advanced media technologies®

MODEL

AlphaGuard

Battery Charge Management System

- > Extends battery life
- > Replace only single batteries, not the entire string
- > Spreads charge voltage equally across batteries
- > Compensates for battery differences as they age
- > Optional communications interface module tracks battery voltage and prevents discharge damage
- > Safe unattended operation designed to CSA C22.2 No. 107.1 and UL 1778 Standards

AlphaGuard monitors and protects your batteries by spreading the charge voltage equally across all the batterie in a string, ensuring that every battery in the string, whether old or new, is properly charged. With an ideal voltage always across each battery, life and runtime are optimized. Individual batteries in a string can be replaced as they fail, allowing batteries to be left in service longer. This stops the wasteful and costly practice of disposing of batteries that may have years of useful life left because one battery in a string fails or replacing batteries based on a scheduled maintenance program. With the optional communications cabling and interface module individual battery measurements are made at the batteries and reported, improving accuracy and allowing the supply to determine End-of-Discharge by individual batteries instead of the string voltage and reporting to status monitoring systems.

AlphaGuard

The AlphaGuard employs a patented Charge Management Technology (CMT) to shuttle excess charge current from one battery to a battery requiring a greater charge and is contained in a small plastic enclosure that installs directly on top of one the batteries in the string. A short service cable connects the AlphaGuard to each of the batteries in the string. Both 36VDC (3 battery) and 48VDC (4 battery) versions are available. One AlphaGuard is required per string.

An AlphaGuard configured with an optional communication interface module allows the AlphaGuard to interface with a status-monitoring module. Two AlphaGuard modules can be connected to an interface module. Optional interface modules include EDSM, ESM and DSM.

Models

AG-CMT-3: AlphaGuard Charge Management SC, 36V String—including 36VDC battery interface cable
AG-CMT-4: AlphaGuard Charge Management SC, 48V String—including 48VDC battery interface cable

Specifications

Configuration
Quantity: One (1) AlphaGuard is required per battery string
Service Location: With the battery string

Cabling
AG-EDSM-S9-Cable: AG-CMT-36/48SC to EDSM Voltage Sense Cable, Single String, 9'
AG-EDSM-D9-Cable: AG-CMT-36/48SC to EDSM Voltage Sense Cable, Two String, 9'
AG-EDSM-S35-Cable: AG-CMT-36/48SC to EDSM Voltage Sense Cable, Single String, 35'
AG-EDSM-D35-Cable: AG-CMT-36/48SC to EDSM Voltage Sense Cable, Two String, 35'

Mechanical
Housing Material: High impact plastic
Dimensions (in): 1.44H x 4.82W x 4.25D
(mm): 36H x 122W x 108D

Weight (lb/kg): 0.8/.36

Electrical
Batteries: Individual 12VDC nominal batteries configured into 36 or 48VDC strings
Circuit Protection: Single blow fuse, reverse polarity protected
Environmental: -40 to 55°C (-40 to 131°F), 5 to 95% humidity
Quiescent Current Draw: 1mA max. (Current consumed by AlphaGuard after low voltage total shutdown)
Charge Management: Most effective during float period of charge
Max. Current: 2A @ 25°C
Quality of Final Balance: ±100mV max. between any two (2) batteries
Charging Efficiency: 80 to 90%
Charge Balance: ±100mV typical
Low Voltage Cutoff/End of Discharge: Determined by the lowest per cell voltage any battery in the string
Programmable 1.80 to 1.65V per cell

Communication to XM2: AlphaGuard configured EDSM communications card
Voltage Sense Regulation: ±100mV

Warranty
5 years