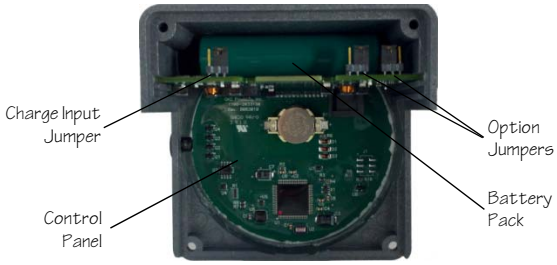
Power Guide

AeroMate™ WSC
(Wire Sensors and Controls)

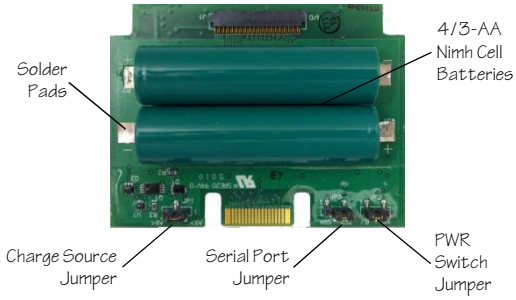
Flexible and reliable power system

Internal Rechargeable AA Battery Holder
Convenient Power Jack Connector

Power Module Components



Power Module Assembly



Battery Notes

The battery pack consists of two (2) rechargeable 4/3-AA cell batteries. The 4/3-AA batteries are 1.2V, 4000 mAh, Nimh (Nickel Metal Hydride) cells.

To remove AA batteries, first pull the battery module out of the housing. Unsolder the plus (+) and negative (-) solder tabs from the PCB pads. Lift the disconnected battery from the Power Module PCB.

To replace the AA batteries, place the 4/3-AA battery on the Power Module PCB being careful to observe battery polarity. Bend or form the battery solder tabs to make contact with the PCB pads. Apply heat to the solder tabs using a standard electronics soldering iron until solder melts and bonds the battery tab to the PCB pad. Use only enough heat bond the tab to the PCB pad – too much heat may damage the PCB pad.

CSA Approval

AeroMate WSC units bearing the CSA Intrinsic Safety label must use only CSA approved batteries. See a list of approved battery cells below.

Order Number	Type	Specification
4008-0124000	Sanyo HR 4/3 A	1.2V @ 4000 mAh

Installing Power Module

AM3100 Control Panel Housing

To install the power module into the enclosure, orient the power module as shown in the illustration above and gently slide the module on to the TOP RAIL of the enclosure. Check to see that the front panel connector mates properly with the power module connector, then firmly seat the power module onto the front panel connector.

Note that the solar charge input (<6V - LOW) is active only when the AeroMate unit is powered ON. When using the external power source input (>6V - HIGH), battery charging is active whether the AeroMate unit is powered ON or OFF. The external power source input is voltage regulated to 2.8 Vdc to prevent battery overcharging.

Power Jack Socket

The power jack socket provides a convenient method for connecting other power sources to charge the internal 4/3-AA batteries or to power the unit with the internal 4/3-AA batteries removed. The power jack socket is on the bottom of the rear application module.

Several accessories are available for use with the power jack including 2 Watt or 6 Watt external solar panels and a 6 Vdc AC-to-DC converter to charge from a 115 Vac utility socket. These accessories use a mated, molded power jack plug and cable with a white stripe to show the positive (+) connection wire.

CAUTION!

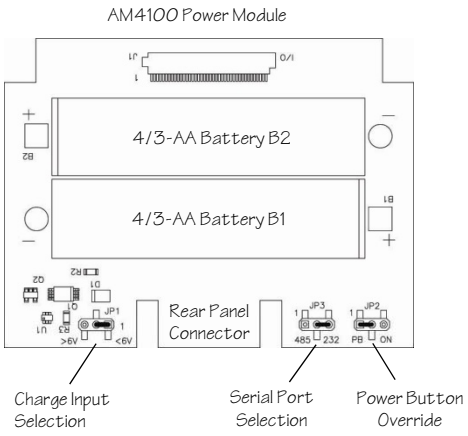
Use only manufacturer supplied accessories with the External Power Jack when rechargeable batteries are installed.

CSA Approval

AeroMate units bearing the CSA Intrinsic Safety label must use only CSA approved power jack accessories. Approved power jack accessories include:

Order Number	*Mfg. Name*	*Mfg. Part No.*	*Power*
9200-0490560	SunWize	1022W5V.52A	2 Watts
9200-0501200	SunWize	1025W5V1.35A	6 Watts

Power Module Jumpers



JP1 – Charge Input	>6V: External Power Supply <6V: Solar Panel Charging
JP2 – Power Control	PB: PWR Button Control ON: Always turned On
JP3 – Serial Port	232: Serial RS-232 Port 485: Multi-Drop RS-485 Port

Power Options

The AeroMate's input voltage and current regulation system allow a wide variety of power options to be used. Solar charging (JP1:<6V) is active only when power is turned ON to the unit. External charging (JP1:>6V) is active in both ON and OFF power modes. For supplemental battery charging, use only manufacturer supplied Power Jack accessories.

The AeroMate's internal 2x 4/3-AA battery pack has a nominal 2.4 Vdc voltage reading. During routine operation, battery voltages in the range of 3.2 Vdc to 2.4 Vdc are considered normal.

Rechargeable Batteries Removed

With the two internal rechargeable 4/3-AA batteries removed, any 4.5 to 24 Vdc power source may be used for normal operation. In this configuration, the AeroMate power draw is constant, regardless of the voltage applied to the external power jack input.

With the two internal rechargeable 4/3-AA batteries installed, any 4.5 to 24 Vdc power source may be used for normal operation. In this configuration, batteries will only charge to 2.80 Vdc and remain in a power standby mode.

Accessories

Part Number	*Accessory Description*
4008-0124000	Nimh 4/3-AA Battery (4000 mAh). Uses 2 each solder tab batteries. Recommend charging before use.
6016-PJ22206	Power Jack Cable w/ alligator clips. 6 ft., 2-Coductor #22 AWG wire. White stripe marks positive lead.
4022-1206300	Wall Socket Utility Charger. 6 Vdc @ 300 mA charge rate. Connects directly to Power Jack.
9203-2034100	AeroMate power module assembly. Includes two 4/3-AA batteries. Direct module replacement.
9200-0490560	Ext. 2 Watt Solar Panel w/ stand. 4.9 Vdc @ 560 mA charging. 6 ft. Power Jack cable provided.
9200-0501200	Ext. 6 Watt Solar Panel w/ stand. 5 Vdc @ 1200 mA charging. 6 ft. Power Jack cable provided.