

S&C Constant-Burden Battery Charger for Type AS Switch Operators

The S&C Constant-Burden Battery Charger is expressly designed for 12-Volt battery-charging duty in applications where the ac power is derived from an S&C 30-Volt-Ampere Potential Device.● This battery charger is typically used with Type AS-1A and AS-10 Switch Operators when they are ordered for 12-Vdc operation with a lead-acid type battery.

The battery charger presents a constant burden to its power source. The S&C Potential Device used to supply the battery charger can also be used for system line-to-ground voltage sensing because its output voltage is unaffected by variations in output from the battery charger.

The battery-charger input current is unaffected by variations in output, including those caused by changes in the state of charge of the battery and short-circuiting or open-circuiting of the battery-charger output terminals. Neither the battery charger nor its supply source can be damaged by a short circuit or an open circuit at the battery-charger output terminals.

The battery charger has a regulated output, with an adjustable output voltage setting (factory-set at 13 Vdc). Fail-safe design circuitry prevents discharge of the battery in the event of loss of input voltage to the battery charger or if a component within the battery charger fails.

For example, if the milliammeter should “open,” a shunting diode will instantly provide an alternate path for the charging current to the battery, with no change in the charge rate or output voltage. Additionally, surge suppression is provided to prevent damage from transients on the power system.

● Although the battery charger is designed for use with the S&C 30-Volt-Ampere Potential Device, other 120-Vac sources may be used.



Figure 1. An S&C Constant-Burden Battery Charger.

