



## SDU 24-BATEM INSTRUCTION MANUAL







### SDU 24-BATEM External Battery



#### IMPORTANT SAFETY INSTRUCTIONS! SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

This manual contains important safety instructions. Read all safety, installation, and operating instructions before operating the Uninterruptible Power System (UPS). Adhere to all warnings on the unit and in this manual. Follow all operating and user instructions.

This equipment is designed for Industrial or Commercial use.

-  **WARNING – EXPLOSION HAZARD!** This product is NOT FOR USE in a Hazardous Locations Environment.
-  **WARNING –** Observe all cautions and warnings in this manual. Failure to do so MAY result in serious injury or death. Refer all UPS and battery service to qualified service personnel. Do not attempt to service this product yourself. Never work alone.
-  **WARNING –** Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from the batteries. PROPER DISPOSAL OF BATTERIES IS REQUIRED. REFER TO YOUR LOCAL LAWS AND REGULATIONS FOR BATTERY DISPOSAL REQUIREMENTS.
-  **CAUTION –** Always disconnect this External Battery Module from the SDU Power module before replacing the batteries.
-  **CAUTION –** When replacing the batteries, use the same number and type of batteries. See the “SDU 24-BATEM Battery Replacement Instructions” section below for battery manufacturer and type required for replacement.
-  **CAUTION –** Do not dispose of battery or batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to skin and eyes. It may be toxic. For battery recycling information, contact CSB recycling network at : 1-800-738-7372

#### WHAT'S INCLUDED

1. SDU 24-BATEM: External battery module.
2. SDU 24-EXTBC6B: Pair of 6 foot polarized cables for connecting the external battery module to the power module

**NOTE:** The circuit breaker must be in the open position “O” prior to installation.

#### SDU 24-BATEM INSTALLATION

The SDU 24-BATEM can be installed as stand alone equipment. The NEMA 1 enclosure features removable cover and knockout holes to ease the installation process.

If necessary, the black and red terminals of the polarized cable SDU 24-EXTBC6B can be detached from one another to separate the black wire from the red wire and allow them to slide easily through the conduit.

Before closing the circuit breaker of SDU 24-BATEM, make sure that one end of the red terminals of the polarized cable is connected to the red terminal of the SDU DC UPS power module and the other red terminal end of the polarized cable is connected to the red terminal of the external battery module SDU 24-BATEM. The same approach applies to the black terminals.

#### TECHNICAL SUPPORT & WARRANTY INFORMATION

**Contact Technical Support:** 1-800-377-4384 • 1-847-268-6651 • [solahd.technicalservices@emerson.com](mailto:solahd.technicalservices@emerson.com) • [www.solahd.com](http://www.solahd.com)

**For warranty information:** Please see the enclosed Terms & Conditions of Sale sheet.



While every precaution has been taken to ensure accuracy and completeness in this manual, Appleton Grp LLC d/b/a Appleton Group assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions. Specifications are subject to change without notice.

## BACK-UP TIME OF SDU DC UPS WITH SDU 24-BATEM (IN MINUTES) VERSUS LOAD PERCENTAGE

**REMARK:** Resistive loads were used to measure the battery run time, using other types of load may result in different battery run time. Run times are based on new, fully charged battery module at a temperature of 25°C (77°F). Run times may vary due to manufacturing variance of the individual batteries.

### DC UPS with SDU 24-BATEM External Battery Pack (EBP)

The external battery module SDU 24-BATEM includes two (2) user replaceable batteries.

SDU 10-24B with SDU 24-BATEM					
Load	20% (2A)	40% (4A)	60% (6A)	80% (8A)	100% (10A)
1 EBP	135	52	28	19	14

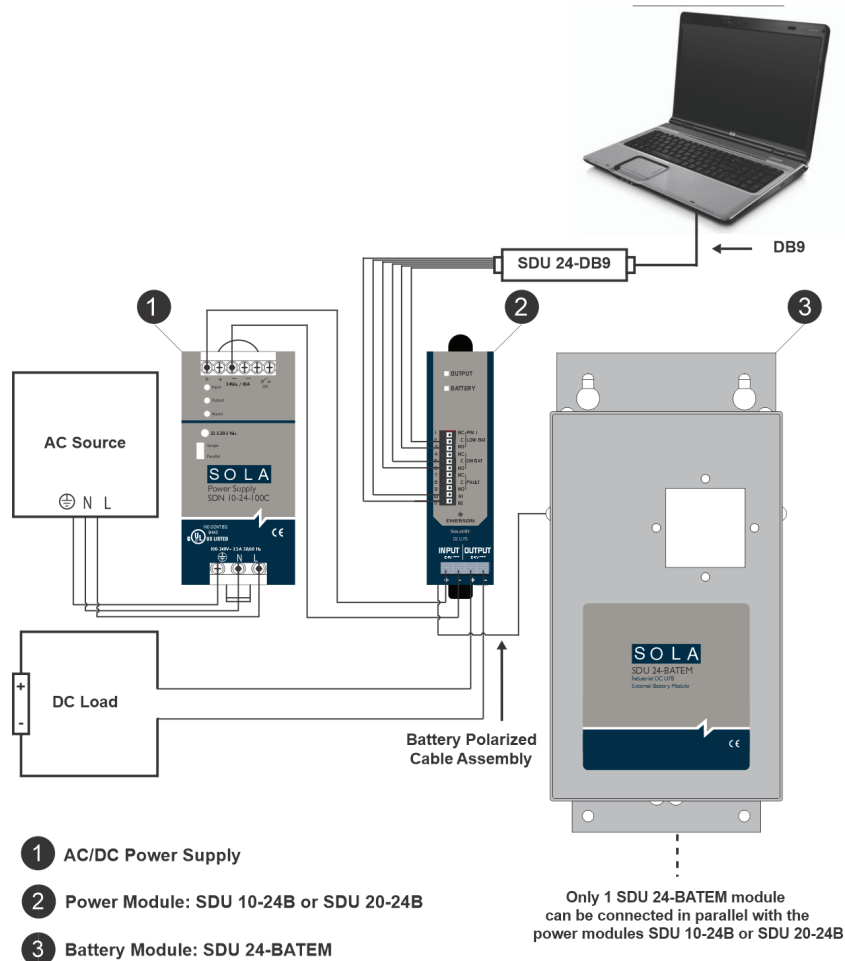
SDU 20-24B with SDU 24-BATEM					
Load	20% (4A)	40% (8A)	60% (12A)	80% (16A)	100% (20A)
1 EBP	48	17	9	6	4

## SDU 24-BATEM SPECIFICATIONS

Parameter	SDU 24-BATEM
Nominal Voltage	24 VDC
Protection	Circuit Breaker: 24V, 25A
Charging Current	1.2
Enclosure Dimension in. (mm)	11.5 x 5.57 x 4.57 (292 x 142 x 116)
Enclosure Type	NEMA 1
Terminal Connector Type	Polarized Powerpole Connectors
Batteries	Replaceable - Refer to the instructions for replacement.
Accessories	6 ft polarized battery cable
Operating Temperature	-20o to +50o C
Charge Temperature	0o to +40o C
Storage Temperature	-20o to +40o C
Humidity	95% no condensation
Certifications	cULus Listed: UL 508/CSA 107.1, UL/CSA 61010-1, UL/CSA 61010-2-201 cRUus: UL/CSA 60950-1, UL/CSA 62368-1 CE/UKCA: IEC/EN 62368-1, IEC/EN 61010-1, IEC/EN 61010-2-201
Weight lbs (kg)	16 (7.26)
Mounting	Wall/Chassis Mounting

## SDU DC UPS WIRING DIAGRAM - DC UPS WITH EXTERNAL BATTERY MODULE SDU 24-BATEM

**NOTE:** Only one (1) SDU 24-BATEM module can be connected with the power module SDU 10-24B or SDU 20-24B.



## SDU 24-BATEM BATTERY REPLACEMENT INSTRUCTIONS

**CAUTION** – A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed before replacing the batteries:

- Remove rings, watches, and other metal objects.
- Do not lay tools or other metal objects on top of the batteries.
- Do not dispose of batteries in a fire. The batteries may explode.
- Dispose of old batteries according to local codes.

**CAUTION** – ELECTRICAL SAFETY PRE-CAUTIONS MUST BE FOLLOWED WHEN INSTALLING OR SERVICING THIS EQUIPMENT. TO PREVENT RISK OF ELECTRICAL SHOCK, TURN OFF AND LOCK OUT ALL POWER SOURCES TO THE UNIT BEFORE MAKING ELECTRICAL CONNECTIONS OR SERVICING.

**CAUTION** – WHEN REMOVING AND INSTALLING THE NEW BATTERIES, EXTREME CARE MUST BE USED NOT TO SHORT METAL CHASSIS PARTS ACROSS THE BATTERY TERMINALS AND NOT TO SHORT THE BATTERIES TO EACH OTHER OR PERSONAL INJURY MAY RESULT.

**NOTE:** Caution should be exercised when replacing the batteries because the load is unprotected from disturbances and power outages during this procedure.

### SDU 24-BATEM Batteries Replacement

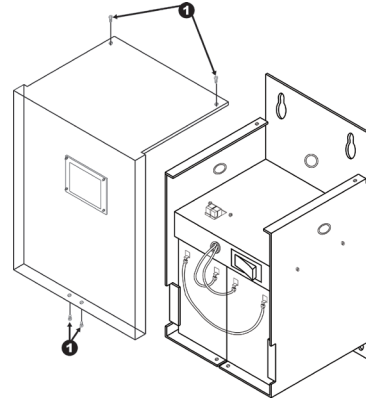
The following battery type must be used as a replacement in this product.

Manufacturer	Type	Rating
CSB	GP1272	12 V dc, 7.2 Ah

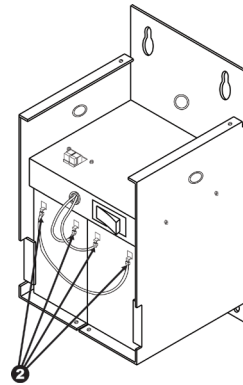
## SDU 24-BATEM BATTERY REPLACEMENT INSTRUCTIONS (CONTINUED)

### Steps to Replace the Batteries

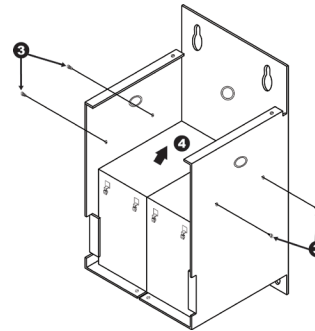
**Step 1:** Remove four (4) screws from cover and slide cover forward off enclosure.



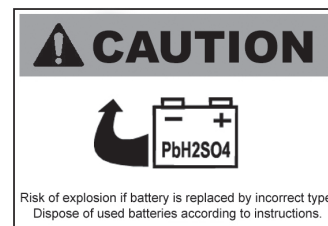
**Step 2:** Remove wires from battery posts



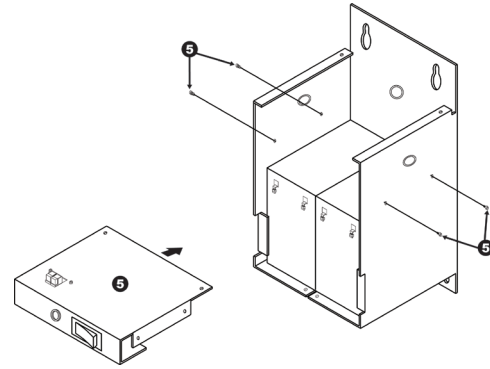
**Step 3:** Remove four (4) screws from enclosure but secure bracket in place and then slide bracket forward from enclosure.



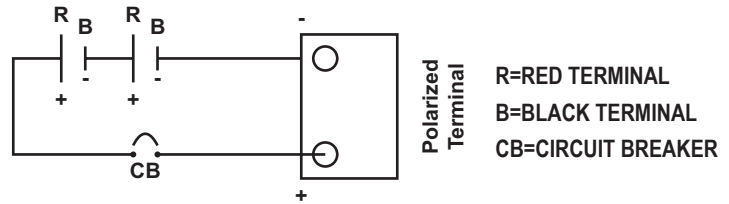
**Step 4:** Remove failed batteries and insert new Replaceable Batteries.



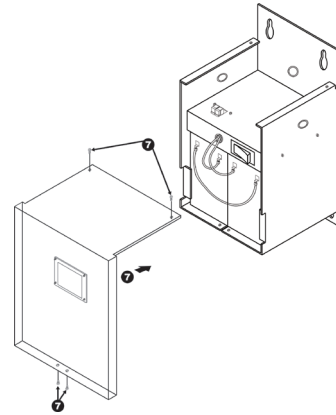
**Step 5:** Slide bracket forward inside the enclosure, secure bracket in place and use the four (4) screws to mount the bracket on the enclosure.



**Step 6:** Use the following connection diagram to assure the correct batteries connection to the polarized terminal connector and to the circuit breaker.



**Step 7:** Slide the top cover on the enclosure then use the four (4) screws for a secure mounting.



The Emerson logo is a trademark and service mark of Emerson Electric Co. Appleton Grp LLC d/b/a Appleton Group. SolaHD is a registered trademark of Appleton Grp LLC. All other marks are the property of their respective owners.  
 © 2023 Emerson Electric Co. All rights reserved.

**United States (Headquarters)**  
 Appleton Grp LLC  
 9377 W. Higgins Road  
 Rosemont, IL 60018  
 United States  
 T +1 800 621 1506

**Europe**  
 ATX SAS  
 Espace Industriel Nord  
 35, rue André Durouchez,  
 CS 98017  
 80084 Amiens Cedex 2  
 France  
 T +33 3 2254 1390

**Canada**  
 EGS Electrical Group  
 Canada Ltd.  
 99 Union Street  
 Elmira ON, N3B 3L7  
 Canada  
 T +1 888 765 2226

**Australia Sales Office**  
 Bayswater, Victoria  
 T +61 3 9721 0387

**China Sales Office**  
 Shanghai  
 T +86 21 3338 7000

**Middle East Sales Office**  
 Dammam, Saudi Arabia  
 T +966 13 510 3702

**Asia Pacific**  
 EGS Private Ltd.  
 Block 4008, Ang Mo Kio  
 Ave 10,  
 #04-16 TechPlace 1,  
 Singapore 569625  
 T +65 6556 1100

**Korea Sales Office**  
 Seoul  
 T +82 2 3483 1555

**India Sales Office**  
 Chennai  
 T +91 44 3919 7300

**Latin America**  
 EGS Comercializadora  
 Mexico S de RL de CV  
 Calle 10 N°145 Piso 3  
 Col. San Pedro de los Pinos  
 Del. Álvaro Obregon  
 Ciudad de México. 01180  
 T +52 55 5809 5049

**Chile Sales Office**  
 Las Condes  
 T +56 2928 4819