

TOROIDAL TRANSFORMERS

*Innovative Power Solutions for Medical and
Power Distribution Industries Globally!*

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WHO WE ARE

For over three decades, Powertronix has created reliable power solutions for Medical, Robotics, & Specialty Power industries. We listen to clients, understand objectives, and provide optimized designs, safety certifications, and support to streamline design-to-production. Our products are built to last, and we are committed to your success. Let's build a strong relationship for another 30 years!

POWERFUL AND VERSATILE ELECTRICAL TRANSFORMERS

Experience the power of our high-quality electrical transformers, ranging from single phase 10VA to 15kVA and three phase 30VA to 45kVA. Designed with isolation and auto features for safe and efficient operation. Choose from various insulation classes (A, B, F, H) to suit your specific needs. Easy to mount for hassle-free installation. Our transformers also offer low-inrush current designs to protect your equipment from energy spikes. Rest assured, our transformers meet the highest safety standards (cULus approved, UL certified, CE marked and RoHS compliant), guaranteeing quality and reliability. Upgrade your electrical system with our exceptional transformers today.

Power up with Transformers

- ▶ **Cost-Effective:** Smaller sizes will result in less material used, reducing overall cost.
- ▶ **Quiet:** Very low mechanical hum makes toroidal transformers perfect for low-noise applications.
- ▶ **Easy To Mount:** A single center screw easily and quickly mounts the toroidal transformer, eliminating parts and assembly time in your production.
- ▶ **Lower Off-Load Power Consumption:** Long-term cost savings due to increased electrical efficiency.
- ▶ **Duty Cycle:** If your load is high but not constant, that is, $T_{off} > T_{on}$, we can design a smaller transformer with duty cycle.

POWERTRONIX CAPABILITIES

GLOBAL

Powertronix provides power solutions that stand the test of time for critical applications in industries such as Medical, Robotics, Power Management and Power Distribution Industries worldwide!

MEDICAL GRADE ISOLATION STATION

Powertronix Isolation Station is used in medical devices to provide medical isolation from the main electricity supply, limiting the leakage current and provide patient and operator protection. The possibility of symptomless failure is almost zero.

POWERMED

These units provide protection to many abnormal operating conditions such as overload, over current and improvised cooling, as well as filter power disturbances and noises.

INDUCTORS

Powertronix Toroidal inductors / chokes are smaller, lighter, cooler and more efficient than conventional laminated inductors. Its winding construction geometry helps to lower electromagnetic interference (EMI).

MEDICAL GRADE TRANSFORMER

Designed for Medical Robotics Machinery

Powertronix Medical Isolation Transformers are intricately crafted for medical equipment usage, providing exceptional AC power quality through noise elimination and protection from AC transients. Featuring robust insulations and built-in thermal protection, these transformers can manage overloads and short circuits with ease. They undergo a strict 4,000VAC hi-pot test and exhibit less than 100 μ A Leakage current. Additionally, they are approved by UL60601-1 and verified by IEC 60601-1, guaranteeing high performance and safety standards.

Features

- ✔ Built-in thermal protection for overload and short circuit conditions
- ✔ Double-reinforced insulation withstands 4,000- volt hi-pot test
- ✔ Low magnetic stray field
- ✔ Low Inrush current design
- ✔ Low mechanical noise
- ✔ Cool operating temperature
- ✔ Compact size & easy mounting

MEDICAL GRADE TRANSFORMER
Isolation: 4,000 Volts RMS

MEDICAL GRADE TRANSFORMER
Frequency: 47-63 Hz



ISOLATION TRANSFORMER

18 VA - 15,000 VA Power

POWERTRONIX Isolation Transformers are distinguished by their small size, light weight and high efficiency. They are built to form, fit and function and can be provided with one or more primary windings and one or more secondary windings.

Features & Benefits

- ✓ Robust Construction
- ✓ Single unit and no external components required
- ✓ Resilient of Harmonics
- ✓ High over-voltage handling capability
- ✓ No downtime: Less field service
- ✓ Withstand at rugged environment /transient conditions
- ✓ Longer shelf-life



3-PHASE TRANSFORMER

2 kVA to 120 kVA Power

3-Phase Transformers converts incoming line voltage to desired output load voltage, as well as adapt the incoming 3-phase line configuration to the desired 3-phase load configuration.

Features & Benefits

- ✓ Robust Construction
- ✓ Single unit, no external components required
- ✓ High over-voltage handling capability
- ✓ Sustainable at poor quality and missing cycles voltages



LOW INRUSH CURRENT TRANSFORMER

1 kVA - 10 kVA Power

Powertronix Low Inrush Current Isolation Transformer has the capability of limiting the inrush current inherently and stop nuisance tripping the breaker without any single external component. Our technology is dependable, robust, and cost effective.

Features & Benefits

- ✓ Single unit, no external components required
- ✓ Overall high circuit MTBF rate
- ✓ Designed to match circuit breaker requirements



HIGH VOLTAGE TRANSFORMER

1.0 kVA to 15,000 VA

High Voltage Toroidal Transformers are designed light weight, small in size, high efficient and high reliability for rough environmental conditions. High Voltage Transformers also provide electrical isolation, power distribution and control and instrumentation application.

Features & Benefits

- ✓ Robust Construction
- ✓ Popular for remotely operated equipment
- ✓ Light weight and compact
- ✓ Negligible electromagnetic interference



CURRENT TRANSFORMER

5 Amp to 8,000 Amp

Current Transformers, also known as Instrument Transformers are used for sensing current through a conductor. Winding turns ratio will provide a relationship to input current and output current. Our custom designed Current Transformers are efficient, lighter and available in many different types to match all your electrical and mechanical needs.

Features & Benefits

- ✓ Robust Construction with waterproof packaging
- ✓ Adopted for various shapes
- ✓ Single-phase and 3-phase
- ✓ Power CT and Signal CT combined models



AUTO TRANSFORMER

10 VA to 15,000 VA Power

Our Auto Transformers are single-winding toroidal transformers used for voltage step-up or step-down without the need for electrical isolation. They provide a considerable reduction in size and weight, along with lower costs.

Features & Benefits

- ✓ Smaller in size
- ✓ Low leakage reactance
- ✓ Single unit, no external components required
- ✓ High over-voltage handling capability
- ✓ No downtime, less field service



LOW PROFILE TRANSFORMER

1.0 kVA to 15,000 VA

Our Low Profile Transformers are designed for slim line equipment and low profile rack systems. Their sleek design and compact size make them the perfect choice for applications where space is limited without compromising on performance or efficiency.

Features & Benefits

- ✓ Robust Construction
- ✓ Single unit, no external components required
- ✓ Resilient of Harmonics
- ✓ High over-voltage handling capability



INTERMITTENT DUTY CYCLE TRANSFORMER

1.0 kVA to 15 kVA

Intermittent Duty Cycle Transformers are small size, low weight, single bolt mounted and well optimized. Smaller transformers are used when the load is intermittent and the duty cycle is shorter than thermal time constant of the transformer.

Features & Benefits

- ✓ Robust Construction
- ✓ Single unit, no external components required
- ✓ Resilient of Harmonics
- ✓ High over-voltage handling capability



DENTAL TRANSFORMER

150 VA to 600 VA Power

Our Dental Transformers are used in medical devices that require improved electrical isolation and helps reduce leakage current. They provide protection to abnormal operating conditions such as over load, over current, and improvised cooling as well as filter power disturbances and noises.

Features & Benefits

- ✓ Input & Output circuit breaker
- ✓ Grounding stud static shield
- ✓ Single unit, no external components required
- ✓ Resilient of harmonics
- ✓ Withstand at rugged environmental/transient conditions



HIGH EFFICIENT POWER TRANSFORMER

22.8kW Power System

Our Highly Efficient Power Transformers have the measurable ability to avoid wasting materials, energy, efforts, money, and time to produce the desired results and meet any requirement.

Features & Benefits

- ✓ 95% to 98.6% efficiency
- ✓ High over-voltage handling capability
- ✓ Sustainable at Poor Quality and Missing Cycles voltages
- ✓ Withstand at rugged environmental/transient conditions
- ✓ No downtime, less field service



THREE-PHASE AUTO TRANSFORMER

2 kVA to 120 kVA Power

Powertronix Three Phase Auto Transformers offer a significant size and weight reduction as well as lower cost. Auto Transformers are for voltage step up or step down when there is no requirement for electrical isolation.

Features & Benefits

- ✓ Single unit, no external components required
- ✓ High over-voltage handling capability
- ✓ Sustainable at Poor Quality and Missing Cycles voltages
- ✓ Withstand at rugged environmental/transient conditions
- ✓ No downtime, less field service



POWER. EVERYTHING DEPENDS ON IT.

When the need for power conversion is at its most demanding... its most critical... for over 60 years, the solution has been Astrodyne TDI. Today, our unmatched experience across multiple industries enables us to deliver a wide range of power-based technology solutions for some of the most well-known companies in the world. From off-the-shelf power supplies to complete customized power systems, the solution is always as close as Astrodyne TDI.

Partner up with the Astrodyne TDI team to bring your design to market, in record time, with international safety and EMC compliance certifications.

Developing Power Technologies & Products that People Depend Upon, to Enhance, Protect, and Save Lives.



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