



## Uninterruptible Power Supply



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Richardson Electronics has partnered with top-tier suppliers to bring you high-quality power components that you can trust for your uninterruptible power supply solutions. We focus on providing power electronics to uninterruptible power supplies for critical mission and standard backup systems. As a global operation, our company has grown to include a team of experts with diverse backgrounds that can guide you with your uninterruptible power supply solution. Serving our customers is a value infused in the company culture, and we stand behind every component we deliver.

## What We Do Best



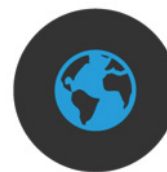
Identify & Design-in New,  
Disruptive Technologies



Industry Leader in  
Power & Microwave  
Technologies



Provide Technical  
Expertise & Engineered  
Solutions



Provide Exceptional  
Global Support

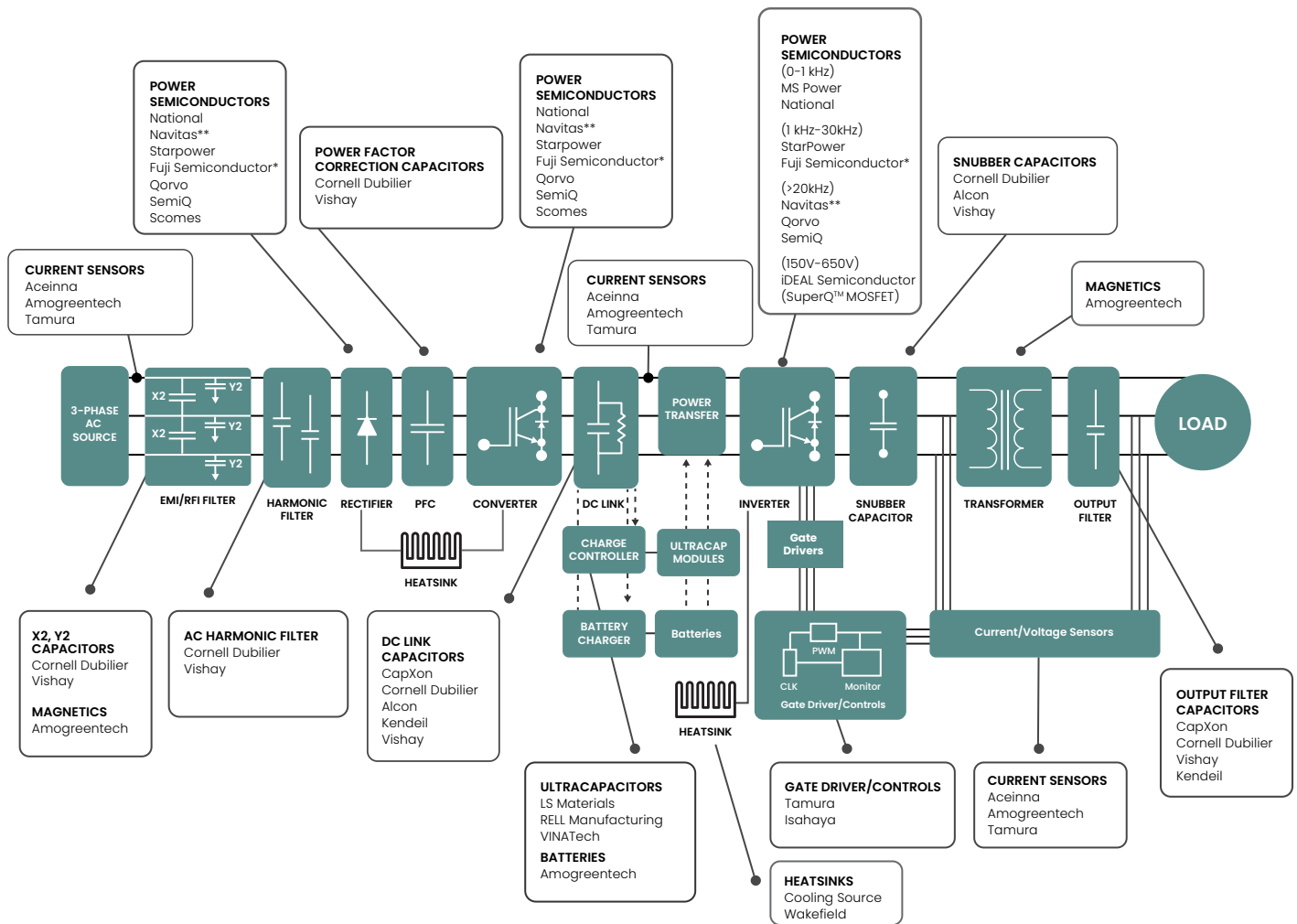


Provide High Quality  
Products for Over 75 Years

# Uninterruptible Power Supply

## POWER & ENERGY - BLOCK DIAGRAM

At Richardson Electronics, our team of experts have created comprehensive block diagrams to help provide a schematic of the components necessary for power management. These block diagrams provide a high-level overview of required components and important working relationships – making them valuable tools for design engineers to make the right choice for their component selection. In addition, we provide solutions and add value through design-in support, systems integration, prototype design, manufacturing, testing, and logistics. Contact us or find the products you need for your design at [rellpower.com](http://rellpower.com).



\*Fuji Semiconductor is only available in the Americas at this time

\*\*Navitas is only available in North America at this time

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## POWER & ENERGY - PRODUCT RANGE & SUPPLIERS

Power Semiconductor		
Product	Product Ranges	Suppliers
Diode   Rectifier   Discrete   Module	12A-13,500A, 200V-6500V	Scomes   MS Power   National
SCR   Thyristor   Discrete   Module	16A-6500A, 200V-8500V	MS Power   National
IGBT   IPM   DIPIPM   PIM	10A-3600A, 600V-1700V	Fuji Semiconductor   Starpower
Superjunction MOSFET	8A-95A, 600V	Fuji Semiconductor
SuperQ™ MOSFET	150V-650V, RDS <sub>ON</sub> : 3 - 160mohm	iDEAL Semiconductor
SiC Cascode   SiC MOSFET   Discrete	7-1000mohm, 650-6500V	Navitas   Qorvo   SemiQ
SiC Cascode   SiC MOSFET   Module	40A-400A, 1200V-1700V	Navitas   Qorvo   SemiQ
SiC JFET	25-1100mohm, 650V-1700V	Qorvo
SiC Diode   Discrete   Module	1-300A 650-3300V	Navitas   Qorvo   SemiQ
DC Link Capacitors (Aluminum Electrolytic & Power Film)		
Product	Product Ranges	Suppliers
Aluminum Electrolytic   Solid Conductive Polymer   Hybrid Conductive Polymer	.47uf-1.5F, 5V-600V	CapXon   Cornell Dubilier   Kendeil   Alcon
Terminal Type: Axial   Radial   Flatpack   Snap   Screw   SMD		
Power Film	1uf-100,000uf, 1uf-50,000uf	Cornell Dubilier   Kendeil   Alcon   Vishay
Terminal Type: Box   Screw   Low Profile   Module   Custom		
AC Filter/Harmonic Film Capacitors		
Product	Product Ranges	Suppliers
Configurations: Oil   Dry	1uf-4000uf, 240VAC-1400VAC	Cornell Dubilier   Vishay
Cases: Box   Oval   Cylindrical   Welded		
Output Type: Single Phase   Three Phase		
PFC (Power Factor Correction) Film Capacitors		
Product	Product Ranges	Suppliers
Configurations: Oil   Dry	.5KVAR-325KVAR, 240VAC-4800VAC	Cornell Dubilier   Vishay
Cases: Cylindrical   Welded		
Output Type: Single Phase   Three Phase		
EMI/RFI Capacitors		
Product	Product Ranges	Suppliers
X1/X2 Film Capacitors   Y1/Y2 Film Capacitors	1nf-40uf, 240VAC-480VAC	Cornell Dubilier   Vishay
Terminal Type: Box		
Snubber Capacitors		
Product	Product Ranges	Suppliers
Polypropylene Film	1nf-45uf, 160V-3000V	Cornell Dubilier   Alcon   Vishay
Terminal Types: Axial   Box   Oil Filled   Direct Mount		
DC Output Capacitors (Aluminum Electrolytic & AC Film)		
Product	Product Ranges	Suppliers
Aluminum Electrolytic   Solid Conductive Polymer   Hybrid Conductive Polymer	33uf-2.7F, 10V-600V	CapXon   Cornell Dubilier   Kendeil   Alcon
Terminal Type: Axial   Radial   Snap   Screw   SMD		
AC Film	1uf-4000uf, 240VAC-1400VAC	Cornell Dubilier   Alcon   Vishay
Terminal Types: Box   Screw		

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## POWER & ENERGY - PRODUCT RANGE & SUPPLIERS

Current Sensors		
Product	Product Ranges	Suppliers
Flux Gate	6A-150A	Amogreentech   Tamura
Hall Effect Open	3A-1500A	
Hall Effect Closed	6A-2000A	
Split Type (Ferrite)	60A-400A	
High Accuracy & Low Ratio Error (Nanocrystalline)	5A-120A	
Excellent Linearity & Precision (Amorphous Nanocrystalline)	40A-120A	
Advanced AMR Current Sensors	±5A-65A	Aceinna
Gate Driver   DC-DC Converters   Hybrid IC's		
Product	Product Ranges	Suppliers
DC-DC Converter (for customers to design own gate drive)   Gate Driver Module (need to add gate resistors)   Gate Driver complete solution   IGBT Mountable Type	15A-3600A Class IGBT & SiC Modules	Isahaya   Tamura
Energy Storage Solutions		
Product	Product Ranges	Suppliers
Batteries	Cell- 3.2V, 150Wh/kg 50Ah-300Ah Module Tray, Shelf, Unit Rack	Amogreentech
LiFePO Lithium Iron Phosphate   Cells, Modules   Complete Systems with BMS (Battery Management System)		
Ultracapacitors	Cell- 2.7-3.0V, .5F-3800F Standard Modules 1.5F-500F, 5.4V-403V	LS Materials   Richardson Manufacturing   VINATech   Cornell Dubilier
Cells   Modules   Complete Assemblies   Custom Design Capabilities		
Hybrid Lithium Ion Capacitor	10F-220F, 2.2V-3.8V	VINATech   Cornell Dubilier
Thermal Management		
Product	Suppliers	
Board Level   Extrusion   Bonded Fin   Folded Fin   Skived Fin   Swaged Fin   Stamped Fin   Heat Pipe Assembly   CPU Coolers   Liquid Cold Plates   Die Casting   Fabricated Complete Solution   Thermal Analysis Capabilities   Thermal Interface Material (TIM)   Thermal Grease   SCR & Diode Clamp Systems   Custom Fabrication	Amogreentech   Cooling Source   National   Wakefield	
Magnetics		
Product	Suppliers	
Materials: Fe Amorphous   Nanocrystalline   Fe Based Metal Cores	Amogreentech	
Components: Inductor   AC Choke   DC Choke   Common Mode Choke   PFC Choke   Output Choke   EMI Filter   Reactor		
Filter Design: Inductor   CMC   Capacitor		

Richardson Electronics has been an industry-leader in providing high-quality products and outstanding engineering support for over 75 years. Our extensive global distribution network and world-class partners provide our customers with innovative technologies, products and services.

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