An S&C Automated Switching System is a fully self-contained and externally powered automated-distribution switching installation that contains two components: an integer-style load interrupting switch and control unit that provides an interface between the switch and the master-station computer.

Control power and tripping power for the switch is provided by four series parallel connected 12-volt, 5 ampere-hour battery packs that are charged by an S&C constant-voltage battery charger/ switch control. The battery charger/switch control and battery packs are located in the control unit.

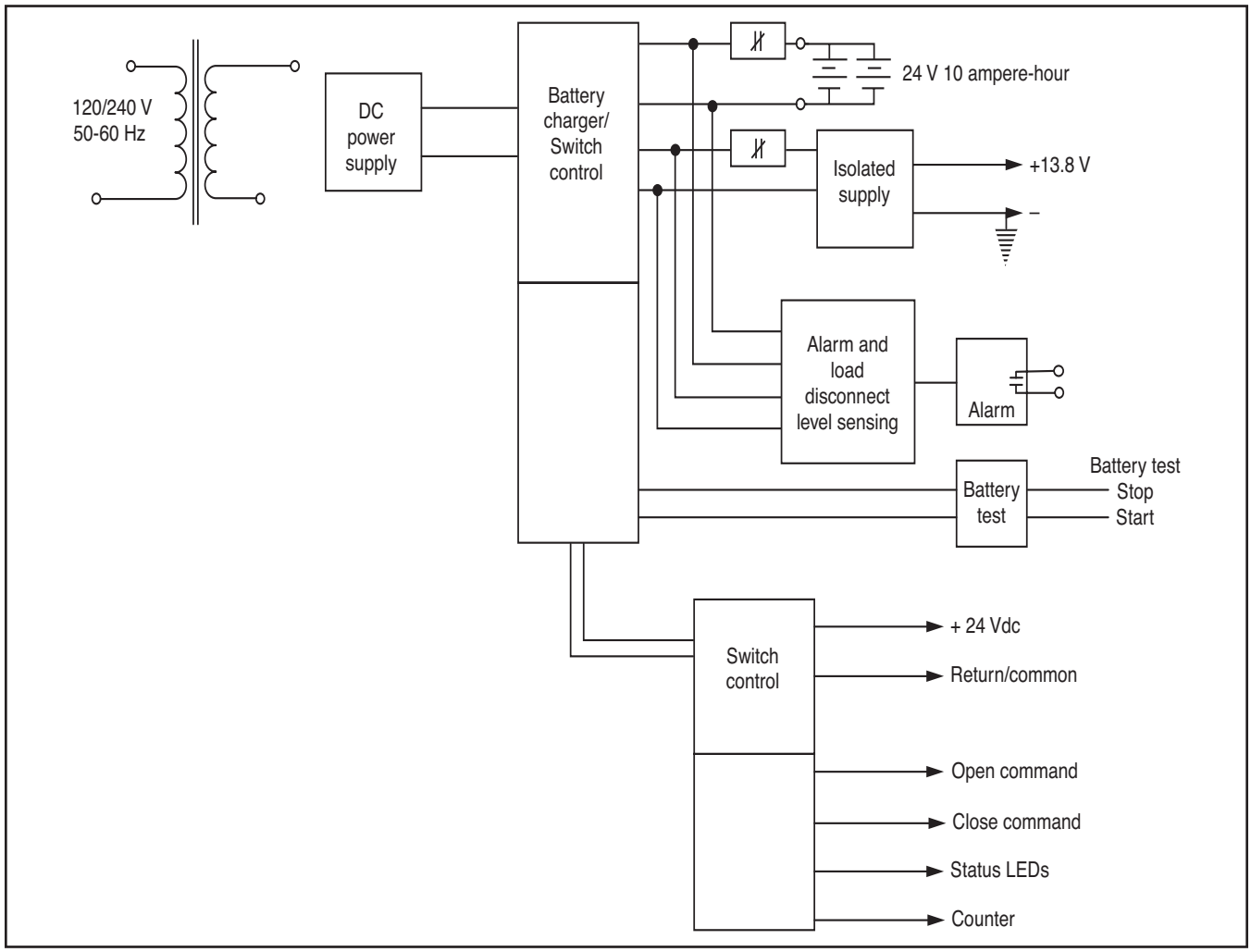
The battery charger/switch control features a 24-volt dc output to charge the supplied battery packs and a 12- volt dc output to power the applicable remote terminal units and transceivers when the ac source is present.

Upon loss of the ac source, the battery packs—if fully charged—will provide power to the complete automated switching system for the operating times shown on page 2.

The battery charger/switch control features a high-output, temperature-compensated constant voltage battery charger with unique battery management system powered by a customer-supplied 120-volt ac source. The battery charger also features integral load-disconnect circuitry to prevent deep discharge of the batteries on loss of ac source, and alarms for loss of ac source, battery low-voltage, or charger overvoltage. The battery load test feature works in conjunction with a suitably equipped remote terminal unit (RTU).

The battery packs are manufactured by Hawker Energy Products, and the batteries are of starved-electrolyte sealed-lead construction.

Following are specifications for the battery charger/ switch control and for the battery packs.



S&C Battery Charger

Supersedes Data Bulletin 768-98 dated 8-5-2002.

February 18, 2019

Battery Charger/Switch Control

Manufacturer. . . . . S&C Electric Company
Type . . . . . Constant-Voltage Temperature Compensated
Operating Temperature Range . . . . . -40°C (-40°F) to +70°C (158°F)
Input Voltage . . . . . 90-140 or 180-280 Vac 50/60 Hzf
Number of Battery Charging Outputs. 1
Float Charge Voltage . . . . . 27.3 volts at +25°C (77°F)
Low-Voltage Load Disconnect. . . . . 22 Volts sustained for 30 seconds
Low-Voltage Alarm-Contact Opening . . . Less than 24 volts
Charger Overvoltage Alarm-Contact Opening. . . . . Charger output above 30.75 Vdc
Loss of Ac Source Alarm● . . . . . 85 Vac
Maximum Time to Recharge Battery Packs Upon Return of Ac Source . . . . . 5 hours
Dc Output Fuse . . . . . 581-00AUTO-10 (10 A, 32 V)
Ac Input Fuse 581-000007-01 (GDC-2A)

Cyclon Battery Packs in Metal Outer Case

Manufacturer. . . . . Hawker Energy Products
Type . . . . . Rechargeable, sealed-lead, starved-electrolyte
Part Number . . . . . 0809-0109 (S&C # 9931-073)
Number of Packs Required 4
Nominal Voltage (each battery pack) . . . . . 12 volts dc at +25°C (77°F)
Rated Capacity (10-Hour Rate) . . . . . 5 ampere-hour at +25°C (77°F)
Operating Temperature Range . . . . . -65°C (-85°F) to +80°C (176°F)
Life Expectancy■ . . . . . 2-6 years
Maximum Recommended Interval Between Charge . . . . . 6 months
Deep Discharge Limit (12-volt pack) . . . . . 10.2 volts
Deep Discharge Limit (24-volt pack) . . . . . 21.6 volts
Maximum Storage Temperature . . . . . +80°C (176°F)

Operating Time▲ (when disconnected from ac source)

For 1-Watt Radio at -40°C (-40°F) . . . . . 14 hours
For 1-Watt Radio at +25°C (77°F) . . . . . 26 hours
For 5-Watt Radio at -40°C (-40°F) . . . . . 8 hours
For 5-Watt Radio at +25°C (77°F) . . . . . 18 hours

● 180-280 Vac 50/60 Hz requires factory modification. Contact your nearest S&C Sales Office for more information.

■ Dependent on storage conditions, charger settings, temperature, and type of load.

▲ The values shown represent the approximate length of time S&C Automated Switching Systems will function before the low-voltage load-disconnect circuit in the battery charger operates to prevent deep discharge of the battery packs. These time values are based on continuous operation of the RTU drawing 3 watts, and occasional recharging of the switch-operating mechanism.