

Corcom EMI/RFI Filter Product Overview

TE Connectivity offers over 300 solutions for EMI/RFI problems associated with susceptibility, as well as compliance with international emissions standards. Corcom filters are available in a wide range of single and 3-phase designs as well as IEC inlet and power entry modules which can combine several functions to reduce cost, space and labor. Solutions are also available for DC applications and applications requiring extremely high performance with feedthrough filters and capacitors for a wide range of applications.



TE Connectivity			Corcom Filter Products
FILTER TYPE	POWER LINE FILTERS		
SERIES	B Series	K Series	DK Series
PERFORMANCE	*	General Purpose	>
Approvals	UL / CSA / VDE	UL / CSA / VDE	UL / CSA / VDE
Features	 General purpose RFI Filters for high impedance load / low current General purpose Wide variety of termination options Meets low leakage current requirements of VDE portable equipment and non-patient medical equipment 	 General purpose RFI power line filters for high impedance loads Well suited to applications where pulsed, continuous and/ or intermittent RFI interference is present EK models meet the very low leakage current requirements for VDE portable equipment and non- patient care medical equipment Available with ground line inductor (choke) 	 Enhanced differential mode performance K Series RFI line filters Higher performance line to line attenuation than the K Series E version meets the very low leakage current requirements for VDE portable equipment and non- patient care medical equipment V version features same high performance with more cost-effective design
ELECTRICAL PARAMETERS			
Max. voltage	250 VAC	250 VAC	250 VAC
Current Ratings	1, 2, 3, 5, 10, 20 or 30A	1, 2, 3, 5, 10, 20, 30, 40 or 60A	1, 3, 6, 10 or 20A
Leakage current each Line to Ground @ 120VAC 60Hz / 250VAC 50Hz	VB Models: .4 mA / .7 mA EB Models: .21 mA / .36 mA	VK Models: .5 mA / 1.0 mA EK Models: .21 mA / .36 mA	VDK Models: .4 mA / .7 mA EDK Models: .22 mA / .38 mA
Electrical Setup	Single stage	Single stage	Dual stage
MECHANICAL PARAMETERS			
Mounting features	Screw mounting	Screw mounting (flange or panel)	Screw mounting
Termination inputs	.25 [6.3] spade terminals, 8-32 terminal bolt & nut or wire leads	.25 [6.3] spade terminals, 8-32 terminal bolt & nut, wire leads or IEC 60320-1 C14 or C20	.25 [6.3] spade terminals, 8-32 terminal bolt & nut or wire leads
Termination outputs	.25 [6.3] spade terminals, 8-32 terminal bolt & nut or wire leads	.25 [6.3] spade terminals, 8-32 terminal bolt & nut or wire leads	.25 [6.3] spade terminals, 8-32 terminal bolt & nut or wire leads
TYPICAL APPLICATIONS			
	Wide band RFI suppression for applications requiring low attenuation including:	Universal filter for applications requiring mid-range attenuation including:	Universal filter for applications requiring improved attenuation including:
	HVAC TV (Audio (Video	TV / Audio / Video Computing & accessories	TV / Audio / Video

• TV / Audio / Video

• Home appliances

• Medical equipment

• Exercise equipment

Computing & accessories

• Battery charging systems

Computing & accessories
 Computing & accessories

• Home appliances

• Medical equipment

• Gaming machines

• Exercise equipment

• Test measurement equipment

- Home appliances
- Medical equipment
- Gaming machines
- Exercise equipment

POWER LINE FILTERS (Continued) R Series EBP, EDP, EOP Series

WG Series

X, Y & Z Series









General	Purpose>	Wide Range	Performance
JL / CSA / VDE	UL / CSA / VDE	UL / CSA / VDE	UL / CSA / VDE
Two-stage general purpose RFI power line filter	PC board mountable general purpose RFI filters	High performance, low cost filter ideal for appliance equipment	Chassis or PC Board Mountable Power Line Filters for Emission
• Dual T section RFI filter provides	 General purpose 	Cost effective	Control
premium performance	 Low leakage current 	• Tubular design	 Compact chassis or PC board mountable
Well suited for low impedance loads where noisy RFI	Cost-effective	WGD, WGE and WGF versions	Three levels of performance
environments are present	Compact size	designed to comply with leakage current requirements for appliances	Complete filtering solution in
Controls pulsed, continuous and/or	EDP model features enhanced	which may be easily moved from	minimal size
intermittent interference	differential mode performance	one place to another	• X Series for FCC Part 15J, Class E
 ER model offers low leakage current without deterioration of 	 EBP model features compact size (less than 1" square) 	 Available in a variety of styles 	• Y Series for EN55022, Level A
insertion loss			• Z Series for EN55022, Level B
			 Medical version available in the HZ Series
250 VAC	250 VAC	250 VAC	250 VAC
l, 2, 3, 5, 10 or 20A	1, 3, 6 or 10A	16A	1, 2, 3, 4 or 6A
VR Models: .4 mA / .7 mA ER Models: .21 mA / .36 mA	EDP/EOP Models: .22 mA / .38 mA EBP Models: .13 mA / .21 mA	A, B & C Models: .76 mA / 1.27 mA D, E & F Models: .10 mA / .20 mA	.3 mA / .5 mA
Single stage	Single stage	Single stage	Single stage
Screw mounting (flange or panel)	PC board pins	Screw-in mounting stud	Screw mount or PC board pins
25 [6.3] spade terminals, 3-32 terminal bolt & nut, wire leads or IEC 60320-1 C14	PCB pins .025 [.635] square	.25 [6.3] spade terminals, wire leads or RAST 5 header interface	.25 [6.3] spade terminals or PCB pins .065[1.65] diagonal
25 [6.3] spade terminals, 3-32 terminal bolt & nut or vire leads	PCB pins .025 [.635] square	.25 [6.3] spade terminals, wire leads or RAST 5 header interface	.25 [6.3] spade terminals or PCB pins .065[<i>1.65</i>] diagonal

Universal filter for applications with low impedance loads including:

Motors

- Semiconductor actuators
- Home appliances
- Gaming machines
- Exercise equipment
- Security systems
- Industrial equipment & controls

Designed for PCB mounting for a wide range of applications including:

- Gaming machines
- Cash terminals
- Office equipment
- Small consumer electronics
- TV / Audio / Video
- Computing & accessories

Specially designed for the white goods / appliance market. Offers wide band RFI suppression for many applications including:

- Washing machines / dryers
- Dishwashers
- Refrigerators & freezers
- Coffee Machines
- Hand held appliances & tools
- Ovens & ranges

RFI filter designed to bring most digital equipment (including those with switching power supplies) into compliance with EN55022, Level A or B and FCC Part 15J, Class B conducted emission limits. Ideal for all applications with limited space including:

- Switching Power Supplies
- Industrial single phase applications



FILTER TYPE	POWER LINE FILTERS (Continued)		
SERIES	S, V & W Series	G & N Series	SB Series
PERFORMANCE	*	Wide Range Performance	>
Approvals	UL / CSA / VDE	UL / CSA / VDE	UL / CSA / VDE
Features	Multipurpose Power Line RFI Filter for Emission Control • Effective when used to control emissions in equipment using SCR	High Performance RFI Filters for Switching Power Supplies For increased filtering requirements • Designed to provide excellent	High Performance B Series RFI Line Filters • Enhanced performance version of our popular B Series of RFI line
	and T2L circuitsS & W Series designed for high impedance frequencies	attenuation for most digital electronics equipment and help comply with EN55022 Level A and FCC Part 15J Class B	filters • Small size with enhanced performance
	 V Series designed for low impedance frequencies 	 Broad frequency range of performance from 20kHz to 30MHz 	 30A version half the size of other 30A filters
	 Medical version available in the MV Series 	• Size and cost-effective solution	Low leakage version available
ELECTRICAL PARAMETERS Max. voltage			
Max. voitage	250 VAC	250 VAC	250 VAC
Current Ratings	3, 6, 10, 20 & 60A (60A S Series only)	6 & 10A	6, 10, 20 & 30A
Leakage current each Line to Ground @ 120VAC 60Hz / 250VAC 50Hz	.4 mA / .7 mA (S Series 3-10A) .75 mA / 1.25 mA (S Series 60A) .5 mA / .82 mA (V & W Series) .07 mA / .13 mA (MV Series)	.3 mA / .5 mA (EG models) 1.2 mA / 2.0 mA (VG & N models)	.75 mA / 1.25 mA (VSB models) .22 mA / .36 mA (ESB models)
Electrical Setup	Dual stage	Single stage (6A models) Dual stage (10A models)	Single stage
MECHANICAL PARAMETERS			
Mounting features	Screw mounting	Screw mounting	Screw mounting
Termination inputs	.25 [6.3] spade terminals or terminal bolt & nut	.25 [6.3] spade terminals	.25 [6.3] spade terminals or 8-32 terminal bolt & nut
Termination outputs	.25 [6.3] spade terminals or terminal bolt & nut	.25 [6.3] spade terminals	.25 [6.3] spade terminals or 8-32 terminal bolt & nut

TYPICAL APPLICATIONS

Multipurpose power line RFI filter for emission control and high noise industrial environments and applications that require compliance with FCC Part 15, Subpart J and EN55022, Level A, down to 150kHz including:

- Consumer electronics
- Small machine tools
- Food service equipment
- Measurement & Instrumentation

Specifically designed for most digital electronic equipment requiring a high range of symmetric and asymmetric attenuation including:

- Switching power supplies
- Motor drives
- Small machine tools
- Industrial single-phase applications
- Wide band RFI suppression for applications requiring enhanced performance including:
- TV / Audio / Video
 - Computing & accessories
- Home appliances
- Medical equipment
- Gaming machines
- Exercise equipment





• Exercise equipment

FILTER TYPE	POWER LINE FILTERS (Continu		
SERIES	Q Series	FC Series	EP & VP Series
PERFORMANCE	<		>
Approvals	UL / CSA / VDE	UL / CSA / VDE *	UL / CSA / VDE
Features	Highest Performance RFI Filters for Switching Power Supplies	Single Phase Power Line Filter for Frequency Converters	Dual Stage RFI Power Line Filters for Switching Mode Power Supplie:
	 High attenuation for common and differential mode interference 	 Designed for frequency inverters and variable speed motor drives 	 Dual stage filter offers high insertion loss
	 Effective from 10kHz to 30MHz Optimized for attenuation and size 	 Suitable for electronically noisy environments 	 Well suited for meeting CISPR 22 A and FCC Part 15J, Class B
	 3 or 6A versions available with IEC inlet 	Protects programmable logic controllers from RF noise on the AC	• EP model meets very low leakage current requirements
	 Medical version available in the HQ Series 	power line Touch safe terminals 	 7 and 12A versions offer optimum package size
ELECTRICAL PARAMETERS			
Max. voltage	250 VAC	250 VAC	250 VAC
Current Ratings	3, 6 & 20A	6 & 10A	3, 6, 7, 10, 12 & 20A
Leakage current each Line to Ground @ 120VAC 60Hz / 250VAC 50Hz	.73 mA / 1.27 mA (3 & 20A VQ models) .22 mA / .38 mA (3 & 20A EQ models) .29 mA / .51 mA (6A EQ models)	3.9 mA / 7.0 mA (B suffix, single stage) 3.8 mA / 6.7 mA (no suffix, dual stage)	.73 mA / 1.27 mA (VP models) .21 mA / .36 mA (EP models)
Electrical Setup	Dual stage (medical versions without y-capacitors)	Single stage (B suffix) Dual stage (no suffix)	Dual stage
MECHANICAL PARAMETERS			
Mounting features	Screw mounting (flange or panel)	Screw mounting	Screw mounting (flange or panel)
Termination inputs	.25 [6.3] spade terminals, wire leads or IEC 60320-1 C14	DIN type terminals	.25 [6.3] spade terminals, wire leads, terminal bolt & nut, or IE 60320-1 C14
Termination outputs	.25 [6.3] spade terminals or wire leads	DIN type terminals	.25 [6.3] spade terminals, wire leads, or terminal bolt & nut
TYPICAL APPLICATIONS			
	Trouble shooter for wide banded RFI suppression of applications with very high RFI emissions including: • Consumer electronics	Wide band RFI suppression of industrial single phase applications with very high RFI emissions including: • Drives with long motor-cables	Wide band attenuation for applications with very high RFI emissions. This filter series offers excellent attenuation for application such as:
	 Single phase industrial applications 		 Consumer electronics

Switching power supplies with

transient currents

• HVAC

- Consumer electronics
- Single phase industrial applications
- Drive motors and controllers

* VDE approvals for dual stage models up to 36A only

• Variable speed motor drive

applications



Corcom Filter Products

POWER LINE FILTERS DC FILTERS FEEDTHROUGH FILTERS AQ Series DA, DB, DC and DCP Series FFA, FFD, AFC, AFD Series T Series Superior Performance UL / CSA / VDE UL / CSA UL / CSA / VDE **High Performance RFI Power High Frequency Power Line Filter** DC filters available in a wide variety AC & DC rated feedthrough filters Line Filters for Switching Power or Power Entry Module of versions for DC system RFI issues and capacitors for highest rated performance Supplies High common and differential • DA Series - Compact RFI Line Filter Superior common-mode and mode performance from with DC Inlet Connection FFA (AC rated) & FFD (DC rated) premium differential-mode 10kHz to 1GHz feedthrough filters • DB Series - High Current DC Inlet attenuation Available with an IEC inlet, Filter and Connectors • AFC (AC rated) & AFD (DC rated) Smaller package sizes than the EP fuseholder and switch feedthrough capacitors DC Series - General purpose line Series Suitable for applications where filters for DC applications up to Offers high reliability & · ET models with low leakage current computers are used to process 125VDC with many options performance for high frequency secret or confidential information applications · Medical versions available in the P Series - adaptable power entry HT Series module for DC rated applications • Custom versions available 250 VAC 250 VAC 125 VDC (DA, DB) & 80VDC (DC, P) 250 VAC / 130 VDC 3, 6, 10, 15 & 20A 3, 6, 10, 15 & 20A 3, 6, 10 & 15A (DA Series) 10 to 300A (FFA/AFC/DFC) 60A (DB Series), 3 & 6A (P Series) 10 to 200A (FFD) 15, 30, 60, 100 & 125A (DA Series) .3 mA / .5 mA (ET models) 1.2 mA / 2.3 mA (3A models) .75 mA / 1.2 mA (VT models) .7 mA / 1.2 mA (6A models) Single (3-10A) & Dual stage (10-20A) Multi stage (medical versions without y-capacitors) Screw mounting Screw mounting (flange or panel) Screw mounting & snap-in Screw mounting .25 [6.3] spade terminals, Wire leads Spade terminals, PCB pins, wire Screw terminal wire leads, terminal bolt & nut, or leads, DA or DCB connector, or IEC 60320-1 C14 terminal bolt & nut .25 [6.3] spade terminals, Wire leads, or IEC 60320-1 C14 Spade terminals, PCB pins, wire Screw terminal wire leads, or terminal bolt & nut leads, DA or DCB connector, or terminal bolt & nut Wide band attenuation for Ideal filter series for hardened Network routing equipment Universal applications including;

applications with very high RFI emissions including

- Consumer electronics • Single phase industrial applications
- Drive motors and controllers
- Commercial & building equipment

applications where computers are used to process secret or confidential information

Servers

- Switching equipment
- Wireless cabinets
- Ethernet hubs
- Base stations
- Repeater stations
- Power supplies for all types of communications equipment
- Servers and routers
- Base stations
- Transportation
- Telecom
- MRI rooms
- High current switch mode power supplies
- Military and aerospace



FILTER TYPE	3-PHASE FILTERS		
SERIES	AYO Series	AYA Series	A Series
		Concon	
PERFORMANCE	General & High Purpose	← Wide Range	e Performance
Approvals	UL / CSA / VDE	UL Recognized ²	UL / CSA / VDE
Features	Compact Low Current 3-phase WYE RFI Filters	3-phase WYE RFI Power Line Filters	High Performance 3-phase RFI Filters for WYE Applications
	 For 3-phase, four wire, WYE applications 	 For 3-phase, four wire, WYE applications 	 Common mode and differential mode suppression from 50kHz to
	 Filters each of the three lines plus neutral 	 Cost-effective, universal 3-phase filters 	 30MHz Optional end bell kits available to shield input and output terminals
	 Good for attenuation beginning at 100kHz 	 Good attenuation over the complete frequency range of 10kHz to 30MHz 	AYP single stage for lower noise environments
	Space saving design	Two different mounting styles	AYT dual stage provides highest
ELECTRICAL PARAMETERS	 Low leakage current 	available	performance
Max. voltage	440 VAC Phase to Phase 250 VAC Phase to Neutral / Ground	440 VAC Phase to Phase 250 VAC Phase to Neutral / Ground	440 VAC Phase to Phase 250 VAC Phase to Neutral / Ground
Current Ratings	3, 6, 10 & 20A	16, 25, 36, 50, 63 & 100A	20, 30, 45 & 60A
Leakage current each Line to Ground	2.0 mA / 3.0 mA (3 - 10A models) 3.5 mA / 5.5 mA (20A models) @ 120 VAC 60Hz / 250 VAC 50Hz	1.62 mA / 2.82 mA @ 120 VAC 60Hz / 250 VAC 50Hz	1.4 mA / 3.4 mA @ 120 VAC 60Hz / 250 VAC 50Hz
Electrical Setup	Single stage	Single stage	Single stage (AYP Models) & Dual stage (AYT Models)
MECHANICAL PARAMETERS			
Mounting features	Screw mounting (flange or panel)	Screw mounting (flange or inserts)	Screw mounting (inserts)
Termination inputs	.25 [6.3] spade terminals	Terminal bolt & nut or DIN type terminals	Terminal bolt & nut
Termination outputs	.25 [6.3] spade terminals	Terminal bolt & nut or DIN type terminals	Terminal bolt & nut

TYPICAL APPLICATIONS

Wide band RFI suppression for general purpose 3-phase applications with low to middle RFI emissions including:

- Vending machines
- Food service equipment
- Gaming machines
- Small machine tools

Universal filter series equipped with 2 different connecting versions including:

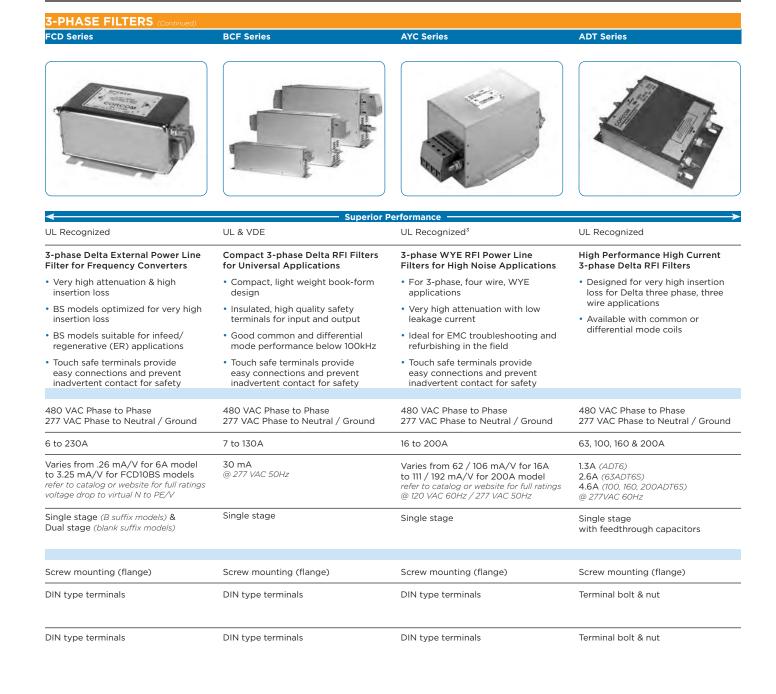
- Uninterruptible power supplies
- Industrial control systems
- Machine tools

² All models except 16AYA10, 30AYA10, 63AYA6, 63AYA6A and 100AYA6A Wide band RFI suppression for industrial 3-phase applications with high noise emissions (AYP models) and lower noise emissions (ATY models) including:

- Large machine tools
- Customer machinery
- Input filter for motor drives

Corcom Filter Products

TE Connectivity



Wide band RFI suppression for industrial 3-phase applications with very high RFI emissions including:

- Machine tools
- Elevators & escalators
- Frequency converters
- Industrial cabinets

Specially suited for regeneration systems of returning power. Wide banded RFI suppression for industrial 3-phase applications with very high RFI emissions including:

- 3-phase inverters & converters
- Variable speed motor drives
- Process automation equipment
- Elevators & escalators
- Machine tools

Wide band RFI suppression for WYE applications with very high RFI emissions including:

- Frequency converters with very long motor cables
- Machine tools

WYE Ideal for industrial 3-phase applications with extremely high noise emissions including;

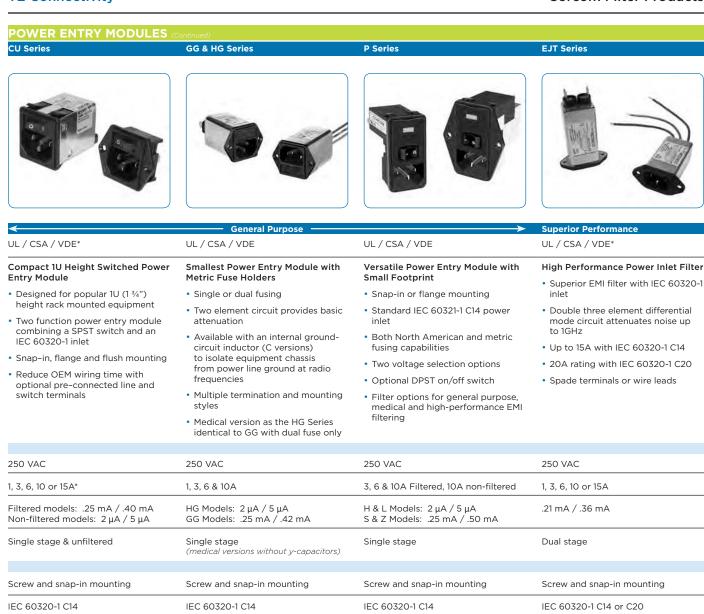
- High current motor drives
 - Spot-welding machines
 - Any difficult application with very difficult noise suppression

² All models except 200AYC10B



FILTER TYPE	POWER ENTRY MODULES		
SERIES	SRB Series	EEJ Series	C Series
PERFORMANCE	General Purpose	✓ Wide Range	Performance>
Approvals	UL / CSA / VDE*	UL / CSA / VDE	UL / CSA / VDE*
Features	 Minimum Depth, Cost-effective Shielded Power Inlet Filter Wide range of capacitor values Attenuates coupled EMI up to 300MHz Minimal to low leakage current versions are suitable for patient and non-patient contact medical equipment. Full range of mounting and 	Cost-effective Medium Performance Power Inlet Filter Including the EJH/EJHS, EJM/EJMS and EJS Models • Enhanced two element circuit provides medium attenuation to 30MHz • EJH & EJHS models feature minimal leakage current suitable for patient contact medical applications	 Power Entry Module with Switch Two function power entry module combining a DPST switch and an IEC 60320-1 inlet Snap-in or flange mounting Available with or without a shielder general purpose or medical grade filter Two element circuit provides enhanced EMI attenuation
	ermination options including unique vertical and horizontal orientation slide in mounts eliminate the need for mounting hardware	 EJM & EJMS models feature low leakage current, suitable for most medical applications EJS models feature EEJ performance in snap-in mounting 	 Reduce OEM wiring time with optional pre-connected line and switch terminals
ELECTRICAL PARAMETERS	naraware	performance in shap in mounting	
Max. voltage	250 VAC	250 VAC	250 VAC
Current Ratings	15A*	1 to 20A	1, 3, 6, 10 or 15A*
Leakage current each Line to Ground @ 120VAC 60Hz / 250VAC 50Hz	Varies by model from .2 µA to .24mA refer to catalog or website for full ratings	EEJ/EJS Models: .22 mA / .38 mA EJH Models: 2 μA / 5 μA EJM Models: .01 mA / .017 mA	F models: .25 mA / .40 mA H & non-filtered models: 2 μA / 5 μA
Electrical Setup	Capacitive, 8 options available values from 33pF to 3300pF	Single stage	Single stage & unfiltered
MECHANICAL PARAMETERS			
Mounting features	Screw and snap-in mounting	Screw and snap-in mounting	Screw and snap-in mounting
Termination inputs	IEC 60320-1 C14	IEC 60320-1 C14 or C20	IEC 60320-1 C14
Termination outputs	.25 [6.3] spade terminals, wire leads or PC board pins	.25 [6.3] spade terminals, wire leads or PC board pins	.187 [4.8] spade terminals (non-filtered) or .25 [6.3] spade terminals (Filtered) Available with or without pre-connected switch terminals
TYPICAL APPLICATIONS			
	 Wide band RFI suppression for any application with very limited space for the suppression unit including: TV / Audio / Video Computing & accessories Home appliances Consumer electronics 	 Wide band RFI suppression for a wide range of applications including: TV / Audio / Video Computing & accessories Home appliances Medical equipment 	 Wide band RFI suppression for applications with limited space including: TV / Audio / Video Computing & PC powers supplies Network & cabeling systems Medical equipment
	*15A versions are tested by UL to US and Canadian requirements and are VDE approved at 10A	Gaming machinesExercise equipmentAppliances	*15A versions are tested by UL to US and Canadian requirements an are VDE approved at 10,





.187 [4.8] spade terminals .25 [6.3] spade terminals or .187 [4.8] spade terminals (standard) .25 [6.3] spade terminals or wire leads or .25 [6.3] spade terminals (L & Z) wire leads Available with or without pre-connected switch terminals Available with or without interconnection block for unfiltered versions Specially designed for 1U height Wide band RFI suppression for Wide band RFI suppression in over Specially designer to attenuate noise equipment racks and can be used in applications with very limited space 8000 configurations for a wide range in the high frequency range up to space limited applications including: including: of applications including: 1GHz for various electronic applications including: TV / Audio / Video TV / Audio / Video Telecom • Plasma & I CD TV's Computing Computing & accessories Computing & accessories • Computing & accessories • TV / Audio / Video Home appliances Home appliances Instrumentation & measurement Consumer electronics Medical equipment Medical equipment *15A versions are tested by UL to US and Gaming equipment Gaming equipment *15A versions are tested by UL to US and Canadian requirements and Canadian requirements and Fitness equipment Fitness equipment are VDE approved at 10A are VDE approved at 10A HVAC



FOR MORE INFORMATION

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