

SDU AC - B Series, DIN Rail UPS

The SolaHD SDU AC - B Series DIN Rail UPS combines an industry leading compact design with a wide operation temperature range, enhanced communication 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
- Communications port for optional Industrial Ethernet protocols or discrete communication card
- User Replaceable Battery
- Long-Life High-Temperature Battery
- Wide operation temperature range from 0 °C to +50 °C (+32 °F to +122 °F)
- Cold start capability
- Software and cable included for easy installation
- Simulated sinewave output
- USB communication port
- Remote turn-on and shutdown capabilities
- Two year limited warranty
- Panel/wall mounting brackets (optional)

Certifications and Compliances

- **UL** UL Recognized Component, Hazardous Locations E491259
 - ANSI ISA 12.12.01/CSA 213
 - Class I, Division 2, Groups A, B, C, D, T4

Selection Table

Catalog Number	Capacity (VA/W)	Volts, Frequency In/Out	Typical Back-Up Time (minutes) At full load/half load.	Input/Output Connections	Approx. Ship Weight – lbs (kg)
SDU 500B	500/300	120 Vac, 50/60 Hz	4:20/14:30	IP20 touch proof, screw terminals. Wire range: 8 ~ 18 AWG.	10.8 (4.9)
SDU 850B	850/510		1:30/7:00		11.5 (5.2)
SDU 500B-5	500/300	230 Vac, 50/60 Hz	4:20/14:30		10.8 (4.9)
SDU 850B-5	850/510		1:30/7:00		11.5 (5.2)

Note: Run times in this table are approximate. They are based upon new, fully charged standard battery modules at a temperature of 25 °C (77 °F) with 100% resistive UPS loading. Run times listed above can vary by +/-5% due to manufacturing variances of the individual batteries



- **UL** UL Recognized Component, UPS Equipment, E179213
 - UL 1778 5th Ed., CSA C22.2 No. 107.3
 - Suitable for UL 508 at full load output (no derating) and Ind. Control Equipment Applications Overvoltage Cat III, Pollution Degree III
- **CE**
 - Low Voltage Directive: EN62040-1
 - EMC Directive: EN62040-2 EN55032; EN 55011, EN 55024, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61326-1, EN61000-3-2, EN 61000-3-3, IEC/EN 61000-4 Series
- **ODVA** Compliant
 - EtherNet/IP™ SDUENETIPCARD has been tested and approved for conformance by the ODVA. More information about EtherNet/IP™ and the ODVA can be obtained from the following website: www.odva.org.
- **RoHS** Compliant

Related Products

- Portable MCR Power Conditioners
- STV Surge Protective Devices
- SDN DIN Rail Power Supplies
- STFV Plus SolaHDTracking Filters

Specifications

Catalog Number	SDU 500B	SDU 850B	SDU 500B-5	SDU 850B-5
Input				
Capacity (VA/Watts)	500/300	850/510	500/300	850/510
Nominal Voltage	120 Vac		230 Vac	
Frequency	50 or 60 Hz			
Harmonic	THD: 38.1%; Maximum single harmonic distortion of: 31.3%			
Power Factor	0.6			
Output (Back-Up Mode)				
Voltage Vac	Simulated sinewave			
	120 V		230 V	
Frequency	50 or 60 Hz			
Transfer Time	Typical <8 ms			
Protection				
Input (Internal)	10A	8A	6.3A	
Overload Protection	UPS shutdown if overload exceeds 105% of nominal at 20 s, 120% at 10 s, 130% at 3 s; auto-recovery			
Short Circuit (Utility Mode)	In the event of dead short on the outputs of the UPS, input fuse will break Once the fuse opens, UPS goes to battery mode and goes on battery mode short circuit protection until OSCP is removed			
Short Circuit (Battery Mode)	Retry until the short circuit is removed or battery defect			
Battery				
Type	Sealed, maintenance-free, lead acid batteries			
Typical Recharge Time	8 hours			
Typical Back-Up Time At full load/half load	4:20/14:30 min.	1:30/ 7:00 min.	4:20/14:30 min.	1:30/ 7:00 min.
Alarm				
ON Battery	Slow beeping every 10 seconds			
Battery Low	Rapid beeping every second			
Overload	Continuous beeping sound			
Environment				
Ambient Operation	0-95% humidity non-condensing, Ordinary Location: 0 °C to +50 °C (+32 °F to +122 °F) up to 3000 m (9842.5 ft.) Hazardous Location: 0 °C to +40 °C (+32 °F to +104 °F) up to 2000 m (6600 ft.)			
Audible Noise	< 40 dBA (1 meter from surface)			
Vibration	Operating - IEC60068-2-6, Sine Wave: 10 Hz to 60 Hz displacement of 0.35 mm, 60 Hz to 500 Hz @ 5 G; 60 min. per axis for all X, Y, Z direction Non-operating - IEC60068-2-6, Random: 5 Hz to 500 Hz @ 2 Grms; 20 min per axis for all X,Y,Z			
Shock	Operating - IEC60068-2-27, Half Sine Wave: 10 G for a duration of 10 g for a duration of 10 ms, 3 shocks each in 3 axes in positive and negative direction Non-operating - IEC60068-2-27, Half Sine Wave : 20 g for duration of 10 ms, 3 shocks in 3 axes in positive and negative direction			
Dimensions				
Unit (H x W x D) – in. (mm)	4.89 x 10.91 x 5.22 (124.2 x 277.0 x 132.7)			
Weight – lbs (kg)	10.8 (4.9)	11.5 (5.2)	10.8 (4.9)	11.5 (5.2)

Comm Card Accessories



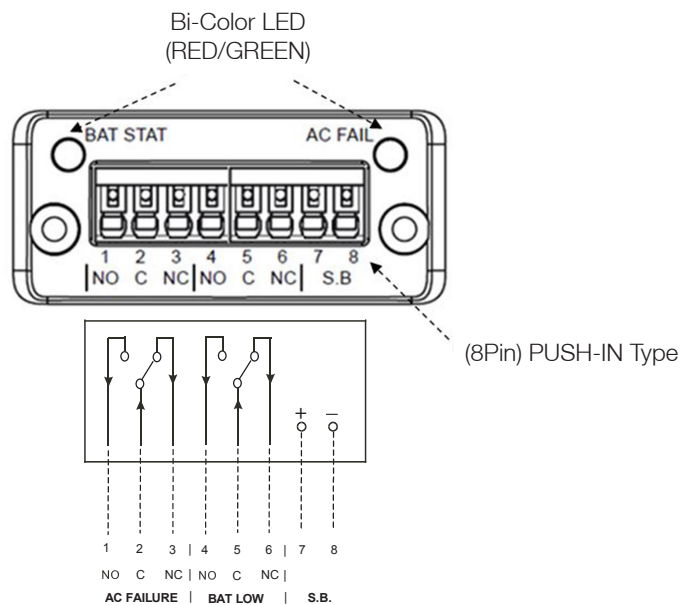
Active - (Industrial Ethernet)



Passive

Catalog Number	Description	Approx. Ship Weight – oz. (g)
Active - (Industrial Ethernet)		
SDUENETPCARD	2 Port EtherNet/IP™ COMM CARD	1.0 (28.4)
SDUECATCARD	2 Port EtherCAT COMM CARD	1.0 (28.4)
SDUMBUSCARD	2 Port Modbus® - TCP COMM CARD	1.0 (28.4)
SDUPNETCARD	2 Port Profinet Industrial Protocol COMM CARD	1.0 (28.4)
Passive		
SDUCFRELAYCARD	SDU CF Dry Contact I/O RELAY CARD	1.0 (28.4)

SDU CF Relay Card Connection Diagram



SDU Accessories

Catalog Number	Description	Approx. Ship Weight – oz. (g)
SDU-PMBRK	Mounting brackets to secure UPS to wall, back of panel or enclosure	16.0 (454.0)
SDUEDC	Enhanced DIN Clip to secure UPS to DIN rail	1.6 (45.3)

Comm Card Specifications

Description	Catalog Number	
	SDUCFRELAYCARD	Active Cards (Example: SDUENETIPCARD)
Input		
Nominal Voltage	+3.3 V ±5 %	
Standby Signal	Active low via normally open momentary switch	
Frequency	50/60 Hz	
Output		
LED Diagnostics	Refer to diagram	Refer to diagram NS = Network Status, MS=Module Status
Relay Logic Signals	Refer to diagram	—
Relay Contact Ratings	60 V peak, 1A	—
Case/Enclosure Material	Housing: LCP (Liquid Crystal Polymer) Color: Natural, Thermoplastic, UL 94 V-0	
Weight & Dimensions		
H x W x D, in. (mm)	0.91 x 2.0 x 2.2 (23 x 50 x 55) approximate	
Net Weight, oz. (g)	1.0 (28.4) approximate	
EMC		
Immunity/Emissions	Emission EN 61000-6-4 EN55016-2-3 Radiated emission EN55022 Conducted emission Immunity EN 61000-6-2 EN61000-4-2 Electrostatic discharge, EN61000-4-3 Radiated immunity EN61000-4-4 Fast transients/burst, EN61000-4-6 Conducted immunity	
Temperature °F (°C)	Storage: -40 °C to +85 °C (-40 °F to +185 °F) Operating: -40 °C to +70 °C (-40 °F to +158 °F) Convection cooling; no forced air required	
Vibration	Operating: IEC60068-2-6, Sine Wave: 10 Hz to 500 Hz @19.6 m/S ² , displacement of 0.35 mm, 60 min per axis for all X, Y, Z direction Non-Operating: IEC60068-2-6, Random : 5 Hz to 500 Hz (2.09 Grms); 20 min per axis for all X,Y,Z direction	
Shock	Operating: IEC60068-2-27, Half Sine Wave: 10 G for a duration of 11 ms, shock for 1 direction (X axis) Non-Operating: IEC60068-2-27, Half Sine Wave : 50 G for duration of 11 ms, 3 shocks for each 3 directions	
Humidity	0% to 90% RH, noncondensing; IEC 60068-2-2, 60068-2-3	
Warranty	2 Years	
MTBF (bellcore)	1,968,800 Hours	
General Protection	Protected against Continuous short -circuit, Continuous overload, Continuous open circuit. Galvanic Isolation:I/P to O/P: 3 KVac, I/P to GND: 1.5 KVac, O/P to GND: 0.5 KVac	