



by Schneider Electric

Documentation Supplement for Marine Smart-UPS™ SRT5KRMXLIM, SRT6KRMXLIM External Battery Pack SRT192RMBPM

Product Description

The information in this documentation supplement applies to specific APC™ by Schneider Electric DNV-GL Type Approved Uninterruptible Power Supply (UPS) models, external battery packs (XLBP), companion EMI filters and the tower installation kit.

The tower installation kit is used only for UPS models in tower configurations.

The APC by Schneider Electric products listed in the table below meet DNV-GL Type Approval 2.4 requirements.

When these specified UPS models are used with the appropriate companion filter and tower installation kit they are approved for use on the bridge, in control rooms and in accommodation zones.

SKU	Description
SRT5KRMXLIM	Marine Smart-UPS SRT 5000 VA, 230 Vac, Rack-Mount
SRT6KRMXLIM	Marine Smart-UPS SRT 6000 VA, 230 Vac, Rack-Mount
SRT6M	Marine Filter for use with Smart-UPS UPS models: SRT5KRMXLIM/SRT6KRMXLIM
SRT10BDVK	Marine Secure Bolt Down Vibration Isolation kit for Smart-UPS UPS models: SRT5KRMXLIM,SRT6KRMXLIM XBP model: SRT192RMBPM
SRT192RMBPM	Marine external battery pack for use with Smart-UPS models: SRT5KRMXLIM, SRT6KRMXLIM
SRT10IP23	SRT10IP23 enclosure for use with Smart-UPS models SRT5KRMXLIM, SRT6KRMXLIM

Specifications

When the APC by Schneider Electric Marine UPS models listed in the table on the previous page are used with the appropriate companion filter, the specifications in this marine application supplement supersede the specifications listed in the UPS user manual supplied in the carton with the SRT products.

The APC by Schneider Electric Marine UPS and XLBP models listed in the table on the previous page, are capable of operating at temperatures up to 55° C for up to 16 hours in a 24 hour period. This meets the DNV-GL Type Approval 2.4 temperature Class A requirements.

Operation at a temperature above 40° C requires the UPS power output to be de-rated.

- 0° C to 40° C (32° F to 104° F) at 100% rated output power
- 40° C to 55° C (104° F to 131° F) de-rate output power 2.5%/° C (1.38%/° F)

Input Voltage Range (Full Load, t=40° C)	160 V to 280 V
Input Voltage Range (Half Load, t=40° C)	100 V to 280 V
Input Voltage Range (Full Load, t=55° C)	180 V to 280 V
Input Voltage Range (Half Load, t=55° C)	112.5 V to 280 V

The UPS and XBP models are capable of operating at elevated temperatures.

However, expected battery life drops by 50% for every 10° increase in ambient temperatures above 25° C (77° F).

For maximum runtime capability avoid operating the UPS and XBP models at temperatures above 40° C (104° F).

Certifications

CE

GS

EAC

RCM

DNV-GL

For DNV-GL Type Approval certificate go to the APC web site, www.apc.com.

IEC 60945 recommended compass distances

SRT5KRMXLIM	258 cm
SRT6KRMXLIM	247 cm

Installation

For rack-mount installation instructions refer to the UPS or XLBP installation guide supplied with this XLBP.

Tower Configuration

For shipboard tower installation, APC by Schneider Electric offers a secure bolt down vibration isolation kit, SRT10BDVK.

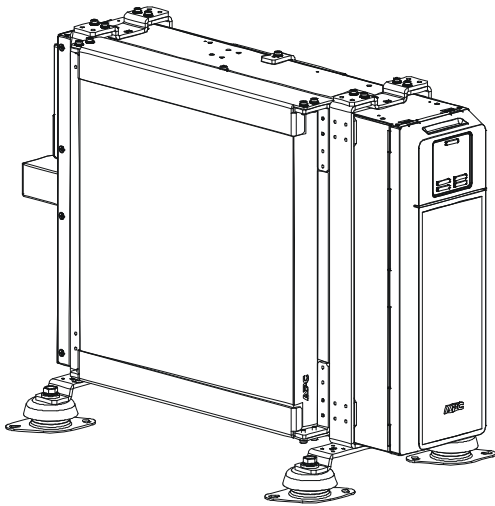
The installation guide is supplied in the carton with the SRT10BDVK kit.

The installation guide is also available;

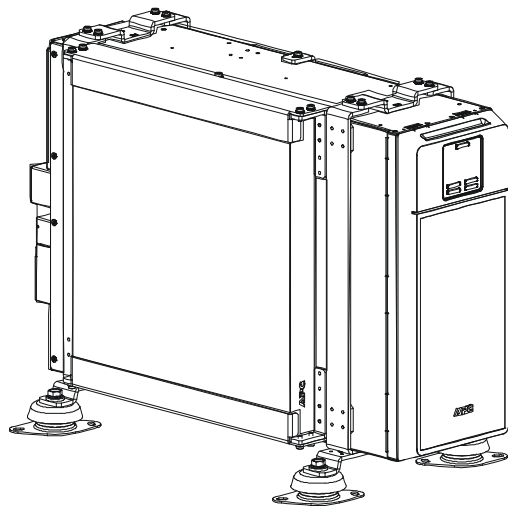
~on the APC web site www.apc.com

~on the Documentation CD supplied in the carton with the SRT10BDVK kit.

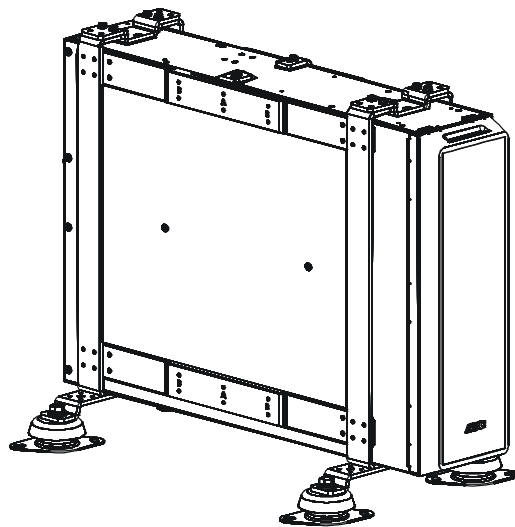
**SRT5KRMXLIM +
SRT6M + SRT10BDVK**



**SRT6KRMXLIM +
SRT6M + SRT10BDVK**



**SRT192RMBPM +
SRT10BDVK**



Emergency Power Off

⚠ CAUTION

RISK OF DAMAGE TO EQUIPMENT OR PERSONNEL.

- Adhere to all national and local electrical codes.
- Wiring must be performed by a qualified electrician.
- Disconnect the mains power, internal and external batteries before installing or servicing the UPS or connected equipment.
- The AC and DC output connectors may be energized by remote or automatic control at any time.
- Disconnect internal and external batteries before installing or servicing the UPS or connected equipment.
- The unit utilizes external batteries that may present a shock hazard even when disconnected from the AC power.
- Disconnect equipment from the UPS before servicing any equipment.
- Do not use the UPS as a safety disconnect.

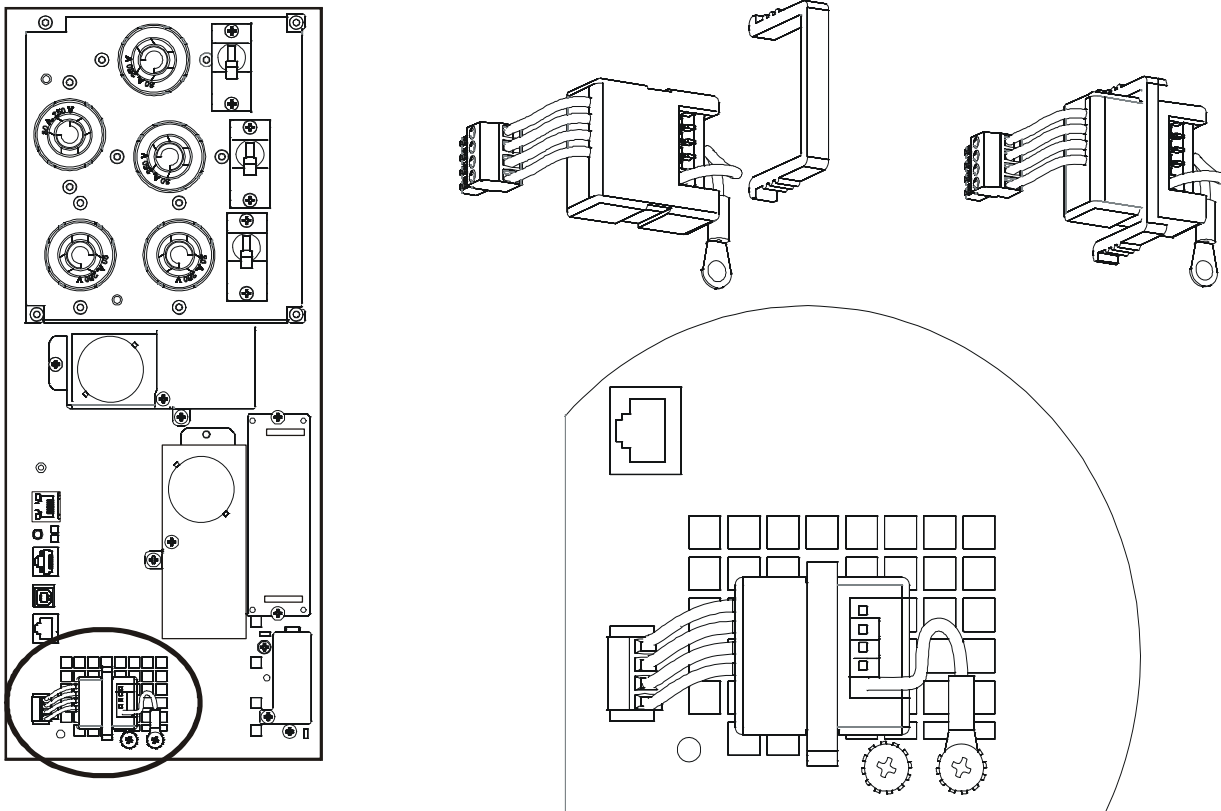
Failure to follow these instructions could result in equipment damage and minor or moderate injury.

Overview

The Emergency power Off (EPO) option is a feature that will immediately disconnect all connected equipment from mains power.

Connect each UPS to the EPO switch. In configurations where multiple units are connected in parallel, each UPS must be connected to the EPO switch.

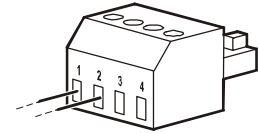
The UPS must be restarted for power to return to connected equipment. Press the ON/OFF button on the front panel of the UPS.



Normally open contacts

1. If the EPO switch or relay contacts are normally open, insert the wires from the switch or contacts at pins 1 and 2 of the EPO terminal block. Use 16-28 AWG wire.
2. Secure the wires by tightening the screws.

If the contacts are closed, the UPS will turn OFF and power will be removed from the load.



Normally closed contacts

1. If the EPO switch or relay contacts are normally closed, insert the wires from the switch or contacts at pins 2 and 3 of the EPO terminal block. Use 16-28 AWG wire.
2. Insert a wire jumper between pins 1 and 2. Secure the wires by tightening the three screws at positions 1, 2, and 3.

If the contacts are opened, the UPS will turn OFF and power will be removed from the load.

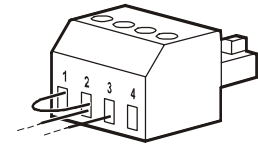
Note: Pin 1 is the power source for the EPO circuit, it provides a few milliamperes of 24 V power.

If the normally closed (NC) EPO configuration is used, the EPO switch or relay should be rated for “dry” circuit applications, the rating should be for low voltage and low current applications. This normally implies the contacts are gold plated.

The EPO interface is a Safety Extra Low Voltage (SELV) circuit. Connect the EPO interface only to other SELV circuits. The EPO interface monitors circuits that have no determined voltage potential. SELV circuits are controlled by a switch or relay properly isolated from mains power. To avoid damage to the UPS, do not connect the EPO interface to any circuit other than a SELV circuit.

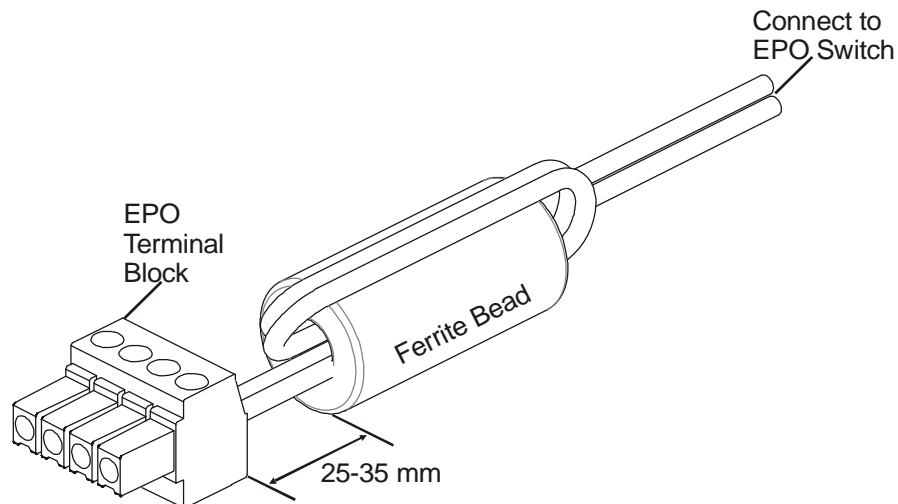
Use one of the following cable types to connect the UPS to the EPO switch.

- CL2: Class 2 cable for general use.
- CL2P: Plenum cable for use in ducts, plenums, and other spaces used for environmental air.
- CL2R: Riser cable for use in a vertical run in a floor to floor shaft.
- CLEX: Limited use cable for use in dwellings and for use in raceways.
- Installation in Canada: Use only CSA certified, type ELC, (extra low voltage control cable).
- Installation in countries other than Canada and the USA: Use standard low voltage cable in accordance with national and local regulations.



Install Ferrite bead

Install the supplied ferrite bead between the supplied EPO terminal block and the EPO switch.



Dry Contact I/O SmartSlot Card AP9613

Marine Smart-UPS models SRT5KRMXLIM, SRT6KRMXLIM, are equipped with a factory installed Dry Contact I/O SmartSlot card, AP9613.

The Schneider Electric™ Dry Contact I/O SmartSlot Card (AP9613) is a management product that provides the following features:

- **UPS status information** is presented through six fully isolated output relays.
When universal input/output ports and optional Dry Contact I/O Accessory (AP9810) are used, UPS status information is presented through eight fully isolated output relays.
- **UPS control and testing** are performed by use of four opto-isolated input contacts.
When universal input/output ports and optional Dry Contact I/O Accessory (AP9810) are used an additional four input contacts (non opto-isolated), may be added.
- **UPS control and testing based on environmental conditions** are performed by use of universal input/output ports and an optional Environmental Sensor (AP9335T or AP9335TH)
- **Configuration Utility** can be used to customize your user interface setup.

For more information on features, configuration and use of the AP9613, refer to the Installation and Configuration Guide supplied with the AP9613.

Required Protective Devices and Wire Sizes

NOTICE

RISK OF EQUIPMENT MALFUNCTION

- Adhere to the recommended circuit breaker guidelines in the table below.
- These recommendations must be followed in order for the downstream circuit breaker to trip before the upstream circuit breaker in the event of a short circuit or overload condition.

Failure to follow these instructions could result in equipment damage.

Wire size and circuit breaker selectivity

Smart-UPS model	Wire Size	Maximum Wire Length (meters)	Input Circuit Breaker (upstream) Current Rating and Trip Curve	Output Circuit Breaker (downstream) Current Rating and Trip Curve
SRT5KRMXLIM SRT6KRMXLIM	13 mm ² (6 AWG)	62 meters	50 Amps, D curve	10 Amps, Z curve 20 Amp, A curve

Customer support and warranty information are available on the APC web site, www.apc.com.

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