



**INDUSTRIAL POWER QUALITY SOLUTIONS**



**SOLAHD**

Since 1915, SolaHD products have been exclusively focused on providing total power quality throughout manufacturing facilities. During this time, production equipment and efficiencies have evolved beyond what was once thought possible; however, our commitment has remained the same. From service entrance to point-of-use, SolaHD products are there to optimize production performance. We have stayed at the forefront of production technologies with power solutions designed exclusively for modern manufacturing’s sensitive computerized equipment, such as networks, sensors, PLCs and safety equipment. Our broad line of DIN Rail power products save space and provide flexibility for modifications in the field or reconfigurations and faster installations.

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## INDUSTRIAL FACILITY WIDE PROTECTION

Anywhere in your facility from the service entrance to the most critical production equipment, SolaHD can power your process control applications with our power conversion and power quality products.

SolaHD offers industrial grade products to meet the most demanding applications worldwide.

- Factory automation
- Inspection, test and instrumentation equipment
- Laboratory and non-patient medical
- High efficiency applications (Energy Star)
- UL508 environments such as waste water treatment
- Harsh environment and remote site locations
- Building automation
- Service automation
- Process control



*Automotive/Industrial Control*

SolaHD offers many products suited for harsh environments including our encapsulated power supplies and transformers. We also offer a wide range of Class 1 Division 2 products.

### When Power Is Money

Power is a dynamic aspect in production and automation. Companies lose billions of dollars every year due to voltage sags and power outages.

Conditioning your incoming power keeps productivity high and costs down. Using compatible power conversion components ensures your system reliability.

### Power Is Our Only Business

Our industrial power specialists are serious about your system performance. SolaHD has been a trusted name in power conversion and power quality since 1915. We provide innovative and reliable products with proven technologies to help control your equipment or facility's efficiency, productivity, and longevity. Our products meet strict global requirements and new efficiency standards. SolaHD delivers total power quality solutions to drive your system reliability, your return on investment (ROI) and your customer satisfaction.



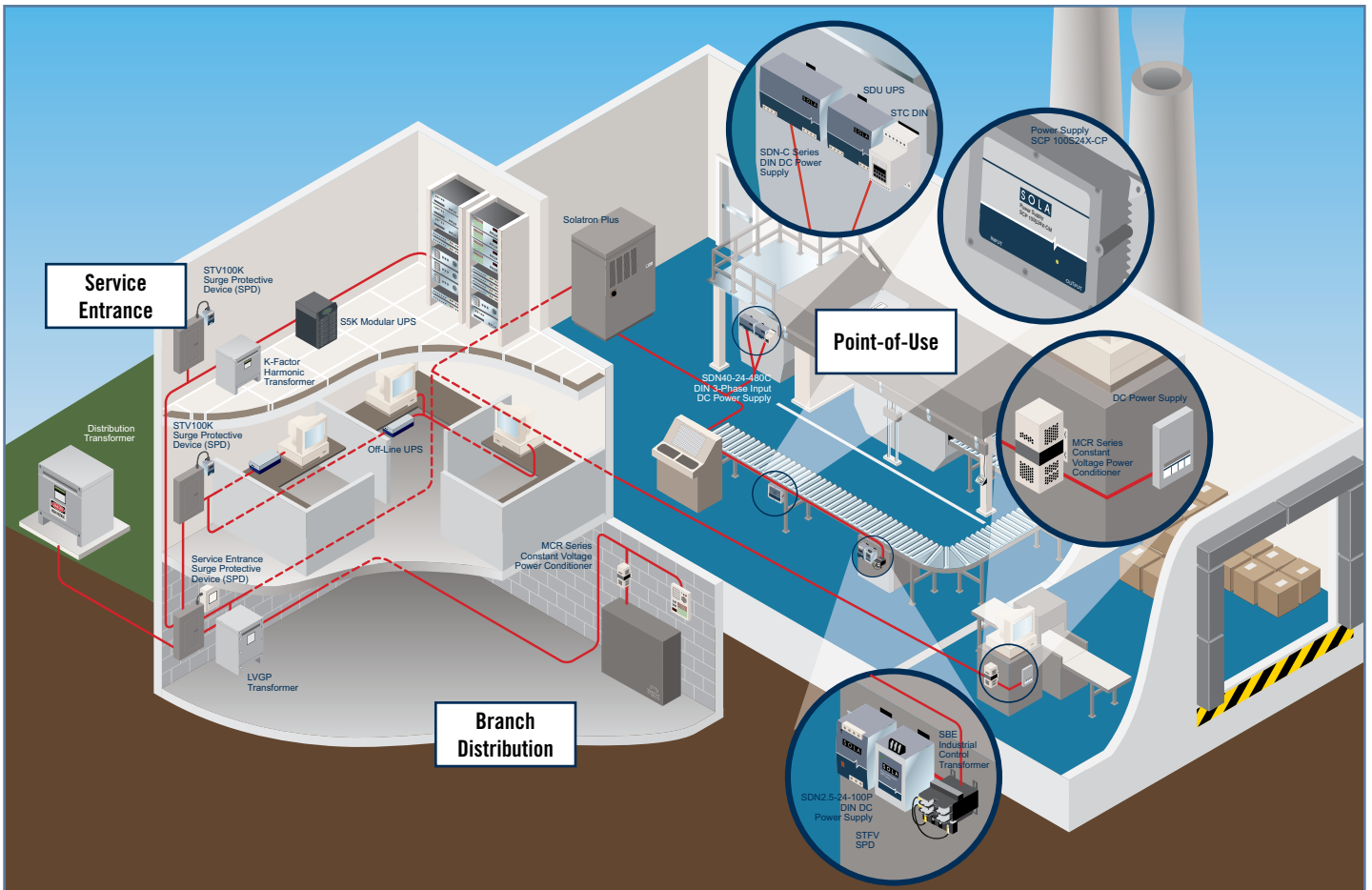
*Power Products (4 watts to 660 kVA)*

Only SolaHD delivers industrial power solutions with a comprehensive, four-staged approach that includes protection and conditioning, back-up power supply and conversion, voltage regulation and knowledgeable service and support.



## ESTABLISH AND MAINTAIN TOTAL POWER QUALITY THROUGHOUT YOUR FACILITY

As the number of system components has increased throughout today's manufacturing floors, so have the number of devices drawing power from the utility grid. This increased demand has led to greater dependency on the level of power quality. SolaHD products stabilize, control and manage the power your equipment needs from the service entrance through branch distribution to points of use throughout your facility.



	Industrial Power Conversion and Protection Solutions				
	Power Conditioning	SPD/Filters	Transformers	Power Supplies	UPS
Service Entrance		X	X		
Branch Panels		X	X		X
Networks	X	X		X	X
Large Machinery	X	X	X	X	X
Process Rooms	X	X		X	X
PLCs & Industrial PCs	X	X	X	X	X
Ethernet & Communications		X		X	X
DeviceNet™		X		X	X
Motion Control		X		X	X
Drives	X	X	X		X
Analog I/O		X		X	X

Power is our only business. While every manufacturing environment requires different levels of protection, SolaHD offers a broad range of products that allows you to select the best solution for your power quality problem. The following chart lists the various modes of protection we offer.

**NOISE AND SURGE PROTECTION**

Surge Protective Devices extend the life of a PLC and prevent catastrophic damage.



STV200/400K  
Surge Protective Devices



STFV Series  
Active Tracking® Filters



STC Series  
Data/Line SPDs

**DRIVE PROTECTION**

Isolation Transformers reduce noise & provide electrostatic shielding.



Drive Isolation Transformers

**VOLTAGE REGULATION**

SDN Power Supplies provide DC regulation and sag-immunity.

MCR/CVS series protects against over 95% of all power quality problems.

S4K On-Line UPS provides output voltage regulation



SDN Power Supply  
Sag Immunity &  $\pm 2\%$  DC  
Regulation



MCR/CVS - 3% & 1%  
Output Voltage Regulation



S4K UPS  
(On-Line)

**BACK-UP**

Uninterruptible Power Supplies provide back-up in the event of power interruption as well as varying degrees of protection depending on the application.

- Off-Line (back-up only)
- Interactive (back-up & selected power protection)
- On-Line (back-up & total power protection)



SDU DC UPS



SDU AC UPS  
(Off-Line)



S3K UPS  
(Line-Interactive)

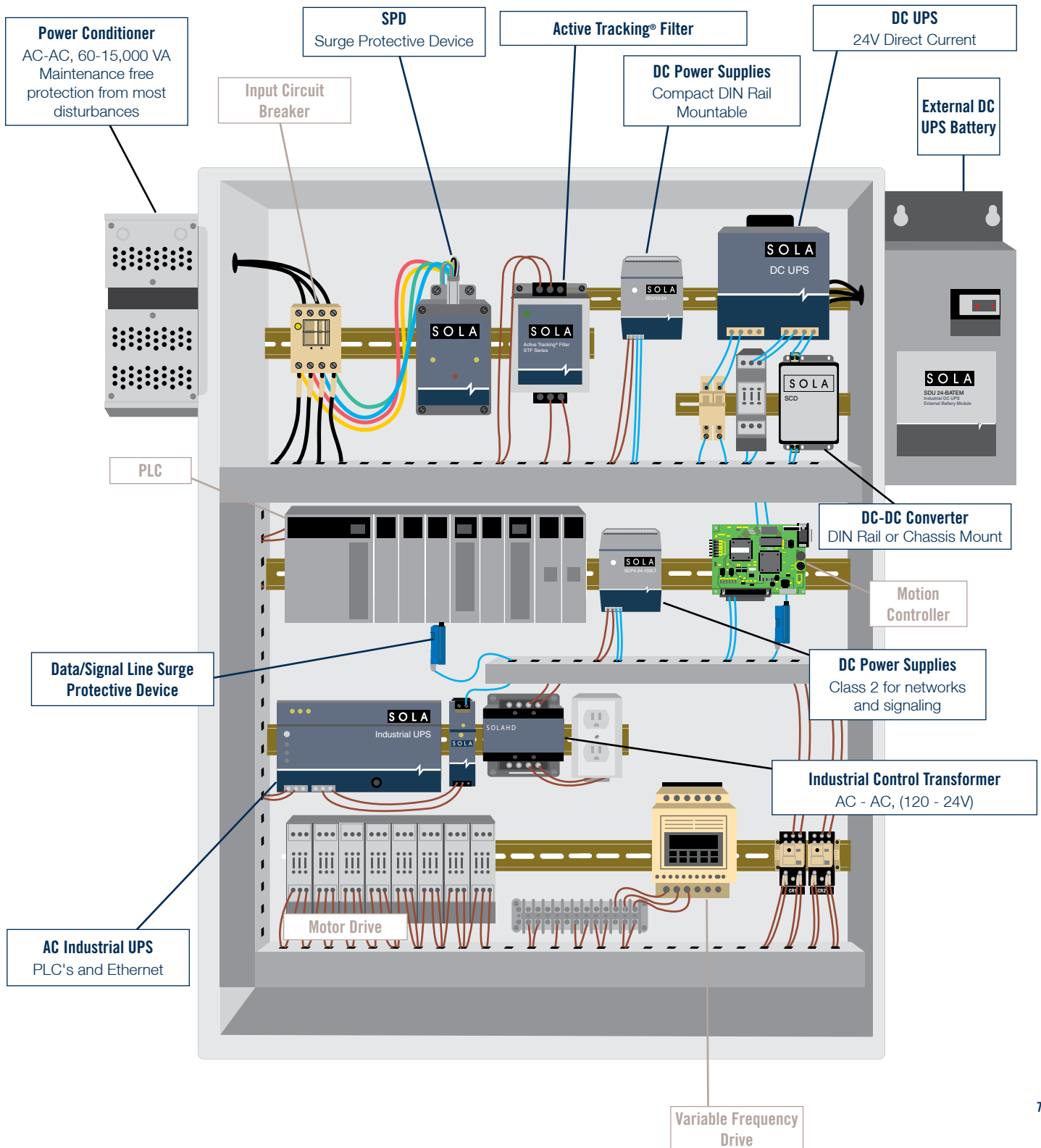


S4K/S5K UPS  
(On-Line)



## MORE EFFICIENT CONTROL PANELS

From surge protective devices to back-up DC power supplies to control transformers, SolaHD is the only brand to offer a total power quality solution within the control panel. This full line of integrated products delivers reliable performance through compact and clearly labeled packages that allow for faster and easier panel installations.



## THE BROADEST RANGE OF DIN RAIL PRODUCTS

SolaHD understands the need for flexible and modular production lines in today's manufacturing facilities. That's why we offer the largest line of DIN Rail mountable power quality solutions. Each product is compact, mounts fast and offers a clean look that is easy to monitor with visual diagnostic LEDs.

### AC/DC DIN RAIL POWER SUPPLIES

Our highly-efficient, compact power supplies come in a wide range of voltages and available features, including PowerBoost™ overload circuitry, hazardous location certifications and optional redundant accessories.



SDN-P SERIES

SDN-C SERIES

SDP SERIES

### DC/DC DIN RAIL POWER CONVERTERS

Provide power to industrial control instrumentation devices and equipment anywhere that AC power isn't convenient with SolaHD's durable, compact DC to DC converters.



SCD SERIES

### FILTERS & SURGE PROTECTIVE DEVICES

SolaHD DIN Rail mountable surge protective devices and filters deliver 24-hour protection from the full spectrum of voltage transients and noises that can cause long-term damage to sensitive equipment.



STV SERIES

STFV PLUS SERIES

STFE ELITE SERIES

### DC & AC UPS

Our advanced line of uninterruptible power supplies keep your machinery running with industry-leading, micro-processor controlled designs.



SDU DIN RAIL DC UPS

SDU DIN RAIL AC UPS



A technical line drawing of an electronic device, possibly a power supply or filter, is overlaid on a dark blue background. The drawing shows various components like capacitors, inductors, and a transformer, connected by wires and traces. The lines are light blue and semi-transparent, creating a layered effect.

# FILTERS & SURGE PROTECTIVE DEVICES

The continuous threats of spikes, noise and harmonic distortions severely impact the reliability of today's electronic equipment. Production, computing, networking and telecommunication equipment depend upon transient-free power for optimized performance. To successfully and dependably eliminate these disturbances, facilities must install multi-staged protection that can handle high-energy surges, electric noise and residual low-voltage transients.

SolaHD safeguards production technologies with a comprehensive line of surge protection and filtering devices that allow facilities to deploy the multi-staged protection that they require. As a necessary first line of defense, SolaHD's Surge Protective Devices are designed to clamp high-voltage spikes off to a level acceptable by even the most sensitive electronic equipment. Our exclusive, hybrid Active Tracking® Filters rid power from noise and transients, even in the harshest industrial environments. SolaHD's wide range of Data/Signal Line products shutdown damaging low-energy surges with high-speed, high-energy components, a variety of voltage levels and unique packaging configurations for applications throughout your facility.

## STV 200/400K SERIES SURGE PROTECTIVE DEVICES



The STV series offers surge protection to equipment throughout facilities with a flexible, modular design that is rugged enough for the harshest industrial environments. The STV 200/400K is capable of point-of-use applications, but also features technology that makes it robust enough to handle the high-impulse, potentially damaging transients commonly found at service entrances or distribution panels.

### Features

- Modular design allows for flexibility
- Surge current capacity of 200 to 400 kA per phase
- Industry's highest surge current repeatability
- All modes transient protection (L-N, L-G, and N-G)
- Form C contact and audible alarm status indications
- Internal/external monitoring, including neutral to ground
- EMI/RFI filtering
- Five year limited warranty

### Applications

- Industrial plants
- Commercial buildings
- Institutional facilities
- Electronics based equipment

### Related Products

- Power Conditioners
- Uninterruptible Power Supplies
- Transformers
- Surge Protective Devices

## STV 100K SERIES SURGE PROTECTIVE DEVICES



The STV 100K series provides the highest levels of hardwired protection with thermal fusing and a fault current fusing level of 65 kAIC. The STV 100K series is perfect for service entrances, branch panels or any dedicated sensitive electronic load.

### Features

- 100,000 amp peak current rating provides all mode protection against severe transients
- Low clamping levels for more effective protection
- 65 kAIC fault current fusing level provides safety and NEC conformance
- LED status and audible alarms
- Compact, rugged metal

### Applications

- Distribution panels (<1200 A)
- Branch, lighting and control panels
- Factory automation installations
- Dedicated industrial equipment

### Related Products

- Power Conditioners
- Uninterruptible Power Supplies
- Drive Isolation & K-Factor Transformers

## STF SERIES ACTIVE TRACKING® FILTERS

The STF series offers the original Active Tracking technology to guard against commonly occurring but very damaging, lower energy transients. Offering excellent noise reduction, the filter continuously tracks the input AC power line and responds instantly upon detecting extraneous high frequency noise.

### Features

- Non degrading, series filter technology for total durability
- High frequency noise filter, RLC Low-Pass filter
- Three phase applications up to 200 Amp
- Attenuates noise to 40 dB in frequency range of 50 kHz to 50 MHz
- Operating temperature from -40°C to +45°C.
- Hardwired connection
- MTBF greater than 100,000 Hours, MIL 217F
- Ten year limited warranty

### Applications

- Branch and control panels
- Factory automation installations
- Point-of-use industrial service equipment



- Dedicated industrial and machine tools equipment
- Telecommunications equipment

### Related Products

- Single and Three Phase Power Conditioners
- Uninterruptible Power Supplies
- Power Supplies

## STFV PLUS SERIES ACTIVE TRACKING® FILTERING WITH SURGE PROTECTION

The STFV Plus series combines Active Tracking® filtration for low-energy noise and surge protection from the high-energy transients caused by turning on machinery, motors and other equipment. The STFV Plus series is designed for years of trouble-free operation and maintenance, and is built to meet your requirements with an available hardwired, single-phase configuration.

### Features

- Non degrading, series Filter/TVSS technology for total durability
- Surge current capacity – 25,000 Amps
- High impact plastic case, epoxy encapsulated enclosure
- Transient protection in all modes (L-N, L-G, and N-G)
- Single Phase applications up to 30 Amp
- Operating temperature from -40°C to +60°C
- Hardwired connection
- LED power indication
- Ten year limited warranty

### Applications

- Branch and control panels
- Factory automation installations
- Point-of-use industrial service equipment



- Programmable logic controllers
- Dedicated industrial equipment
- Telecommunications and IT equipment
- Machine tools equipment

### Related Products

- Power Conditioners
- Uninterruptible Power Supplies
- Power Supplies

## STV 25K DIN RAIL SERIES - SURGE PROTECTIVE DEVICES



The STV25K series provides point-of-use protection, at the dedicated equipment level, against damaging transients. Ideal for installation in electronic control cabinets found in harsh industrial environments such as the factory floor or at remote locations. This DIN Rail series also provides protection on all electrical paths.

### Features

- Compact and narrow design maximizes panel space.
- Low clamping levels for more effective protection.
- Easy access terminal screws for quick mounting and installation.
- 25,000 amps of surge protection.

- Sine wave tracking and all mode protection provide consistent and reliable protection on all electrical paths.
- Thermal fusing prevents MOV overheating caused by excessive current levels.
- Ten year limited warranty

### Applications (20 Amp Max)

- Control cabinets for industrial automation
- Point-of-use industrial/service equipment
- Remote commercial or industrial equipment
- Instrumentation and large test equipment
- Commercial and building automation systems

### Related Products

- DIN Rail Power Supplies
- DIN Rail AC UPS
- Industrial Control Transformers
- Active Tracking® Filters

## STFE ELITE SERIES DIN RAIL ACTIVE TRACKING® FILTERING WITH SURGE PROTECTION



The STFE features a multi-stage design, combining a unique hybrid clamping network with the Active Tracking® Filter technology to provide protection against the full spectrum of voltage transients and surges. It continuously tracks the input AC power line responding instantly upon detecting extraneous high frequency noise and high voltage transients caused by everyday events such as turning on machinery, motors or equipment.

### Features

- Series connected DIN Rail mounted filter
- Surge current capacity – 45,000 Amps

- Transient protection in all modes (L-N, L-G, and N-G)
- Single phase applications up to 20 Amp
- Operating temperature from -40°C to +50°C
- Screw terminal connections
- LED status indication
- Form C contact for remote monitoring
- Five year limited warranty

### Applications

- Control panels
- Factory automation installations
- Point-of-use industrial equipment
- Programmable logic controllers
- Dedicated industrial equipment
- Machine tools equipment

### Related Products

- Power Conditioners
- Uninterruptible Power Supplies
- Power Supplies

## LOW VOLTAGE - DATA/SIGNAL LINE SURGE PROTECTIVE DEVICES



The rapid development of automated controls, telecommunications and fire/security systems has made it imperative to have properly coordinated low-voltage protection. Modern networked industrial facilities require error free transmission of information for maximum productivity and integrity of data.

The SolaHD STC series protects all susceptible low voltage cable routes entering a facility and at key points within the building. These devices can be used as part of a multi-stage protection strategy which involves clamping the initial high-energy impulse, filtering any remaining noise or transients to the PLC or sensitive equipment and finally, protecting the Data/Signal lines entering and leaving the control panel. Modern, networked industrial facilities require error free transmission of information for maximum productivity and data integrity.

The hybrid design of these Data/Signal Line surge suppressors allows them to respond quickly with high energy absorption. These units are available in a variety

of application specific voltage levels and packaging configurations. The STC series is used to protect network signal lines entering or leaving control panels including PLCs, universal remote I/O, DeviceNet™ and Data Highway Plus.

### Features

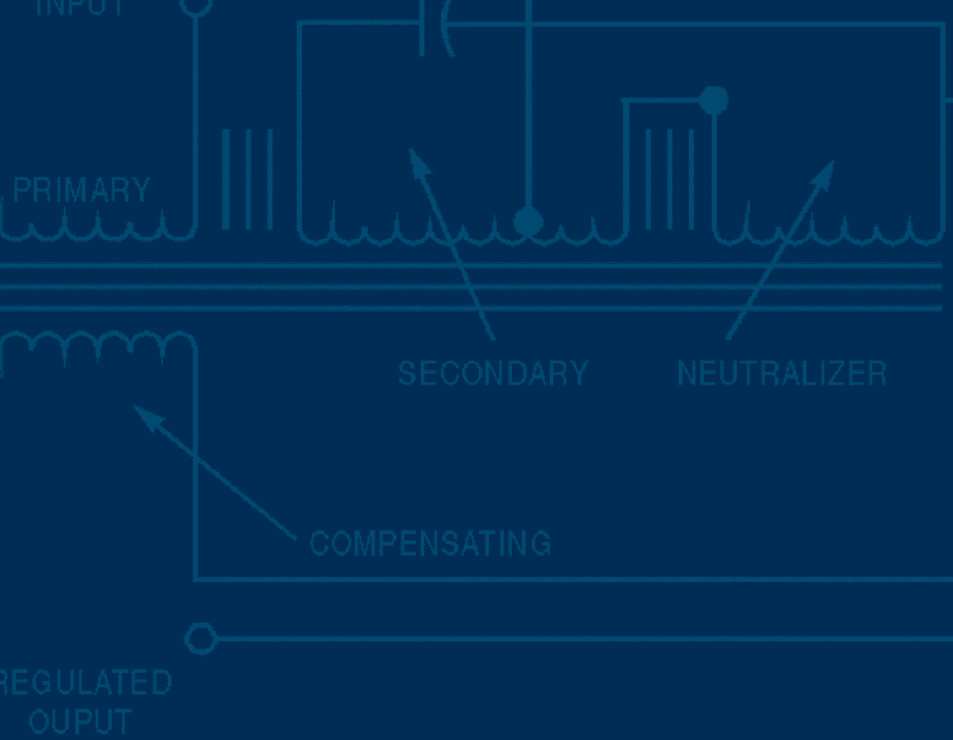
- Low-voltage surge protection
- Hybrid technology
- Fast response time
- Low profile packaging
- Easy installation

### Applications

- STC-PoE: Ethernet and Power-over-Ethernet, Category 5 & 6
- STC-DRS: DIN Rail mountable, single pair surge protection
- STC-642: Two-pair data/signal protection
- STC-CCTV: High-frequency coaxial protection for head and camera ends

### Related Products

- Power Conditioners
- Uninterruptible Power Supplies
- Surge Protective Devices
- Active Tracking® Filters
- Power Supplies



# POWER CONDITIONERS

Power quality disturbances, including the smallest change in voltage level, can lead to unscheduled downtime, failed operations, incorrect data and scrapped production. Computerized and electronic automation equipment require clean power that is free from damaging impulses, brownouts, harmonics, swells and sags. The most effective means for optimizing and protecting production efficiencies is with dedicated power conditioning solutions.

SolaHD is the market leader in power conditioning equipment for industrial facilities. Our product line is built on our dedication to provide the most efficient, reliable and effective protection for your sensitive production equipment. SolaHD power conditioning solutions deliver tightly regulated voltage with superior noise attenuation. Additionally, our units are maintenance-free and built for harsh electrical environments.



## MCR HARDWIRED AND PORTABLE SERIES – POWER LINE CONDITIONERS WITH VOLTAGE REGULATION



The MCR series provides excellent noise filtering and surge protection to protect connected equipment from damage, degradation or misoperation. Combined with the excellent voltage regulation inherent to SolaHD's ferroresonant design, they can increase the actual Mean Time Between Failure (MTBF) of protected equipment.

### Features

- $\pm 3\%$  output voltage regulation
- Noise attenuation
  - 120 dB common mode
  - 60 dB transverse mode
- Surge protection tested to ANSI/IEEE C62.41 Class A & B Waveform (<10 V let-through typical)

- Harmonic filtering
- Galvanic isolation provides exceptional circuit protection
- Point-of-use protection (cord and plug connected)
- Easy and flexible installation
- 25 year typical MTBF
- No maintenance required
- Ten + two year limited warranty

### Applications

- Computers/printers
- Telephone/FAX systems
- POS terminals
- Security systems
- Laboratory equipment
- LAN networks

### Related Products

- DIN Rail AC UPS (SDU)
- Off-Line UPS (S1K Mini-Tower)
- Line-Interactive UPS (S3K Mini-Tower)

## CVS HARDWIRED SERIES - CONSTANT VOLTAGE TRANSFORMERS



Superior voltage regulation of  $\pm 1\%$  sets the CVS series apart from other power conditioning technologies on the market. Extremely tight regulation is accomplished by SolaHD's ferroresonant transformer technology. The CVS recreates a well regulated sinusoidal waveform that is isolated from input disturbances.

### Features

- Superior voltage regulation of  $\pm 1\%$
- Surge protection tested to ANSI/IEEE C62.41, Class A & B Waveform
- Harmonic filtering
- Hardwired
- Acts as a step-up/step-down transformer
- Galvanic isolation provides exceptional circuit protection
- 25 year typical MTBF
- No maintenance required
- Ten year limited warranty

### Applications

- Industrial automation and control equipment PLCs
- Analytical laboratory and factory automating equipment
- Photo processing equipment
- Sound/recording systems
- Photographic enlargers
- Broadcast equipment

### Related Products

- On-Line UPS (S4K Industrial)
- Surge Protective Devices
- Three Phase Power Conditioners
- Active Tracking® Filters

## SOLATRON™ PLUS SERIES – THREE PHASE POWER CONDITIONERS



The rugged design of the SOLATRON™ Plus series ensures high performance through inductive loads and poor power factor. It handles many power quality problems including isolation, voltage regulation and surge protection.

### Features

- Rugged, industrial design
- High overload capability
- High MTBF - No fans used
- No power factor restriction on loads
- Tight regulation (regulate output voltage to  $\pm 3\%$ ) for protection against sag (-25%) and swell (+10%) conditions
- Fail-safe, no-break, auto-bypass
- Status indicating lights
- Shielded, copper wound isolation transformer
- Surge protection to ANSI/IEEE and IEC Standards
- High efficiency (96%) microprocessor controlled tap switcher
- Automatic under voltage protection
- Two year limited warranty

### Applications

- Automatic packaging machinery
- Large machine tool equipment
- UPS bypass circuits
- Retail store
- Process equipment

### Related Products

- STV 100K Surge Protective Device
- Isolation Transformers





The image shows a technical drawing of a DIN rail UPS unit. The drawing includes several dimensions: 575,3 and 602,3 for the main body width; 98,5, 98,5, 98,5, and 159 for the spacing between components; 42,5 for a specific component width; 23 and 40 for vertical dimensions; and 29,7 and 26 for horizontal dimensions. The drawing is rendered in a light blue color on a dark blue background.

# UNINTERRUPTIBLE POWER SUPPLIES

Total protection of your production line isn't complete without guarding against momentary and long term power interruptions. Power interruptions can occur unpredictably and with little or no warning. What they can leave behind is ruined production batches, damaged equipment and lost data. An Uninterruptible Power Supply (UPS) prevents power interruptions from affecting production momentum and equipment by seamlessly switching to back-up battery power the instant it detects a voltage irregularity.

SolaHD is at the forefront of UPS technologies for industrial applications. We have a full range of Off-Line, Line-Interactive and On-Line UPS systems. SolaHD was also the first to offer DIN Rail mountable UPS systems. Their compact design and wide operating temperature range has made them the choice for facilities around the world. SolaHD pioneered the DC UPS as well. The DC UPS is the most efficient way to protect equipment running on 24V DC power. The DC UPS offers the advantages of reducing the number of AC to DC conversions from three to one. This enables the DC UPS to eliminate unnecessary energy losses and heat build-up for greater efficiencies and a longer life.

## SDU SERIES, DIRECT CURRENT UNINTERRUPTIBLE POWER SUPPLY (DC UPS)



The SDU DIN Rail DC UPS is an advanced 24 Vdc uninterruptible power supply that offers rugged and compact housing, wide operational temperature range and unique installation options. With an input voltage range of 22.5 to 30.0 Vdc, the DC UPS is the ideal back-up power solution for your critical connected loads.

The SDU DC UPS provides higher conversion efficiencies by reducing the number of times power is converted from AC to DC and back. These efficiencies enable maximum system up-time flexibility and optimized reliability assurance.

### Features

- Modular, rugged industrial-grade design
- Microprocessor based controls
- Automatic self-test feature for UPS function and battery management check
- Wide power module operation temperature range from -20 to +50°C
- Flexible batteries back-up expansion capabilities
- Overload protection in normal and battery modes
- User replaceable batteries
- IP-20 rated input and output screw terminals
- No internal fan, no extra cooling required

### Applications

- Industrial/machine control
- Computer-based control systems
- Conveying equipment
- Material handling and packaging machines
- Semiconductor fabrication equipment
- DeviceNet™
- Amusement park equipment
- Pharmaceutical applications
- Control rooms

### Related Products

- SDN-P Series
- SDN-C Series
- STV 25K Series

### Why use a DC UPS?

AC UPS products have traditionally taken on battery back-up requirements for industrial applications. Why did SolaHD develop the DC UPS? What are the advantages?

Initially, AC UPS systems were designed for environmentally controlled data centers and offices. These systems typically require a cooling fan because of their tendency to generate fair amounts of heat. In hot, dusty industrial environments, the ability for the fan to cool the unit becomes challenged, translating into lower Mean Time Between Failure. The AC UPS generates extra heat, and consumes more energy, because the 120-volt AC power from the wall is converted three times to charge the batteries and power the control system. AC UPS's are also typically designed for 19" rack mounts. This makes them large and cumbersome for shallow NEMA control panels. The result is that many AC UPS systems are not compliant with UL508, which is required for control panel mounting.

### The SDU DC UPS was designed for manufacturing.

Our DC UPS reduces the number of times power is converted from three times to just one time. This enables a more compact packaging that allows the DC UPS to be DIN Rail mounted within control panels.

SolaHD's DC UPS features DIN Rail mounting capabilities, high MTBF, UL 508, CE and FCC compliance. Battery performance is degraded by over and undercharging. For enhanced reliability, we fitted our SDU-series with a microprocessor brain that enables the unit's power charger to maintain the 24-volt charge needed for maximum battery life. Heat is another enemy of battery performance. Our DC UPS enclosure was designed to protect the battery in operating temperatures as high as +50°C.

The SDN DC UPS also offers a host of essential operational and diagnostic features that are required by today's modern production facilities:

- LED indicators of control power source and battery conditions
- Remote monitoring, diagnostics and shutoff capabilities
- Overload protection in both normal and battery modes
- Automatic self-testing of the control power source functionality and battery condition
- Universal system monitoring relay terminals



## SDU SERIES, DIN RAIL AC UPS

The SDU DIN Rail AC UPS combines an industry-leading compact design with a wide operating temperature range and unique installation options for economical protection from damaging impulses and power interruptions. These units include easy-to-wire screw terminations for critical devices, such as computer-based control systems, that require a battery back-up.

### Features

- Lightweight, compact industrial design
- Wide operating temperature range (0-50°C)
- Cold start capability
- Phone/dataline surge protection
- Software and cable included for easy installation
- Simulated sinewave output
- RS232 communication port
- USB communication port (optional)
- Form C dry contact relay (optional)
- Panel/Wall mounting brackets (optional)
- Remote turn-on and shut-off capabilities
- Two year limited warranty



### Applications

- Programmable logic controllers
- Factory automation
- Robotics
- Conveying equipment
- Computer-based control systems

### Related Products

- Power Conditioners
- STV Surge Protective Devices
- SDN DIN Rail Power Supplies
- STFV Plus Active Tracking® Filters



## S1K MINI TOWER OFF-LINE UPS

The S1K series delivers cost-efficient protection to your critical and sensitive electronic equipment by preventing damaging impulses and power interruptions. These units include outlets for both critical devices that require battery back-up and non-critical devices that do not. The S1K is ideal for office and POS use.



### Features

- Lightweight, compact design
- 4 NEMA 5-15R outlets, (3 Battery, 1 Surge)
- Data-line surge protection for phone or network included on every unit
- DB9 communications interface
- Software and cable included
- Step sinewave output
- Two year limited warranty

### Applications

- PCs
- Workstations
- Computer terminals

### Related Products

- Surge Protective Devices
- Active Tracking® Filters
- Portable MCR Power Conditioners

## S3K MINI TOWER LINE-INTERACTIVE UPS

The S3K series is an economical choice for those applications requiring the performance of a sinewave output, line interactive UPS with the mini tower shape for cabinet installations. The S3K Series protects against most severe power disturbances including over/under voltages through state-of-the-art, line-interactive technology.

### Features

- Automatic voltage regulation (AVR) topology saves battery power for deep voltage sag situations
- High performance sine wave output
- Mini Tower design for control cabinet installation
- Built-in surge protection
- Cold start capability
- Telephone/Modem spike protection
- Power Management software is included (UPSMON)
- 50/60 Hz auto sensing
- Fully digitized, microprocessor controlled
- Two year limited warranty

### Applications

- Industrial automation systems
- PLCs
- Robotics and process control



- Workstations
- Automatic service and dispensing equipment

### Related Products

- Portable MCR Power Conditioners
- Surge Protective Devices
- Active Tracking® Filters



## S4K2U-C AND S4K2U-5C INDUSTRIAL ON-LINE SERIES



The true on-line, double conversion protection offered by the S4K Industrial UPS series eliminates an extensive range of potential power problems, such as spikes, surges, extended overvoltage, transient noise, sags and extended brownouts. The S4K also protects equipment from difficult-to-track harmonics and dangerous frequency variations that are common with standby generator operation.

### Features

- Small 2U height maximizes available space
- Hardwire capability allows for permanent installation in rugged industrial environments

- Flexible; includes rack or tower mounting accessories standard with each unit
- Easy-to-connect add on batteries for extended runtimes
- Hot swappable, user replaceable battery
- Automatic and manual battery test
- Integral dynamic bypass reduces shutdowns
- Compatible with most standby generators
- Input and output noise suppression
- Two year limited warranty

### Applications

- Robotics and process controls
- Industrial automation systems
- Network servers
- Enterprise telecommunication systems
- Printing and publishing machinery
- Industrial and commercial machinery

### Related Products

- CVS Hardwires and Portable MCR Power Conditioners
- Surge Protective Devices
- Active Tracking® Filters

## S4K-C 6 KVA AND 10 KVA INDUSTRIAL ON-LINE UPS

The S4K-C 6 kVA and 10 kVA Industrial UPS series are the first true On-Line industrial UPS that provide flexible output voltage, an integrated maintenance bypass switch and internal batteries all in slim 4U (7.0") and 6U (10.5") enclosures respectively.

### Features

- True double conversion topology
- Both models offer 208/120V or 240/120V
- Configurable as a tower or rack mount
- User replaceable, hot-swappable internal battery module
- Extended battery cabinets available
- Includes both automatic and manual maintenance bypass switch
- Automatic frequency detection (60 or 50 Hz)
- Power Factor Correction
- Remote Emergency Power Off (REPO)
- Intellislot Communication port
- Two year limited warranty

### Applications

- Robotics and process controls
- Industrial automation systems
- Network servers



- Printing and publishing machinery
- Industrial and commercial machinery
- Pharmaceutical and medical diagnosis equipment

### Related Products

- Portable MCR Power Conditioners
- Surge Protective Devices
- Active Tracking® Filters



The S5K Modular series is scalable from 4 to 20 kVA offering many flexible options by adding a few standard modules. Designed to be fully configured, tested and shipped in the configuration you need, the S5K also can be easily upgraded in the field to higher VA ratings (up to 20 kVA maximum), longer runtimes or to add N+x parallel redundancy.

### Features

- Scalable for capacity, redundancy or battery run time offering unbelievable flexibility
- Built-in intelligence is provided for each individual module using microprocessor controls, increasing functionality, communications and reliability

- N+x parallel redundancy is easily achieved by adding extra control, power and battery modules
- Multiple and simultaneous communication ports
- Automatic internal bypass for maximum availability of output power
- Power factor corrected input reduces reflected distortion and optimizes utility power
- Two year limited warranty

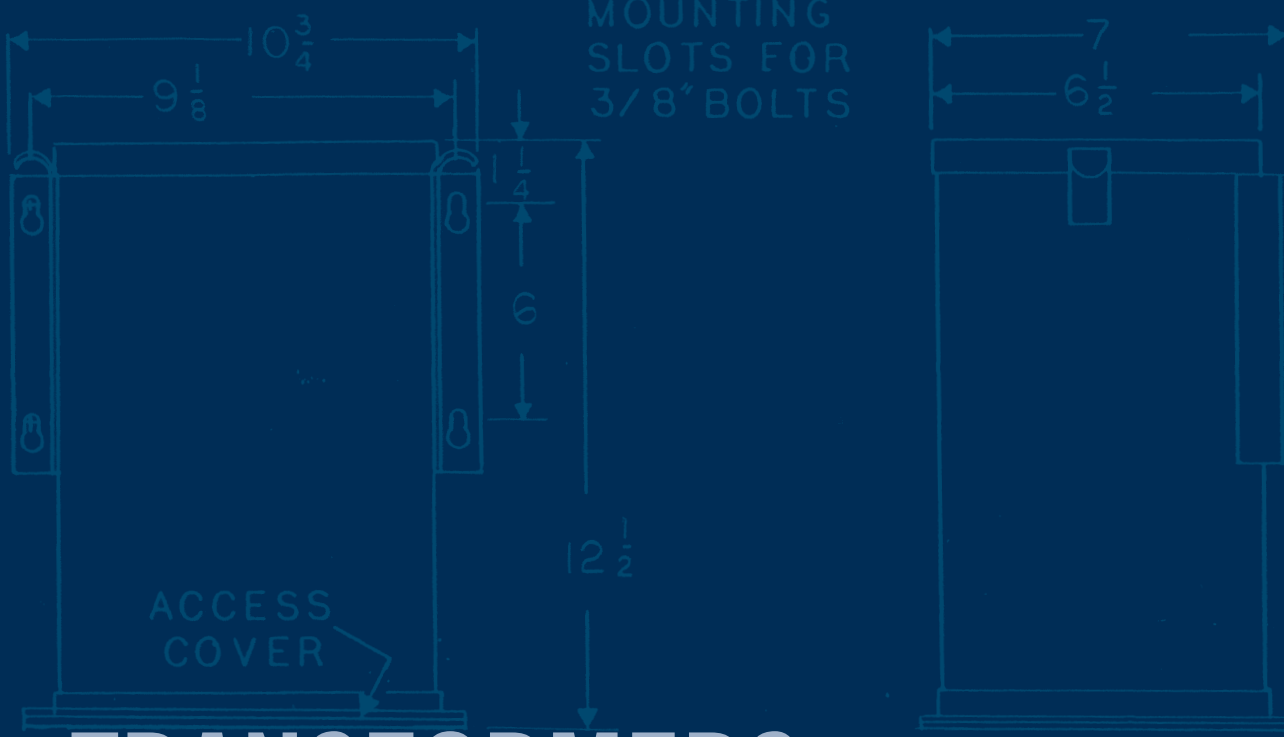
### Applications

- Network servers
- Enterprise telecommunications systems
- LAN gateways, bridges and routers
- Mini-computers, superservers and server clusters
- Clusters of PCs or workstations and peripherals
- Raid arrays and other large scale data handling systems

### Related Products

- STV 200/400K Surge Protective Devices
- Automation Transformers Non-Ventilated 50 VA to 45 kVA





# TRANSFORMERS

Reliably converting the voltage coming into facilities starts with heavy duty transformer technology. Industries are challenged in procuring the transformer that can safely, efficiently and reliably deliver the proper voltage for their specific needs.

SolaHD offers a broad range of transformers for applications across manufacturing facilities. Our distribution and automation transformers cover general purpose, low temperature rise, K-Factor, copper wound, hazardous location, buck-boost, drive isolation and industrial control applications with proven technologies and industry standard certifications. Picking the right transformer from this group depends on the load, temperature, space or usage conditions. Because these environmental factors can drastically affect transformer performance, SolaHD is ready to help you specify the right transformer design with an experienced Technical Services department and online resources that are available 24/7. SolaHD can also custom build transformers for specialty applications that require unique size and performance capabilities.

## DRIVE ISOLATION TRANSFORMERS: 7.5-440 KVA, THREE PHASE



Drive Isolation Transformers are specifically designed to handle the mechanical stresses, voltage demands and harmonics associated with SCR applications.

### Features

- Available from 7.5 thru 440 kVA, 3 Phase, 60 Hz
- Isolation minimizes load disturbances caused by the SCR drive
- UL Listed/NEMA Type 3R enclosures when used with optional weather shield
- Taps on all units for adjustments to incoming source voltage
- Full capacity secondary neutral as required by the National Electric Code
- Shielding attenuates line to ground noise
- Ten year limited warranty

### Applications

- SCR variable speed drives

### Related Products

- Surge Protective Devices
- K-13 Rated Transformers for Variable Frequency Drives

## SMT SERIES – ALUMINUM WOUND, OPEN STYLE: 1000-5000 VA



The SMT series is economical and compact with traditional open wound varnished coils. It features a class 180°C insulation system and 115°C rise under full load. SMT transformers provide excellent cost benefits with NEMA regulation characteristics and electrical performance specifications.

### Features

- Available from 1000–5000 VA, 60 Hz unless noted
- Meets or exceeds electrical requirements of NEMA, ANSI, NMTBA and JIC

### Applications

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers

## SBE ENCAPSULATED CONTROL TRANSFORMERS: 50 – 1000 VA

SBE Industrial Control Transformers are epoxy encapsulated to seal the transformer windings against moisture, dirt and industrial contaminants. Extra deep, molded terminal barriers reduce the chance of electrical failure resulting from arcing or frayed lead wires. The rugged construction and proven reliability of the SBE design is uniquely suited for all industrial environments.

### Features

- 50 - 1000 VA, 50/60 Hz – suitable for worldwide applications
- Interleaved copper windings reduce I<sup>2</sup>R losses and maximize efficiency
- 55°C rise, 105°C insulation system to minimize heat
- Epoxy encapsulated to protect cores and coils against moisture, dirt and other contaminants
- Meets or exceeds NEMA Standard ST 1 and ANSI C89.1 for load inrush capability
- Integrally molded, flame retardant (IEC 707 / ISO Class 1210) Terminal Blocks provide greater terminal contact area and improved conductivity
- Ten year limited warranty



### Applications:

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers

## SBE COPPER WOUND, OPEN STYLE: 1500 – 5000 VA



The open style SBE series provides voltage regulation in excess of NEMA recommendations without exceeding 55°C rise. These higher power capacity transformers are the best choice when 80% or more of the load components are electromagnetic devices.

### Features

- Interleaved copper windings reduce I<sup>2</sup>R losses and maximize efficiency.
- Ratings 60 Hz unless noted 50/60 Hz

- Meets or exceeds electrical requirements of NEMA, ANSI, NMTBA and JIC
- 55°C rise, 105°C insulation system
- High quality silicon steel core

### Applications

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers



## ICE INTERNATIONAL SERIES: 750 – 2000 VA



International CE marked transformers include IP20 touchproof terminations and copper windings in an encapsulated design. The design is highly flexible due to the use of the standardized primary coil for multiple worldwide voltage combinations.

### Features

- IP20 touch-proof terminals
- Copper windings
- Epoxy encapsulated for cooler operation and increased reliability

- 80°C rise temp, 130°C insulation system for harsh, heavy-duty standards
- 50/60 Hz Frequency
- Meets or exceeds electrical requirements of NEMA, ANSI and IEC

### Applications

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- DIN Rail Power Supplies
- 63 Series Power Conditioners
- Surge Protective Devices

## HSZ SERIES INDUSTRIAL CONTROL TRANSFORMERS: 1000 - 10,000 VA



The HSZ series of industrial control transformers is designed for applications where cost or heat issues require the transformer to be mounted outside of the control panel.

### Features

- UL Class 180°C insulation system, 80°C temperature rise under full load
- Meets or exceeds NEMA regulation standards
- Copper windings
- Encapsulated

### Applications

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers



## LOW VOLTAGE GENERAL PURPOSE TRANSFORMERS

Our transformers have provided distributed power in the most demanding environments for the past 90 years. They feature full isolation with shielding and NEMA-3R, NEMA-4/12 and NEMA-4X stainless steel optional enclosures.

### Features

- UL Listed/NEMA Type 3R ventilated outdoor enclosures when used with optional weather shields (order separately)
- UL Class 220°C insulation system, 150°C temperature rise under full load
- Terminal board connections and spacious wiring compartment
- Panel enclosure design reduces labor time. Wiring diagram on inside front cover.
- High efficiency for low cost operation
- Compliant to NEMA TP-1 Standards
- Single and three phase availability
- Fast delivery
- Ten year limited warranty



### Applications

- Office/commercial buildings
- Shopping centers
- Municipal/institutional buildings
- Hospitals

## K-FACTOR TRANSFORMERS



K-Factor Transformers are designed to reduce the heating effects of harmonic currents. The K-Factor rating is an index of the transformer's ability to withstand harmonic content while operating within the temperature limits of its insulating system. SolaHD K-Factor transformers have UL ratings of K-4, K-13, and K-20.

### Features

- Conductors to carry harmonics of a K-rated load without exceeding insulation temperature ratings
- UL 1561 listed up to K-20 rated protection
- Rated temperature rise of 150°C, 220°C insulation
- Shielded for quality power
- Basic design takes "stray losses" into account and functions within safe operating temperatures
- Core and coil design engineered to manage the zero sequence flux caused by triple harmonics
- Provides 100% rated current without overheating the windings or saturating the core

### Applications

- Telecommunications equipment
- Uninterruptible power supplies (UPS)
- Solid state motor drives

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers

## NON-VENTILATED AUTOMATION TRANSFORMERS



### Hazardous Transformers

Encapsulated transformers are rated for use in hazardous locations as well as harsh industrial environments. Encapsulation and rugged NEMA 3R enclosures protect the transformer from dust and moisture while providing extra shock and vibration resistance. UL Listed transformers fully comply with the latest edition of the National Electrical Code for Class I, Division 2, Group A-D locations when installed in compliance with NEC 501.100(B).

### Features

- Encapsulated (suitable for hazardous locations)
- Single phase: .05 – .25 kVA and .50 – 25 kVA;  
Three Phase: 3 – 45 kVA
- Electrostatically shielded for quality power on sizes 1 kVA and larger
- UL Class 200°C insulation system, 115°C temperature rise under full load
- Conduit knockouts for side entry into wiring compartment
- .50 – 45 kVA units are encapsulated with electrical grade silica and epoxy for industrial applications

### Applications

- Industrial plants
- Chemical processing plants
- Water / wastewater facilities
- OEM equipment

### Related Products

- Linear Power Supplies
- DIN Rail DC Power Supplies
- Constant Voltage Transformers

## BUCK-BOOST TRANSFORMERS



These small, single phase, dry type distribution transformers are designed and shipped as insulating/isolating transformers. They have a dual voltage primary and secondary that can be connected for a wide range of voltage combinations. The most common use is to buck (lower) or boost (raise) the supply voltage a small amount, usually 5 to 27%. Buck-boost transformers are in compliance with NEC Article 210-9, Exception 1 when field connected as an autotransformer.

### Features

- Hardshell® encapsulated on sizes 5 kVA and below
- UL-3R enclosures for indoor or outdoor service (some sizes may require the use of weathershields)
- Low cost, smaller, lighter, more efficient to operate than equivalent isolation transformers

### Applications

- Motor loads
- HVAC
- Low voltage lighting (when used as an Isolation transformer)
- Sustained high or low voltage conditions

### Related Products

- Surge Protective Devices
- Active Tracking® Filters



# POWER SUPPLIES

If it uses electrical power, it's probably going to be subjected to voltage sags. These momentary losses of line voltage are one of the most frequent power quality disturbances found in industrial facilities. Normally caused internally by large load start-ups or externally by utility switching, voltage sags prematurely wear machines and computer equipment. The result can be lost data, inexplicable resets or a production shutdown. Most motors, lighting and indicators have some built-in resistance to sags. However, the AC/DC power supply used to power all DC control and logic circuits are often very vulnerable.

SolaHD's legacy is rooted in our renowned power supply solutions. SolaHD products enable production facilities to safeguard almost any equipment application with a complete line of switching and linear power supply technologies. The popular SDN-series is available with a compact housing, visual diagnostics and superior performance, including high Mean Time Between Failure (MTBF) and exclusive PowerBoost™ overload capability. The SDN-series can offer power factor correction for European directives, hazardous location approvals and optional redundant accessories. SolaHD also understands the flexibility requirements of today's modular production lines. That's why we have the largest selection of DIN Rail mountable power supplies for fast installations and reconfigurations.



The SCP-X is a rugged power supply designed for use in extreme environments. The metal case reduces costs by eliminating separate enclosures and the quick change connectors simplify connectivity for distributed I/O devices on industrial machinery. This model provides 24 Vdc output with limited power to meet Class 2 requirements.

**Features**

- IP66/67 Versatile / NEMA 4X Rated
- 24 Vdc, 115/230 Vac, 3.8A Nominal Current
- Listed power supply for stand alone applications
- Can be mounted in any orientation without limitation
- Universal input
- High ambient temperature up to 60°C without derating
- DC OK Green LED
- Worldwide approvals
- Five year limited warranty

**Applications**

- Industrial/machine control
- Process control
- Conveying equipment
- Material handling
- Vending machines
- Packaging equipment
- DeviceNet™
- Amusement park equipment
- Semiconductor fabrication equipment

**Related Products**

- SDN Series
- SDN DeviceNet™ Series

**Sealed Power Supply Produces Greater Cost and Operational Efficiencies**

More and more facilities are turning toward “distributed field power” for machine device control and communication. This has created the need for powerful and efficient field power supplies that can stand up to the heat, water, dust and other performance-robbing conditions of industrial environments.

Typical power supplies have addressed these issues by being mounted inside large and expensive specially-rated enclosures that are located away from the production equipment. Power is routed from the enclosure to the machines via cabling, which creates issues with reliability, maintenance and operator safety.

**Developed Specifically for the Demands of Manufacturing**

The SolaHD SCP-X was designed from the ground up specifically for today’s “distributed field power” plant designs. This stand-alone, self-protected unit eliminates the expense and bulk of non-ventilated enclosures with a rugged aluminum housing that can withstand shocks up to 3G’s. The SCP-X was also engineered with thermal management capabilities that eliminate the need for fans or exterior ventilation. The unit’s passive convection cooling efficiencies are so high, only one inch of free space is required on the sides and front of the unit.

These capabilities allow the SCP-X to be mounted directly onto machines. No expensive separate enclosures are needed. Also less cabling is required between the power supply and the power consuming devices on the machine resulting in cost savings, safer operation and faster installation and maintenance.

## SDN-C COMPACT DIN RAIL SERIES



The SDN-C series combines high efficiency and compact size with new visual diagnostic LEDs. Essential industrial features such as Sag Immunity, Power Factor Correction, and universal voltage input have been retained in this series. Wide temperature operating range and parallel operation capabilities make the new SDN-C units suitable for a variety of industrial applications.

### Features

- Compact packaging saves space on the DIN rail
- Accepts Universal voltage 85 - 264 Vac, 50/60 Hz input
- >90% efficiency

- High MTBF and reliability
- Single phase models meet SEMI F47 Sag Immunity standard
- Active power factor correction
- Parallel capability standard rugged
- Fully tested and burned-in at factory
- User adjustable output voltage accessible via front face

### Applications

- Industrial/machine control
- Process control
- Conveying equipment
- Material handling
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- SDN-P Series
- SDP™ Series
- STFE Elite Series
- SCP Series
- SDU UPS

## SDN-P DIN RAIL SERIES



The SDN-P Series combine industry leading performance with a true industrial grade design. These high quality units meet difficult industrial environmental conditions including high shock, vibration, and wide temperature ranges over the long life cycle of industrial equipment.

### Features

- 60 to 240 Watts, single models
- PowerBoost™ - Powers high inrush loads without shutdown or foldback
- Auto select or universal input for no manual switching
- Industrial-grade design
- -10°C to 60°C operation without derating

- Indefinite short circuit, overvoltage and overtemperature protection
- Rugged metal case and DIN rail clips
- NEC Class 2 rating on SDN4-24-100LP and SDN2.5-24-100P
- Narrow width on rail for space critical applications
- Limited five-year warranty

### Applications

- Industrial/machine control
- Process control
- DeviceNet™ Ethernet

### Related Products

- SDP™ Series
- STFE Elite Series
- SCP Series
- SCL Series
- SDU UPS



The SDN series standard options allow for operation in a wide variety of applications. With the addition of an external redundancy module the SDN can also be used for true redundant operations including 2N and N+x configurations.

### Features

- Smart power “DC OK Relay Contact”
- True isolation
- High availability
- SDN features and quality
- Limited five-year warranty

### Applications

- Process control
- Remote location
- Critical production

### Related Products

- SDP Series
- STFE Elite Series
- SCP Series
- SCL Series

## SCP SERIES, 30 WATT: SINGLE, DUAL AND TRIPLE



The SCP series' compact, rugged switchers are designed to power many of your industrial control and instrumentation devices and equipment. These units provide high reliability and tight regulation through the most difficult factory-floor conditions around the globe. These unique “User friendly” power supplies feature easy-to-install DIN Rail and chassis mounting. Terminations are also easy to access (AC and DC terminations are well separated) and simple to wire. The encapsulated design meets IP20 specifications, and the wide range of voltages will reliably support almost any low-power device in your cabinet or system.

### Features

- International approvals for global use
- Rugged, encapsulated design to resist environment
- IP20 protection

- Many output voltages (3.3-48 Volts; single, dual, triple)
- SCP-MDC - Pair of metal DIN clips
- SCP-PDC - One plastic DIN clip with lever for removal from rail
- UL 60950, E137632, EN60950, CE and IP20
- Limited five-year warranty

### Applications

- Industrial/machine control
- Process control
- Material handling
- Conveying equipment
- Vending machines
- Packaging equipment
- Amusement park equipment
- Semiconductor fabrication equipment

### Related Products

- SDN Series
- SDP Series
- STFE Elite Series
- SCL Series



## SDP™ LOWER POWER DIN RAIL SERIES



The SDP series ranges in output voltages from 5 Vdc to 48 Vdc and features power ratings from 15 to 100 watts. These efficient units are designed specifically for the industrial environment where space is limited. Each unit is rated from -10°C to +70°C, with no derating necessary until after 60°C.

### Features

- No tools required for mounting
- PowerBoost™ industrial overload design
- Overvoltage protection
- Class 2 Limited Power Source for building automation or DeviceNet™
- Continuous short circuit protection
- Low output noise
- Limited three-year warranty

### Applications

- Industrial/machine control
- Process control
- Building automation
- Instrumentation

### Related Products

- SDN Series
- SCP Series
- SCL Series
- STFE Elite Series

## SHP SERIES – HEAVY DUTY MODULAR POWER SUPPLIES



This new generation of high power, intelligent modular power supplies, range from 1500 through 4920 watts and were designed for optimum flexibility. The modular design makes these units easy to customize for unusual voltage and power combinations, and the intelligent modules allow the use of I<sup>2</sup>C or CANBUS/RS485 communication to monitor and control many attributes of the power supply.

### Features

- Available in intelligent and non-intelligent models
- Single, dual and triple output modules configurable in combinations up to 24 different outputs
- Single phase and three phase inputs
- I<sup>2</sup>C control in intelligent modules
- End mounted intelligent fan (speed control/fault status)
- Voltage adjustment on all outputs (manual or I<sup>2</sup>C)
- CANBUS and RS-485 optional interface

- Overload protection on all outputs
- Power factor correction (.99 typ.)
- Configurable output UP/DOWN sequencing
- Modular Construction
- Configurable input and output OK signals and indicators
- Programmable voltage, current limit, inhibit/enable through I<sup>2</sup>C
- Three year limited warranty

### Applications

- Process controls
- Semi-conductor fabrication
- Automated service equipment

### Related Products

- Surge Protective Devices
- SCD DC to DC Converters
- Active Tracking® Filters

## GL SERIES: SINGLE AND MULTI OUTPUT SWITCHERS



The new GL series provides a broad range of AC/DC power supply solutions that covers power ratings from 25 watts to 500 watts for use in various industrial and medical applications requiring standard footprint size and very high reliability (DMTBF = 550,000 hrs.)

These compact, low-profile AC/DC switchers offer universal input voltage with no switches or jumpers, ideal for higher volume worldwide applications.

### All models feature:

- Industry standard footprints
- Universal input
- Full power to 50°C
- High demonstrated MTBF
- Automatic overvoltage protection
- Overload protection
- Latest safety approvals
- Built-in EMI Filtering
- Extensive safety approvals
- Derated operation to 70°C
- 250 VA and higher VA size enclosed
- Two-year warranty

## SILVER LINE SERIES: SINGLE AND MULTI OUTPUT LINEARS

The Silver Line series follows the industry accepted footprint for open frame, linear power supplies. SolaHD improves on this design by offering standard screw terminal connections and optional covers for safety considerations.

### Features

- 15-288 Watts
- Easy-to-install screw terminal connections
- Cover options
- Industry standard footprint
- Universal input and approvals (115/230 Vac)
- Low noise, extremely quiet DC output for noise sensitive or analog circuitry.
- Fast transient response ideal for test applications.
- Built-in OVP on 5 V models and optional on 12, 15 and 24 V models
- Automatic resetting overload protection
- Short circuit protected
- Limited two-year warranty



### Applications

- Industrial control circuits and components
- Instrumentation
- Drives
- CNC machinery
- Equipment for food industry
- Microprocessor circuits
- Analog circuits
- Noise sensitive circuitry and sensors
- Test equipment

## SCD SERIES, ENCAPSULATED, INDUSTRIAL DC TO DC CONVERTER



The SCD series is a compact, rugged DC to DC converter designed to power industrial control instrumentation devices and equipment where AC power is not convenient or accessible. With high reliability and a wide input range, these units can operate through the most difficult factory-floor conditions around the globe.

### Features

- DIN Rail or Chassis mount by removing DIN clips
- Rugged, encapsulated design to resist environment
- IP20 protection
- Wide 20 to 72 Vdc input range
- M3 screw clamp terminations
- Simple snap-on for DIN Rail TS35/7.5 or TS35/15
- Galvanic isolation
- Limited five-year warranty

### Applications

- Industrial - encoders, special sensors, communications and instrumentation
- Telecommunications systems
- Remote site/harsh environment

### Related Products

- SDN Series
- SDP™ Series
- SCL Series
- STF Series



SolaHD has been providing power-conversion and power quality solutions for over 90 years. Our full line of premium products features proven technologies that protect operations throughout your facility for improved efficiency, productivity and longevity.

Emerson Industrial Automation brings integrated manufacturing solutions to diverse industries worldwide. Our comprehensive product line, extensive experience, world-class engineering and global presence enable us to implement solutions that give our customers the competitive edge.

For over 150 years, our electrical product brands have been providing a rich tradition of long-term, practical, high-quality solutions with applications ranging from the construction and safe operation of petrochemical and process plants to the provision of quality power that precisely controls automotive robotic production.

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This group manufactures a broad range of electrical products including conduit and cable fittings, plugs and receptacles, enclosures and controls, conduit bodies and industrial lighting. Whether the application is hazardous location, industrial, or commercial, the ECM group has the products to meet your needs.

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This group offers the broadest power quality line, including UPS, power conditioners, voltage regulators, shielded transformers, surge suppression devices and power supplies.

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This group offers a broad range of electrical heating cable products for residential, commercial, and industrial applications.

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