in the application? Then your design might benefit from an AC/DC power supply with lower isolation grade to save costs and space. Our Application Specialists Can help you make the right choice. Options may include:

- Selected Industrial Automation component
- Modified/repurposed component
- Application specific solution

Safety critical isolation required?

GOOD TO KNOW

Galvanic isolation presents both a functional requirement as well as a safety measure for power supplies. Traco Power Medical & Healthcare power supplies offer two times Means-of-Patient-Protection (2 x MOPP) – the highest isolation grade under the IEC/EN/ES 60601-1. As a best practice, this type of isolation is always applied in medical devices for all electrical connections that interface the outside world.

→ CONTACT AN APPLICATION SPECIALIST

All Traco Power Medical & Healthcare products come with ISO 13485 quality management and ISO 14971 risk management at no extra cost. All products are assembled according to IPC-A-610 class 3 for highest reliability in extreme conditions. If you are unsure about the benefits for your particular project, contact an Application Specialist.

Quality and risk management

GOOD TO KNOW

As a leading manufacturer of Medical & Healthcare power solutions, Traco Power adheres to the ISO 13485 quality management and ISO 14971 risk management standards for your effortless regulatory compliance. Further benefits include:

- Consistent assembly quality meeting IPC-A-610 level 3 class 3
- 5 years product warranty
- Transparency and traceability of production batches
- Responsive customer support

CONTACT AN APPLICATION SPECIALIST

Attesting protection against defibrillator pulses is part of risk management on application level and is in generally carried out by the original equipment manufacturer (OEM). Our application specialists can support you choosing the right solution for patient-applied applications.

Defibrillator pulse protection

GOOD TO KNOW

In many monitoring or treatment scenarios, patient-applied devices must remain functional and/or resume function during and/or after a defibrillator pulse is delivered to the patient. To date, there is unfortunately no single factor in the choice of an IEC/EN/ES 60601-1 certified AC/DC power supply that provides a sufficient condition for ensuring an application is protected against such pulses.

Handled on application level

Fully encapsulated

GOOD TO KNOW

Fully encapsulated AC/DC power supplies provide superior resilience against moisture and dust. However, the added plastic housing and potting material put an upper limit to the maximum achievable power output at acceptable thermal performance.

Open-frame

FULLY ENCAPSULATED

Fully encapsulated, PCB mounted Medical & Healthcare power supplies present the first choice for applications where moisture or dust are a concern.

OPEN-FRAME, CHASSIS MOUNTED

Open-frame chassis mounted Medical & Healthcare power supplies provide a cost effective solution for applications where mechanical stability and protection against dust and moisture are not required.

METAL ENCLOSED, CHASSIS MOUNTED, RECEPTACLE + PLUG

Metal-enclosed chassis mounted Medical & Healthcare power supplies combine high thermal performance with compact size. They are a first choice for applications requiring medium to high power outputs.

Contact sales

GOOD TO KNOW

Detailed conformity documentation is available on request. Please contact your sales representative for more information.

Receive design-in support

GOOD TO KNOW

Our Application Specialists are ready to support you in the early phase of your design. Support may include but is not limited to:

- Choice of components
- Regulatory requirements
- Design-to-manufacturing
- Thermal constraints

Download conformity documents.

Receive samples

Fulfill regulatory requirements

Finish engineering

GOOD TO KNOW

Our Technical Services Team is happy to assist you with overcoming specific engineering challenges. Contact your Traco Power Sales Representative or Application Specialist and receive free Technical Support for all Traco Power Products.

Start of production

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- Selected Industrial Automation component
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Diagnosing, treating, or monitoring a patient and/or patient applied device?

No/Unsure

Yes

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The medical industry knows some of the most stringent requirements for the safety of electrical devices. All Traco Power Medical & Healthcare products are IEC/EN/ES 60601-1 certified to ensure highest safety and performance.

The IEC/EN/ES 60601-1 standard addresses risks such as:

- Electrical shocks
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CONSULT MEDICAL & HEALTHCARE AC/DC POWER SUPPLY - PRODUCT SELECTION GUIDE

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DC/DC converter?

No

Yes

GOOD TO KNOW

Medical and Healthcare DC/DC converters present a reliable, safe, efficient, compact and cost-effective way of providing galvanic isolation. Applications include battery-powered devices or components connected to other power converters upstream.

AC/DC converters are commonly referred to as power supplies and are directly connected to an alternating current grid. The vast majority of low power converters in Medical & Healthcare applications is DC/DC.

CONTACT AN APPLICATION SPECIALIST

Do you already have a safety-critical isolation "upstream" in your application? Then your design might benefit from a product without or with lower insulation grade to save costs and space. Our Application Specialists help you make the right choice. Options may include:

- Selected Industrial Automation component
- Modified/repurposed component
- Application specific solution

Safety-critical isolation required?

No/Unsure

Yes

GOOD TO KNOW

Galvanic isolation presents both a functional requirement as well as a safety measure for power converters. Traco Power Medical & Healthcare products offer two times Means-of-Patient-Protection (2xMOPP) isolation – the highest grade under the IEC/EN/ES 60601-1.

As a best practice, this type of isolation is always applied in medical devices for all electrical connections that interface the outside world.

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Quality and risk management

Unsure

Yes

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Unsure

Handled on application level

GOOD TO KNOW

In many monitoring or treatment scenarios, patient-applied devices must remain functional and/or resume function during and/or after a defibrillator pulse is delivered to the patient. To date, there is unfortunately no single factor in the choice of an IEC/EN/ES 60601-1 certified DC/DC converter that provides a sufficient condition for ensuring an application is protected against such pulses.

As a prerequisite, Traco Power Medical & Healthcare DC/DC converters provide a low coupling-capacitance between the input and output terminals to keep parasitic currents to a minimum.

Wide Input voltage range (4:1)

Yes

No

GOOD TO KNOW

DC/DC converters with a wide (4:1) input voltage range are a great choice for battery-powered applications and/or platform components. Application engineers can reuse proven and tested power-supply designs for a wide range of input voltages from different power sources.

Surface-Mounted Device (SMD)

Yes

No

WIDE 4:1 PCB-MOUNTED DC/DC CONVERTERS FOR MEDICAL & HEALTHCARE

PCB-mounted Medical & Healthcare DC/DC converters with a wide (4:1) input voltage range reduce total costs of ownership and time-to-market. They present a great choice for battery-powered applications or platform components. Application engineers can reuse proven and tested designs for a wide range of input voltages from different power sources.

THROUGH-HOLE (THT) DC/DC CONVERTERS FOR MEDICAL & HEALTHCARE

Traco Power Medical & Healthcare DC/DC converters with through-hole technology (THT) offer industry-leading reliability, safety, thermal performance and value for a variety of applications.

SURFACE MOUNTED (SMD) DC/DC CONVERTERS FOR MEDICAL & HEALTHCARE

Traco Power offers a selection of surface mounted (SMD) DC/DC converters for Medical & Healthcare applications. SMD products can easily be picked and placed and soldered automatically for cost-effective assembly. Their small footprint and compact size reduces board-space and weight.

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