

Battery charger part number TA-3409 is used on some models of remote supervisory Vista Underground Distribution Switchgear and source-transfer Vista Underground Distribution Switchgear to provide control power to perform switching (or motor operations); charge the included battery pack; power control devices, such as a remote terminal unit; and provide 12-Vdc to power communication devices.

When ac control power is lost, power for these devices is provided by three series-connected 12-Volt, 5-ampere-hour● battery packs. The battery charger and battery pack are located within a low-voltage enclosure. For more information on the operation of the TA-3409 battery charger, refer to S&C Instruction Sheet 680-540.

In the event ac power is present and a battery is unavailable or cannot function properly, the TA-3409 battery charger is capable of performing coupled motor operations. **Note:** In this instance, only one motor operator can be run at a time.

Note: The TA-3409 battery charger replaced the TA-2646 battery charger (identifiable by G-4875 on the front panel) starting in July 2022. Specifications for the pre-2022 battery charger and battery pack are described in S&C Information Bulletin 682-97. A retrofit kit is available to upgrade to the TA-3409 charger. Contact the local S&C Sales Office for more information.

The Vista switchgear battery charger automatically self-tests the battery once every two hours upon initial connection for a period of 24 hours. Then, the battery charger will self-test once every 24 hours at midnight. At midnight on the 28th day of the month, the battery test results will be noted in the monthly logs.

The battery packs are of rechargeable, starved-electrolyte, sealed-lead construction and are manufactured by EnerSys.■

★ Only applicable to some models of source-transfer and remote supervisory Vista Underground Distribution Switchgear. Contact the local S&C Sales Office for details.

● Larger capacities are available. Contact the local S&C Sales Office for details.

■ Other equivalent manufacturers may be used. Contact the local S&C Sales Office for details.

▲ 48 Vdc used for motor operations when battery is unavailable or cannot function properly.

▼ Other part numbers and equivalent manufacturers may have wider operating temperature ranges. Contact S&C for details.

□ Dependent on storage conditions, charger settings, operating temperature, and type of loads.

Refer to the following for specifications of the battery charger and battery packs:

Battery Charger

Manufacturer	S&C Electric Company
Type	Four-step three stage
Operating temperature range	-40°C to +70°C (-40°F to +158°F)
Input voltage	110-240 Vac, 50/60 Hz 100-373 Vdc
Charge voltage	42 Vdc nom.
Low-voltage load disconnect	35.5 Vdc
Low-voltage alarm	36.5 Vdc
Charger overvoltage alarm	45.9 Vdc
Maximum time to recharge battery packs upon return of ac source	10 hours
Dc output fuse	Resettable 6 A
Ac input fuse	Resettable 4 A

Typical Output Characteristics

12 Vdc	50 W cont., 100 W max for 0.25 seconds
48 Vdc	250 W cont., 1000 W max for 0.5 seconds▲

Battery Packs

Manufacturer	EnerSys■
Type	Rechargeable, sealed-lead, starved-electrolyte
Nominal voltage (each of three battery packs)	12 Vdc at +25°C (+77°F)
Rated capacity (10-hour rate)	5 ampere-hours● at +25°C (+77°F)
Operating temperature range	-40°C to +40°C (-40°F to +104°F)▼
Maximum interval between charge	6 months
Deep discharge limit	32.4 Vdc
Maximum storage temperature	+40°C (104°F)
Life expectancy	2-6 years□



S&C Remote Supervisory and Source-Transfer Vista® and Vista® Green Underground Distribution Switchgear

Table 1. Operating Time When Disconnected from Ac Source^①

Load	Time
For 1-Watt radio at -40°C (-40°F)	7 hours
For 1-Watt radio at +25°C (+77°F)	13 hours
For 5-Watt radio at -40°C (-40°F)	4 hours
For 5-Watt radio at +25°C (+77°F)	9 hours

^① The values shown represent the approximate length of time remote supervisory or source-transfer Vista switchgear will function before the low-voltage load-disconnect circuit in the battery charger operates

to prevent deep discharge of the battery pack. These time values are based on continuous operation of the remote terminal unit drawing 3 Watts and occasional operation of the switch operating mechanism.