









EMI Power Filters Selection Guide

	High Current Feed-thru Filters	High Current Terminal Blocks	Power Entry Modules	Power Entry Modules Fused/Switched and Fused
Applications	 Cellular base stations, telephone racks, high current switch mode power supplies, power amplifiers and servers	 Cellular base stations, telecommunication switching networks, hi-reliability radar & transmission systems, industrial controls, power supplies, UPS, instrumentation and power distribution	 Digital equipment, personal computers and peripherals, measuring instruments, home appliances, monitor and display units	 Digital equipment, personal computers and peripherals, measuring instruments, home appliances, monitor and display units
Features/Benefits	<ul style="list-style-type: none"> ■ Easy installation - Bolt-in style, surface mount ■ Design flexibility - Available with single, dual, triple and quad configurations, different stud lengths, mounting brackets hardware and EMI gasketing available. ■ Performance - Ideally suited to help meet NEBS, GR1089, and EN55022 ■ Agency approvals - Designed to meet agency approvals, some selected filters UL 1950 recognized, CSA C22.2 certified and TÜV approved ■ Custom options - Custom interfacing, contact pins, wire leads, multiple outputs ■ Environmental - Can be used in both indoor and outdoor applications 	<ul style="list-style-type: none"> ■ Rugged construction - Provides protection to filtering element; especially useful for repeated in-field wiring changes ■ Design flexibility - 2 x 2 to 2 x 6 position blocks Terminal Blocks available with either metric or US threaded studs ■ Performance - Filter elements provide high insertion loss for EMI filtering of DC power lines to help meet NEBS, GR1089, and EN55022 ■ Agency approvals - UL recognized 	<ul style="list-style-type: none"> ■ Rugged construction - Designed to perform in industrial environments ■ Design flexibility - Available in PCB mount, fast-on tab, solder lug or flying leads ■ Performance - Ideally suited for products that must conform to FCC part 15 regulations Meets over-voltage of IEC 664 category II and complies with IEC 950 Metal case provides maximum isolation that optimizes performance ■ Agency approvals - UL recognized, CSA certified, TÜV approved (tested and found to be in accordance with VDE 0565 Part 3) ■ Custom options - Value added connectors, wire leads, ring terminals 	<ul style="list-style-type: none"> ■ Rugged construction - Designed to perform in industrial environments ■ Design flexibility - Bolt-in or snap-in mounting Available in fused or switched and fused versions ■ Performance - Ideally suited for products that must conform to FCC part 15 regulations Meets over-voltage of IEC 664 category II and complies with IEC 950 Low leakage versions available for medical applications ■ Agency approvals - UL recognized, CSA certified, TÜV approved (tested and found to be in accordance with VDE 0565 Part 3)
Performance Characteristics	<ul style="list-style-type: none"> ■ Current ratings (max.) - To 500 Amps ■ Voltage ratings (max.) - To 1000 VDC and to 240 VAC ■ Insertion loss range - AC: 1 MHz to 1 GHz DC: 150 KHz to 10 GHz ■ Temperature range - -55°C to +125°C ■ Capacitance - To 4.7 µF Class Y2 and Y4 available 	<ul style="list-style-type: none"> ■ Current ratings (max.) - Barrier strip: 60 Amps ■ Voltage ratings (max.) - From 100 VDC to 250 VAC, 60 Hz ■ Insertion loss range - Effective insertion loss from 1 MHz to 200 MHz ■ Temperature range - -55°C to +105°C ■ Capacitance - .015 µF per line or .030 µF per pair 	<ul style="list-style-type: none"> ■ Current ratings (max.) - Up to 15 Amps ■ Voltage ratings (max.) - From DC to 250 VAC, 60 Hz ■ Insertion loss range - Effective filtering from 100 KHz to 30 MHz ■ Temperature range - -25°C to +85°C ■ Leakage current range - 0.35 mA to 0.50 mA max 	<ul style="list-style-type: none"> ■ Current ratings (max.) - 2, 4 and 6 Amps ■ Voltage ratings (max.) - 125 VAC and 250 VAC ■ Insertion loss range - Effective filtering from 100 KHz to 30 MHz ■ Temperature range - -25°C to +85°C ■ Leakage current range - 0.35 mA to 0.50 mA max for general purpose filters 0.005 mA to 0.10 mA max for medical filters
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	Power Line Filters	Three-Phase Power Line Filters	Military/Aerospace Multisection Filters	Commercial Custom Assemblies
Applications	 <p>Digital equipment, personal computers and peripherals, measuring instruments, medical, industrial, telecommunications equipment, factory automation, UPS, vending machines, elevators, and switch mode power supplies</p>	 <p>Digital equipment, industrial equipment, UPS, inverters, converters, automation equipment, computerized industrial washing machines, and switching power supplies</p>	 <p>Commercial & military avionics, satellites, secured communications, ruggedized computers, radar, electronic warfare, and ground/air weapon systems</p>	 <p>Telecommunications, cellular base stations, medical equipment, telephone switching, traffic control systems, industrial work stations, servers, power supplies, UPS, industrial controls and welders</p>
Features/Benefits	<ul style="list-style-type: none"> ■ Rugged construction - Designed to perform in industrial environments ■ Design flexibility - Available with fast-on, bolt-in terminals or wire leads Single stage and dual stage ■ Performance - Ideally suited for products that must conform to FCC part 15 regulations High performance in both metal and plastic cases Excellent attenuation for high voltage impulse ■ Agency approvals - Several styles are UL recognized, CSA certified, TÜV approved (tested and found to be in accordance with VDE 0565 Part 3) 	<ul style="list-style-type: none"> ■ Rugged construction - Designed to perform in industrial environments ■ Design flexibility - Available with fast-on or bolt-in terminals Single and dual stage Delta and Wye configurations ■ Performance - Ideally suited for products that must conform to FCC part 15 regulations Both metal and plastic cases provide high performance Excellent attenuation for high voltage impulse ■ Agency approvals - Agency approvals pending 	<ul style="list-style-type: none"> ■ Rugged construction - Metal enclosures built to withstand MIL-STD environmental conditions ■ Design flexibility - Standard catalog parts available Parts designed to meet customers' requirements ■ Performance - EMI designs provide excellent isolation and high frequency performance ■ Military approvals - Available to meet MIL-F-15733 and MIL-STD-461 Military testing IAW MIL-STD-202, MIL-STD-105 ■ EMI design verification - Equipment verification can be accomplished through Spectrum Control's EMI test lab 	<ul style="list-style-type: none"> ■ Rugged construction - Designed to perform in industrial environments ■ Design flexibility - Filters designed to meet customer's circuit requirements Transient protection Circuit breakers Voltage cut-off Other options available Provides quick and economical solutions to meet customer's specific requirements Increases speed-to-market and decreases development time Designs optimized through EMC verification ■ Agency approvals - Designed to meet NEBS and safety agency approvals
Performance Characteristics	<ul style="list-style-type: none"> ■ Current ratings (max.) - To 260 Amps ■ Voltage ratings (max.) - From DC to 250 VAC, 60 Hz ■ Insertion loss range - Effective filtering from 100 KHz to 30 MHz ■ Temperature range - -25°C to +85°C ■ Leakage current range - 0.35 mA to 3.0 mA max 	<ul style="list-style-type: none"> ■ Current ratings (max.) - 3 Amp to 200 Amps ■ Voltage ratings (max.) - 250 VAC to 440 VAC ■ Insertion loss range - Effective filtering from 100 KHz to 30 MHz ■ Temperature range - -40°C to +85°C ■ Leakage current range - Standard and low leakage designs available 	<ul style="list-style-type: none"> ■ Current ratings (max.) - Up to 100 Amps ■ Voltage ratings (max.) - 400 VDC and 240 VAC standard; custom voltage ratings available ■ Insertion loss range - Effective filtering from 10 KHz to 10 GHz ■ Temperature range - -55°C to +125°C 	<ul style="list-style-type: none"> ■ Current ratings (max.) - Up to 250 Amps ■ Voltage ratings (max.) - 400 VDC and 240 VAC standard; custom voltage ratings available ■ Insertion loss range - Effective filtering from 10 KHz to 10 GHz ■ Temperature range - -55°C to +125°C ■ Leakage current range - Standard and low leakage designs available
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