

# Custom UPS Systems

For Critical AC and DC Applications



**THE POWER OF QUALITY**



**Solarcraft delivers long-term savings  
and built-to-last products for your  
mission-critical operations.**

**Solarcraft**<sup>™</sup> **THE POWER OF QUALITY**

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# THE POWER OF QUALITY

Since 1994, THE POWER OF QUALITY has guided the way we do business. Solarcraft started out by designing and building small solar power systems for *critical electronics in remote locations*. As utility power became more accessible in the field, we developed uninterruptible power supply (UPS) systems. Like our solar power systems, our UPS power systems are designed for powering critical loads through worst case scenarios.

We build a full range of enclosures, control panels, equipment racks, and shelters. All power components are housed in rugged enclosures. Very often, the critical

load components are integrated in the same enclosure, resulting in a stand-alone solution specific to the customers' requirements, reducing footprint and cost.

QUALITY – in design, materials, workmanship, service, and most of all, in people, is fundamental to our business approach. Solarcraft takes pride in continually improving our processes and products, seeking innovative solutions, and building the highest quality, most reliable power systems in our industry. To our customers, the Solarcraft name is synonymous with quality. That's what we mean by **THE POWER OF QUALITY.**

## Capabilities

- Engineering and Design
- Metal Fabrication
- Electrical Integration and Programming
- CID2 Standards for Hazardous Areas
- On Site Commissioning and Field Service

## Applications

- Communications
- Data Centers
- Food and Beverage
- Harsh Environments
- Oil and Gas
- Outdoor Industrial
- Renewable Energy
- Seismic
- Server Rooms
- Traffic
- Transportation
- Utilities

*The bitterness of poor quality remains long after the sweetness of low price is forgotten.*

-Benjamin Franklin



On display in our showroom are examples of Solarcraft power systems, including this UPS+Solar Hybrid system for PLC, Communications, and power distribution.

Established  
1994

## Introducing Our Factory

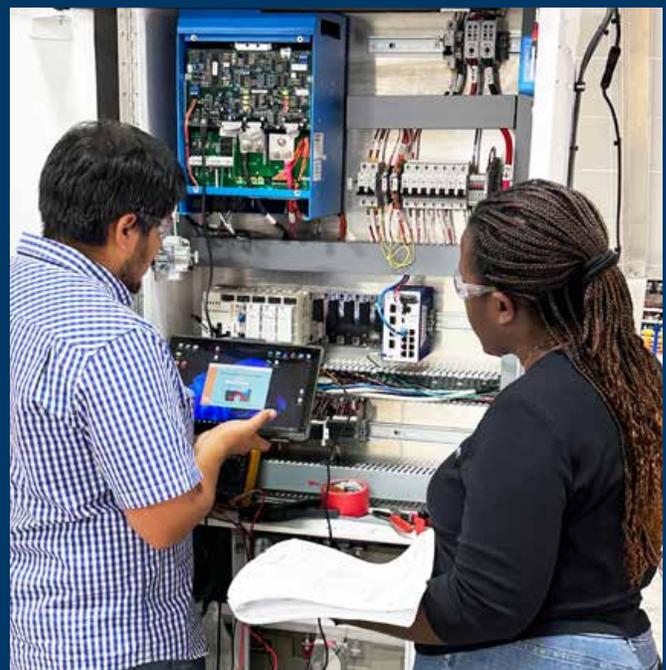
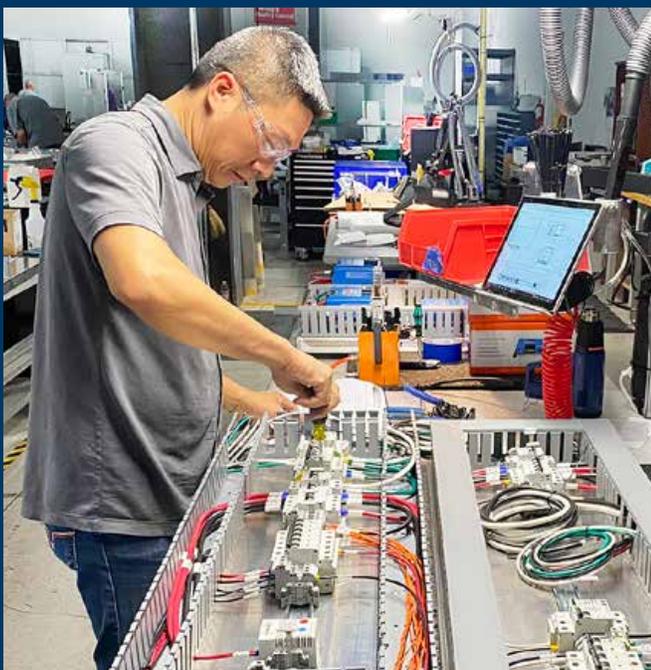
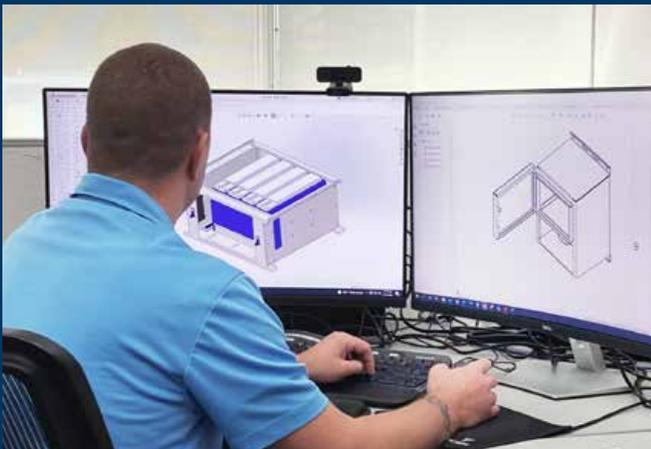
Solarcraft designs and builds power solutions at our 36,000 square-foot facility in Sugar Land, Texas USA.

Solarcraft's Engineering Department is key to product development, design and innovation. Our team designs custom power solutions — evaluating load parameters and selecting components — to produce schematic and fabrication drawings for your approval.

Our Fabrication area features an Amada laser cutter, press brake, and welding bays. We design and manufacture all our metal components — from large steel skid bases and 10'x10' shelters to enclosures, switch racks, backplanes, brackets, and racking.

In our UL 508A Certified Wiring and Integration area, the latest automated machines precision cut, label, and ferrule batches of wire directly from schematic drawings, making panel wiring and component integration accurate and efficient. Our wiring technicians' workstations are custom built for efficiency, complete with laptops for reading schematics.

Our proprietary operations software tracks jobs through every stage of the process: from Quotation and Purchase Order, to Engineering, Fabrication, Wiring, Final Assembly, Inspection, Testing and shipping. We are proud of our facility, and invite clients tour Solarcraft and see how our systems are built.



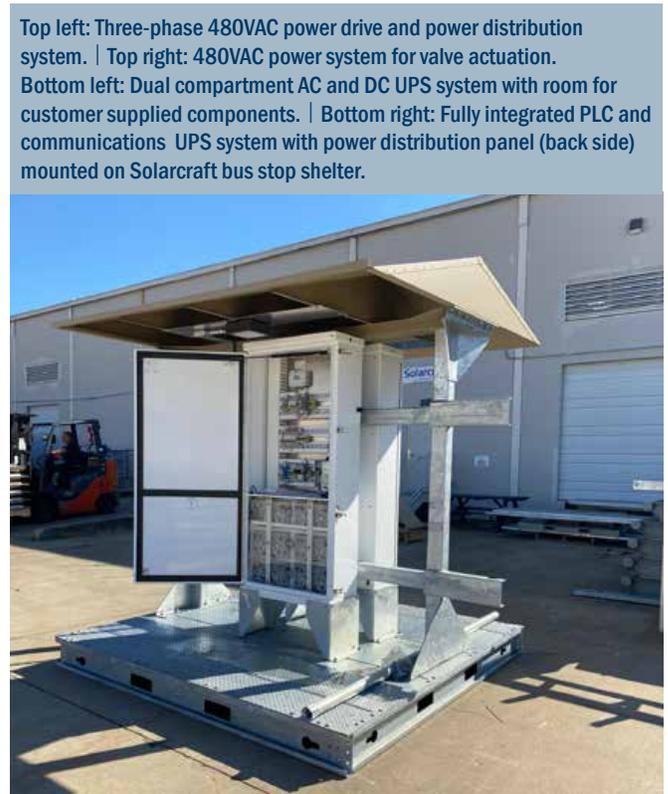
## How are Solarcraft's UPS systems different?

Solarcraft's niche is building rugged UPS solutions for critical loads where an "off-the-shelf" solution will not suit the requirements. Our clients need continuous power under a range of conditions and power requirements. These include outdoor and remote location, temperature sensitive, hazardous area, differing loads, and motor-driven requirements to name a few.

Solarcraft engineers work with clients to recommend the ideal topology to suit the application and operational conditions. There are many factors that affect the design.

Load characteristics such as sensitivity of the equipment to power switching, local utility power quality, heat buildup, back-up time, physical footprint, environment, and budget are all design considerations. Systems are built one at a time or in multiple quantities, as needed to meet the project's requirements.

What also sets Solarcraft apart is our ability to integrate all power and load components together in a single enclosure or shelter. An integrated solution saves time, space and cost, delivering a stand-alone turnkey system.



Top left: Three-phase 480VAC power drive and power distribution system. | Top right: 480VAC power system for valve actuation. Bottom left: Dual compartment AC and DC UPS system with room for customer supplied components. | Bottom right: Fully integrated PLC and communications UPS system with power distribution panel (back side) mounted on Solarcraft bus stop shelter.

## AC-UPS and DC-UPS Systems

Solarcraft builds a range of AC and DC UPS systems, as well as hybrid systems where both AC and DC power are present. An example of a hybrid system is powering an AC electric motor as well as DC powered PLC's and communication equipment.

Another type of hybrid system combines solar for backup when utility line power goes down, for remote areas that are prone to lengthy power outages caused by weather.

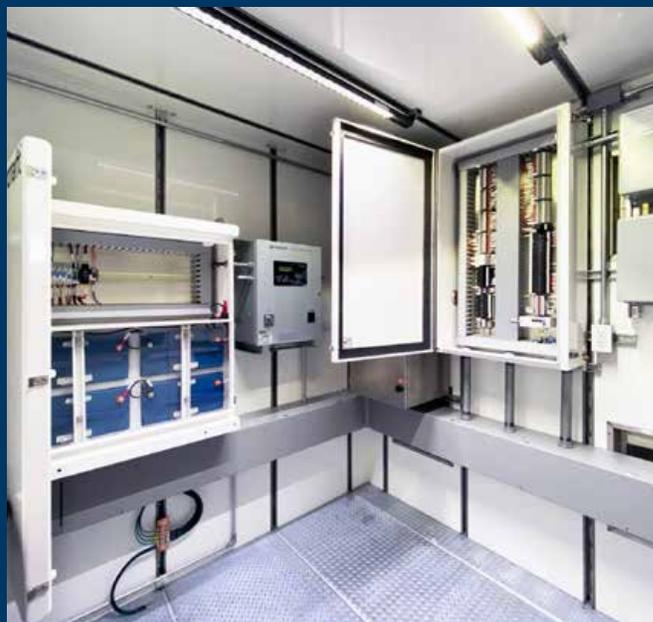
Certified CID2 systems for hazardous locations are also available.

### AC UPS Systems

- Single-phase 120VAC, 208VAC, 240VAC output
- Three-phase, any output up to 480VAC, 50Hz or 60Hz
- DC Output voltages of 12VDC, 24VDC, 48VDC, -48VDC, 120VDC
- On-board integrated controls and communication assemblies
- Custom backup time

### DC UPS Systems

- Output voltages of 12VDC, 24VDC, 48VDC, -48VDC, 120VDC
- On-board integrated controls and communication assemblies
- Custom backup time



Top: Gas analyzer with UPS system, junction box, and control panel inside our thermal efficient equipment shelter. | Below left: Point of interconnect with metering, RTU, communications, switches, and battery backup for utility power distribution. | Below: Fully integrated RTU and electrical equipment shelter, with UPS system (shown inside left of door).





Top left: Outdoor multi-camera custom enclosure with battery-backup power and communications. | Top right: Solarcraft integrated electrical equipment shelter with dual-door RTU/PLC UPS system, junction box, ➔



customer equipment and lighting. | Bottom left: Fully integrated Hybrid AC/DC UPS system with PLC's, communications, and I/O's panels. Bottom right: Hybrid AC/DC UPS power system for block valve.



## Custom Features

Solarcraft offers a variety of options such as externally mounted controls, HMI screen sun shields, dual compartments for AC and DC components, fold-down laptop shelves, internal LED lighting, insulation, stainless steel or powder-coated aluminum, and more.

Standard 19" racking is available, as is custom-designed racking.



## Solarcraft DC-UPS 100W and 200W Power Supplies for critical DC loads

Solarcraft's DC-UPS is both a battery charger and a primary power supply, designed to be combined with storage batteries for a true on-line UPS. This combination produces clean, uninterrupted power to critical DC loads. In the event of a utility power surge or outage, the Solarcraft DC-UPS supplies back-up power for hours, or several days depending on the load and battery capacity.

Solarcraft's DC-UPS has many well-integrated and unique features and is available in three sizes: 12-Volt 100W, 24-Volt 100W, and 24-Volt 200W.



## Features and Benefits

- Low Voltage Disconnect (LVD) protects batteries from excessive discharge resulting in permanent battery damage
- True universal input – 47-66 Hz, 85-265 VAC (automatic, no jumpers); 110-370 VDC input
- Power-Factor-Corrected Input – prevents harmonic degradation of the AC power line feeding the system
- Constant-Current Limited Output – avoids shutdown problems
- Temperature Compensated Output – provides proper voltage for battery charging over wide temperature range
- Low Noise Output – allows use with sensitive electronics used in control, monitoring, and communications
- Zero Transfer Time – provides continuous load power
- Wide Operating Temperature – makes it suitable for indoor or outdoor use (-20 to 60°C, -4 to 140°F)
- Isolated Form C Alarm Contacts – provides remote signaling, or may be used to shed loads when AC power fails
- Status Indicators – provides quick visual system status

- Reverse Battery Protection – with a replaceable fuse protects the DC-UPS and your loads
- Rugged Aluminum Chassis – for trouble-free service in harsh industrial or remote applications

## Applications

- PLC's and RTU's
- Radio Base Stations and Repeaters
- SCADA Systems
- Tower and Obstruction Lighting
- Remote Telemetry
- Video Cameras
- Gate Openers
- Security Systems
- Roadway Caution Signs
- LED Traffic Controls
- Communication Back-up Power

## Industry Leading 5-Year Warranty

At Solarcraft, all our products come standard with a 5-YEAR WARRANTY. Solarcraft warrants that our products will be free of defects in workmanship and materials at the time of shipment, for a period of five years from the date of shipment.

We are proud to offer this industry-leading, 5-Year Warranty to our customers for no additional cost.

## Additional Solarcraft Offerings

- Solar Power Systems
- Battery Cabinets and Racks
- Bus Stop/Switch Racks
- Modular Thermal-Efficient Equipment Shelters
- Electrical RTU Shelters/Enclosures
- Concrete Anchor Blocks and Heavy Duty Skids
- Industrial-Grade Modular/Movable Solar Arrays and Skid Solutions
- CID2 Standards for Hazardous Areas



Top row: Solar-powered electric block valve actuator on pipeline. | RTU electrical, communications, and control shelter built on elevated structure to raise it above river bed flood plane. Bottom row: Thermal-efficient insulated electronics shelter for highly sensitive measurement and instrumentation, inspected and ready for transport. | Field service on-site commissioning and operations training.

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