SOLA

Industrial UPS

REMOTE
ON / OFF

⏻ POWER ON/OFF/TEST

☒ BATTERY WARNING /   ⚠ OVERLOAD

🔋 ON BATTERY (BACK UP MODE)

∿ AC INPUT NORMAL (AC MODE)

Input: Output:
⏚ N L   ⏚ N L

Circuit Breaker

Vout   Remote   Surge Protection
                  OUT   IN

SDU (500 VA AND 850 VA) OFF-LINE DIN RAIL AC UPS – PRODUCT GUIDE

SOLAHD

EMERSON™
Industrial Automation

SDU SERIES, DIN RAIL AC UPS

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

APPLICATIONS

- Programmable Logic Controllers
- Factory Automation
- Robotics
- Conveying Equipment
- Computer based Control Systems

FEATURES

- Lightweight, compact industrial design
- Wide operation temperature range: 0 °C to +50 °C (+32 °F to +122 °F)
- Cold start capability
- 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

CERTIFICATIONS AND COMPLIANCES

- All Models
  - CE
  - Low Voltage Directive: EN62040-1: 2008/A1: 2013
  - EMC Directive: EN62040-2: 2006
- SDU 500, SDU 850 Models
  - c(UL)us UL Recognized Component, UPS Equipment
  - UL 1778, CSA C22.2 No. 107.3
  - Suitable for UL 508 with no derating and CSA C22.2 No. 107.1 Ind. Control Equipment Applications
  - Overvoltage Cat III, Pollution Degree III

RELATED PRODUCTS

- Portable MCR Power Conditioners
- STV Surge Protective Devices
- SDN DIN Rail Power Supplies
- STFV Plus Active Tracking® Filters
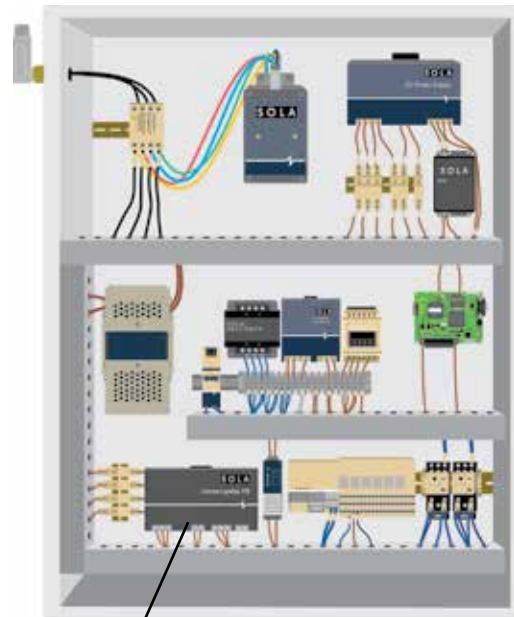
The SDU series provides back-up protection for sensitive equipment in a control panel.
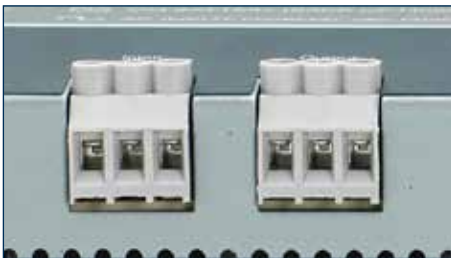
SECURE MOUNTING

This Off-Line UPS is designed to allow safe and secure mounting on a DIN Rail, in a control panel or as an integrated part of an enclosure or machine. Boasting a compact design and weight of approximately 5 kg (11 lbs), the SDU series provides reliable and economical power protection to critical loads in locations exposed to power aberrations in the factory floor environment.

The SDU allows critical equipment to safely shutdown preventing costly disruptions on the factory floor.

LIGHTWEIGHT, COMPACT DESIGN

H REMOTE ON/OFF

A

B

Input: ⊕ N L   Output: ⊕ N L

Circuit Breaker

C   **D**   **E**   **F**   **G**

SOLA
Industrial UPS

POWER ON/OFF/TEST
BATTERY WARNING /   ⚠ OVERLOAD
ON BATTERY (BACK UP MODE)
AC INPUT NORMAL (AC MODE)

Vout   Remote   Surge Protection
OUT   IN

CE
c(UL)us
UL 1778
Ind. Application
E179213

RoHS

IP20-Rated Input and Output Screw Terminals

V$_{out}$, Remote and Communications Port

A POWER ON/OFF/TEST PUSH BUTTON
- Cold start feature allows UPS to be started even if there is no AC input.
- A simple push of the button initiates UPS self-test.

B DETAILED LEDS
- Cleary indicates UPS operation status and condition

C SCREW TERMINAL CONNECTIONS
- Strong and reliable screw clamp connections
- Accepts 10-24 AWG wire
- Meets IP20 specifications

D INPUT CIRCUIT BREAKER
- Provides protection from AC overload and short circuit

E VOUT
- Output terminal providing 12V power source to the optional relay card

F REMOTE
- RS232 Communication port, DB9 connector
- Open collection signal for "AC Failure", "Low Battery" and "UPS Shutdown" (dry contact relay options available)

G COMMUNICATION
- RS232 communication port with USB support (optional accessory available — UPSMONUSB)

H REMOTE ON/OFF
- Remote on/off IP20 screw terminals provides the same functions as the front panel switch including ON/OFF/Test functions
- Accepts 10-24 AWG wire

SOLA HD

INDUSTRIAL STRENGTH PROTECTION

Catalog Number	SDU 500	SDU 850	SDU 500-5	SDU 850-5
Capacity (VA/Watts)	500/300	850/510	500/300	850/510
Load Power Factor	0.6			
Dimensions - mm (in)				
Unit (H x W x D) - mm (in)	124.0 x 281.0 x 116.0 (4.88 x 11.1 x 4.55)			
Weight - kg (lbs)	4.7 (10.7)	5.0 (11.4)	5.2 (11.5)	5.4 (11.9)
Input Parameters				
Voltage	120 V (+10%, -20%)		230 V (+/- 20%)	
Frequency	50 +/- 5 Hz or 60 Hz +/- 6 Hz (auto sensing)			
Output AC Parameters				
Voltage (Battery Mode)	Step sinewave			
	+/- 5%			
Frequency (On Battery)	50 or 60 Hz			
	+/- 0.3 Hz			
Overload Protection	UPS automatic shutdown if overload exceeds 105% of nominal at 20 seconds, 120% at 10 seconds, 130% at 3 seconds			
Short Circuit	UPS output cut off immediately			
Battery Parameters				
Battery Type	Sealed, non-spillable, maintenance-free lead acid batteries			
Transfer Time	4 - 6 ms typical			
Back-up Time * (minutes)	4.5/18	2.5/10	4.5/18	2.5/10
Recharge Time	8 hours to 90% capacity after full discharge			
Environmental				
Operating Temperature	0 °C to +50 °C (+32 °F to +122 °F)			
Storage Temperature	-15 °C to 60 °C (+5 °F to +140 °F)			
Relative Humidity	1% to 95%, non-condensing			
Ambient Operation	1-95% humidity non-condensing, 0 °C to +50 °C (+32 °F to +122 °F) up to 1524 m (5,000 ft)			
Audible Noise	< 40dBA (1 meter from surface)			
Standards				
EMC	FCC Part 15, Subpart B, Class A; EMC: EN62040-2; EN55022; CISPR22; EN61000-3-2; IEC61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -2-2			
Elevation	1524 m (5,000 ft) without derating			
Shock & Vibration	According to the International Safe Transit Association standard ISTA 2A.			
Mounting	To be mounted on DIN TS35/7.5 or TS35/15 rail system. Chassis mounting permissible via optional brackets. Unit handles normal shock and vibration of industrial use and transportation without coming off rail.			

* At full load/half load.

INDUSTRIAL, COMPACT & FLEXIBLE UPS

The SDU AC UPS is tested and approved for use in industrial control equipment applications under UL 508 and CSA C22.2 No. 107.1 at the full output VA rating. Therefore, no derating is necessary. It's compact and lightweight design mounts directly to the installed DIN rail via the factory provided DIN RAIL clip, requiring no additional hardware. An optional mounting bracket is available when specific applications require an alternate mounting method. The SDU AC UPS allows for ease of installation and flexibility in your control enclosure designs.

Selection Table

Capacity (VA/W)	Catalog Number	Volts, Frequency In/Out	Typical Back-up Time (minutes) *	Input/Output Connections	Approx. Ship Weight - kg (lbs)
500/300	**SDU 500**	120 Vac, 50/60 Hz	4/18	IP20 touch proof screw terminals. Wire range: 10-24 AWG.	4.7 (10.7)
850/510	**SDU 850**		2/10		5.0 (11.4)
500/300	**SDU 500–5**	230 Vac, 50/60 Hz	4/18		5.2 (11.5)
850/510	**SDU 850–5**		2/10		5.4 (11.9)

* At full load/half load.

SDU Accessories

Catalog Number	Description	Approx. Ship Weight - kg (lbs)
RELAYCARD–SDU	Dry contact I/O relay box, IP20 touch proof screw terminals, wire size range 12-22 AWG (IEC 2.5mm); N.O./N.C. form "C" contact. Relay contact signal for "On Battery", "Low Battery" and "UPS Shutdown".	1.0 (0.45)
UPSMON–USB	RS232 to USB adapter cable	1.0 (0.45)
SDU–PMBRK	Mounting brackets to secure UPS to wall, back of panel or enclosure.	1.0 (0.45)
Dimensions mm (in)		
Width	282 (11.1)	
Depth	116 (4.55)	
Height	124 (4.88)	
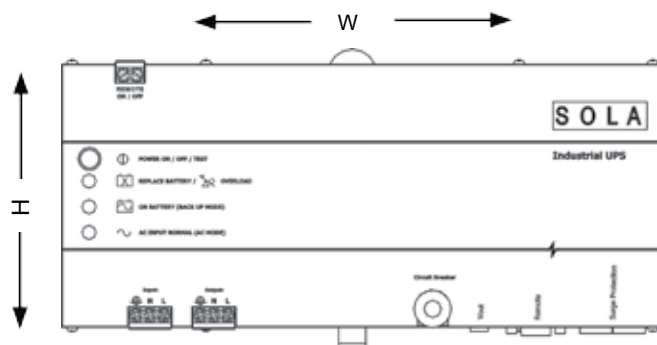
Enclosure should be properly ventilated during normal use and storage, not sealed or unventilated.

Contains Valve Regulated Lead Acid (VRLA), non-spillable type battery cells
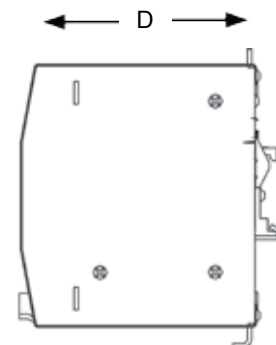
Warning

SolaHD is our premium line of power conversion and power quality products under Appleton Group, a business unit of Emerson Industrial Automation. SolaHD offers industrial grade products that help increase machine availability and ensure data reliability while bringing greater flexibility to the design of your machines and production line. SolaHD products improve efficiency, productivity and longevity in the most demanding industrial environments.

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 providing quality power that precisely controls automotive robotic production.

Engineers, distributors, contractors, electricians and site maintenance professionals around the world trust Emerson Industrial Automation brands to make electrical installations safer, more productive and more reliable.

Appleton Group is organized into three focused businesses that provide distributors and end users expert knowledge and excellent service.

ELECTRICAL CONSTRUCTION MATERIALS
This group is made up of the Appleton, Nutsteel and O-Z/Gedney brands, offering a broad range of electrical products including conduit and cable fittings, plugs and receptacles, enclosures and controls, conduit bodies and industrial and hazardous lighting. Whether the application is hazardous location, industrial or commercial, the electrical construction materials group has the products to meet your needs.

POWER QUALITY SOLUTIONS
The SolaHD brand offers the broadest power quality line, including uninterruptible power supplies, power conditioners, voltage regulators, shielded transformers, surge protection devices and power supplies.

HEATING CABLE SYSTEMS
This group is made up of the EasyHeat and Nelson brands, offering a broad range of electrical heating cable products for residential, commercial and industrial applications.

Asia/Pacific
+ 65.6891.7600

Australia
+ 61.3.9721.0348

Brazil – São Paulo/SP
+ 55.11.2122.5777

Brazil – Camaçari/BA
+ 55.71.3496.4427

Canada
+ 1.888.765.2226

China
+ 86.21.3418.3888

Europe
+ 33.3.2254.2759

Mexico/Latin America
+ 52.55.5809.5049

Middle East/Africa/India
+ 971.4.881.8100

Appleton Grp LLC
9377 W. Higgins Road
Rosemont, IL 60018
1.800.377.4384
solahd.com

SOLAHD

EMERSON
Industrial Automation

EMERSON. CONSIDER IT SOLVED.