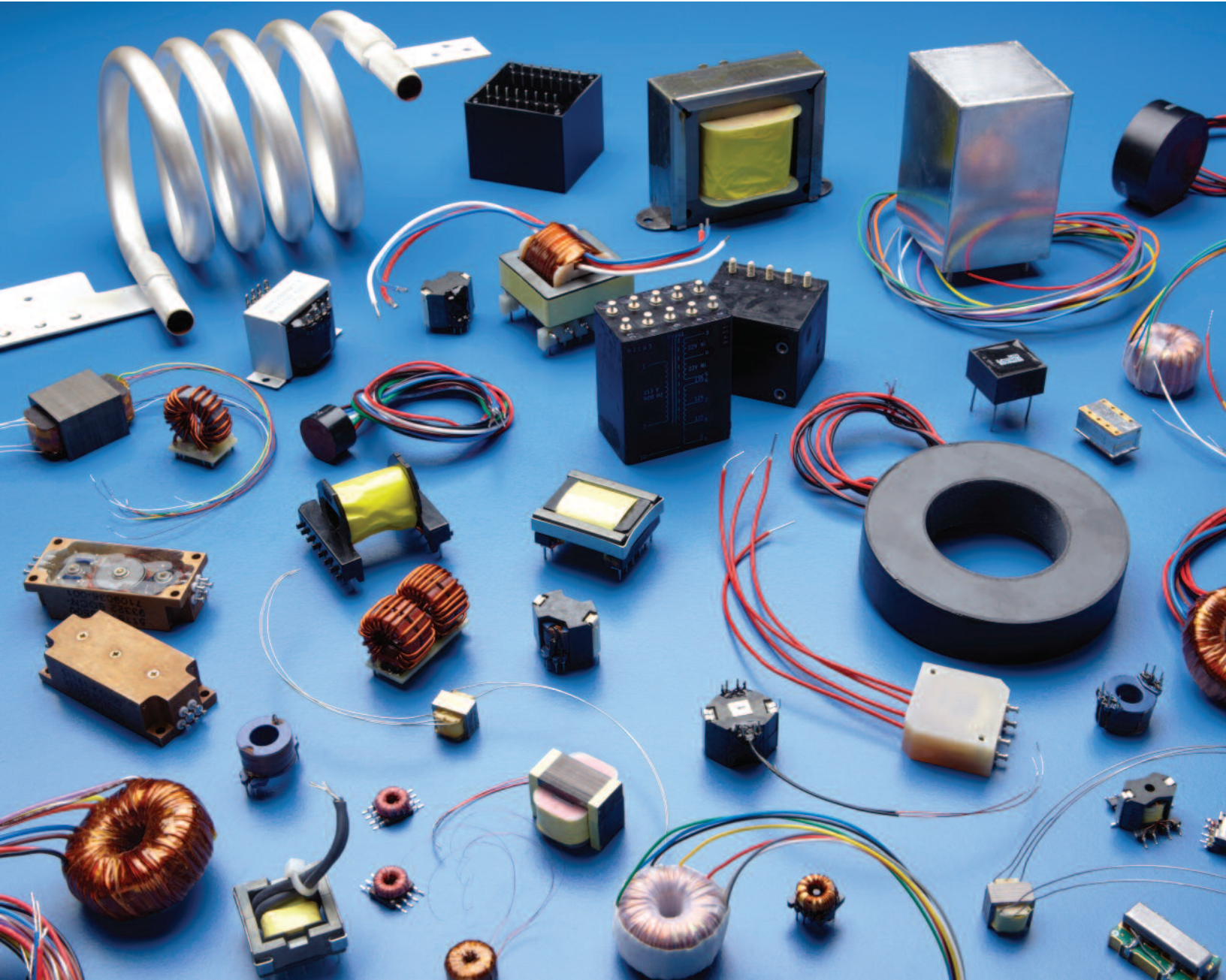


transformers, inductors

magnetics

& custom solutions



api 
technologies corp.

API Technologies produces a broad range of magnetic devices, including a variety of transformers, inductors, chokes, coils and custom application-specific solutions. Our magnetics group combines the people, products and technologies of several brands, including Filtran and RTI Electronics, in order to satisfy your magnetics requirements. API Magnetics is a key supplier to many of the world's leading OEMs, serving the military, aerospace, medical, telecom, transport, RF and industrial/test measurement markets.

Engineering Expertise

The engineering team at API brings a wealth of experience to helping you find the ideal magnetic product for your application. We will help you find a standard part number or develop a custom solution using the design criteria you prefer, from construction (raw materials, winding and finish) to electrical and mechanical characteristics to circuit function.

Quality Construction

API's commitment to quality begins with a rigorous raw material selection and inspection process and continues through highly trained operators utilizing state-of-the-art equipment. The end result is the highest quality magnetics consistently manufactured to meet some of the industry's most stringent requirements including many MIL, ANSI and ISO certifications.

Custom Solutions

We offer extensive design and manufacturing capabilities, including more than two dozen magnetic core materials and winding wire from 6 to 45 gauge with many coatings, leads and terminations. We produce toroids ranging in size from 0.5" to 18" in diameter with up to 4,000 turns and accuracy to +/- 1 turn, and a wide variety of encapsulation and laminate options.

Design Considerations

The Magnetics group at API specializes in designing custom products to meet your needs. Our above mentioned capabilities provide great flexibility in designing and building a magnetic device specifically for your application. Below are some of the critical design criteria we will work with your engineering team to address.

Electrical Characteristics - Identifying the circuit function/application and/or specifying electrical requirements such as amperage, voltage, inductance, frequency response, leakage, and noise reduction often determines selection of materials and components.

Mechanical Constraints - Restrictions on maximum height and available board area and mounting style (surface mount or through-hole) set physical parameters that often are difficult to change. Mechanical size restrictions can strongly affect component temperature rise.

Environmental Conditions - Maximum/minimum operating temperatures and allowed surface and/or internal temperatures of components, including UL compliance, as well as conditions such as air flow, sealing of container, high shock, and vibration will influence material selection and design.

Regulating Requirements - Considerations include safety standards to be met (eg. IEC/UL 60950-1, UL61010-1, UL 1585 etc), listing of the unit with a regulatory agency such as UL, CSA or VDE and requirements for UL thermal insulation system marking.

Qualification Conditions - Identify the qualification process required prior to approval, be it customer standards, or Hi-Rel standards such as MIL-PRF-27 or MIL-STD-981 and whether formal testing or the ability to demonstrate compliance by design is necessary.



magnetic product families



Current Transformers

Current Sensors

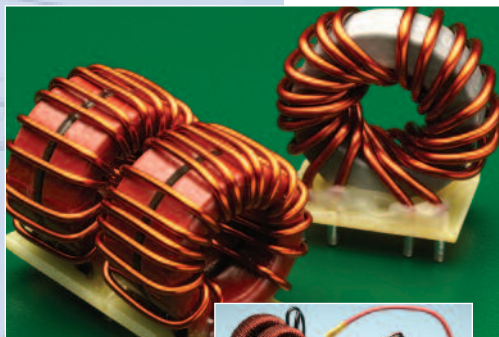
- Measures electrical current (AC & DC) and can transform current from high to low measurable values
- Wide primary current range of 3.5 Amps to 800 Amps
- Apps include advanced fault tolerant computers and workstations, control panels reading current flowing to electric transformer, telecom and communications

High Frequency Current Transformers

- 20 kHz-100 kHz operating frequency
- Available totally encapsulated, with or without wound primary turns and loading resistor
- Built to UL, MIL, VDE, CE specs, EMRL current transformers meet UL1244
- Ideal for ammeters, wattmeters, relays and cross current compensation

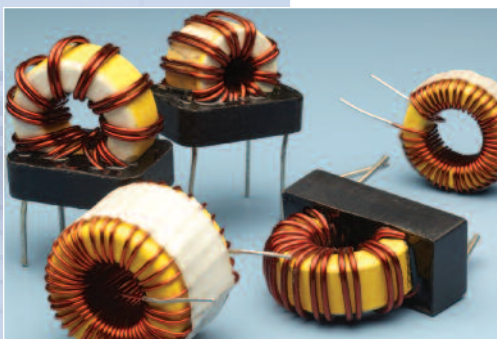
Load Detector Current Sensors

- Innovative Snap-On load detectors mount on pre-wired systems without disrupting existing connections
- Broad frequency response of 30Hz to 15 kHz
- Measure currents up to 40 Amps RMS continuous and 120 Amps intermittent
- Excellent for economical energy management and automation control



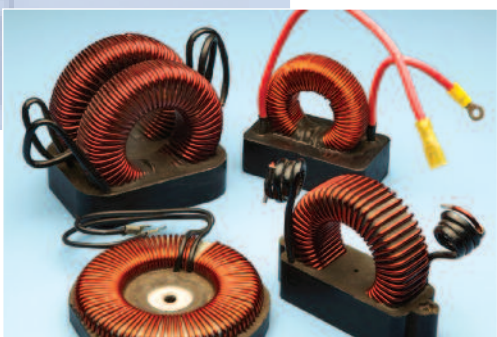
Power Inductors/Chokes

- Precision wound heavy-duty toroidal inductors
- Stores energy as a magnetic field, can delay and reshape alternating current
- Up to 100 amps, standard
- Semi or full epoxy molded, horizontal and vertical mounting
- Lighting dimmers – low wattage residential to higher wattage commercial, motor controls, SCR controls and line filters



Switch Mode Power Supply Inductors

- Filter inductors, toroidal current sense transformers and high frequency inverter transformers
- Performance verified in 25kHz power supply
- 10 to 1,000 watts with low power losses
- Switching frequencies from 5 to 100 kHz
- Open winding, semi-encapsulated and encapsulated construction
- Custom designs up to 200 Amps



Lighting Chokes & Inductor/Filters

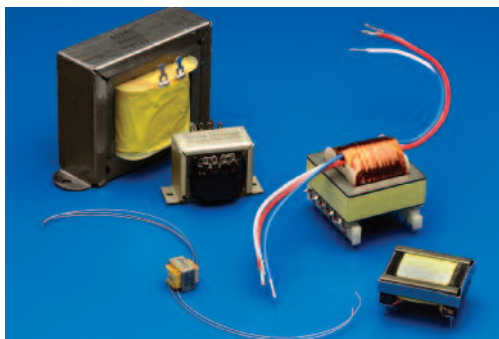
- Precision wound heavy-duty toroidal inductors
- Rugged design
- 120 volt models from 12.5 to 100 Amps
- 240 volt models from 8.3 to 60 Amps
- High quality noise rejection filter
- Ideal for lighting dimmers, EMI/RFI filters, PWM and PM circuits primarily for motor controls, UPS Systems, differential mode line filters

magnetic product families continued



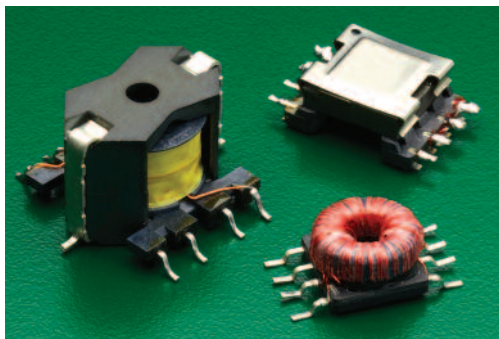
Toroidal Power Transformers

- 50/60HZ, 5-15,000V Power Transformers (Europe ER series)
- 60 Hz 120V Power Transformers (U.S. FR series)
- 400Hz 115-230V Power transformer (Military DR series)
- Convert power-level voltages from one level or phase configuration
- Lower magnetic leakage, lower electrical noise and mechanical hum
- Excellent as isolation step-down and high voltage step-up transformers, autotransformer, ferroresonant transformer and smoothing inductor



Laminate Power Transformers

- Value ranges from 3 VA to 100,000 VA
- Transform line voltage to any other voltage
- Apps include audio power conditioning, low-wattage indoor and outdoor lighting solutions, military and commercial UPS systems, power supplies, mono crystalline and crystalline solar processing

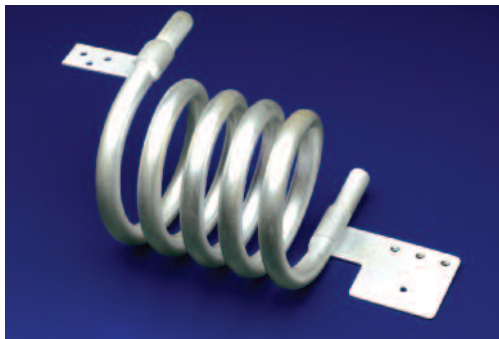


Modem & Module Transformers

- Broadband and voiceband transformers used for datacom and telecom applications
- xDSL, T1/E1, T3/DS3/E3/STS-1, ISDN interface modules
- ADSL / POTS splitter modules
- Impedance and line matching transformers

Air Coils

- Custom and build-to-print air coils for RF power, filter and sensing applications
- Made with specialized custom tooling to meet customer dimensional and electrical requirements



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