

AIRSYS Multi Unit Controller (ASMUC)

For AIRSYS Wall Packaged Units



Product Overview

- Microprocessor based multi-unit controller manages up to 6 HVAC units.
- Optional zone control allows for up to 4 independent control zones, each with its own setpoint, alarming, and backup units. This is ideal for hot/cold aisle containment and other compartmentalized buildings.
- Smart control features seamless changeover between free cooling, partial free cooling, and mechanical cooling.

Adaptive Free Cooling

Adaptive Free Cooling learns the optimal setpoints for free cooling as the system operates. If the shelter heat load changes, Adaptive Free Cooling will learn the new load and change accordingly. This ensures free cooling operation is always maximized and the system is as efficient as possible.

FEATURE SPOTLIGHT

Engineered Features

Power Monitoring

Instantaneous, 1hr, and 30-day average power consumption for each individual HVAC can be displayed locally and monitored remotely

PGD Display

The large 132x64 display features an intuitive interface which speeds up installation and maintenance of the HVAC system.

Micro-USB Interface

Built-in Micro-USB interface allows users to quickly download settings and alarm logs to personal computers, which expedites diagnostics.

System Step Test

Step-by-step testing mode allows quick and systematic verification of all major HVAC functions on all units.

Standalone Fail-Safe Mode

If the controller is unavailable, the HVAC units retain efficient operation, including free cooling, using onboard sensors and the last settings given by the controller.

Remote Monitor/Control

Dry contact outputs are available for major alarms. The built-in Ethernet module allows for communication through HTML, SNMP and TCP/IP protocols.

Rugged Construction

Industrial controller comes with 3000V surge protection. The polymer layered steel frame provides corrosion resistance for a large range of operating environments.



AIRSYS
Balance the Environment

HVAC Model Compatibility

Compatible with all HVAC units with “M” designation

11 V 1 T3 **M** R410 A AC

Control Configuration

M: Designed for Multi-Unit Controller

D: Designed for Dual Unit Controller

Technical Data

Model/Part Number	ASMUC.6.DC	ASMUC.6.AC
General		
Number of HVAC units controlled	1 to 6	1 to 6
Controller Display	132x64 Programmable Graphical Display	132x64 Programmable Graphical Display
Electrical		
Power Input	18-60VDC	100-264VAC
Wire Size	18AWG	18AWG
Breaker Size	5A	5A
Certification	ETL/CSA/CE	ETL/CSA/CE
Temperature Sensor		
Sensor Type	Passive Resistor	Passive Resistor
Range	-60 to 230 °F [-50 to 110 °C]	-60 to 230 °F [-50 to 110 °C]
Sensor Extension	Up to 100ft w/ 24AWG	Up to 100ft w/ 24AWG
Humidity Sensor		
Sensor Type	Conductivity Based	Conductivity Based
Range	10% to 100% RH	10% to 100% RH
Sensor Extension	Up to 50ft w/ 24AWG	Up to 50ft w/ 24AWG
Communication		
Default Protocol	IPV6 / SNMP	IPV6 / SNMP
Alarm Dry Contacts	3 Input / 6 Output	3 Input / 6 Output
Dimensions		
Height	21-3/4" [552mm]	21-3/4" [552mm]
Width	16-1/8" [410mm]	16-1/8" [410mm]
Depth	5-3/8" [137mm]	5-3/8" [137mm]
Net Weight	28 lbs. [12.7kg]	28 lbs. [12.7kg]
Shipping Weight	31 lbs. [14kg]	31 lbs. [14kg]

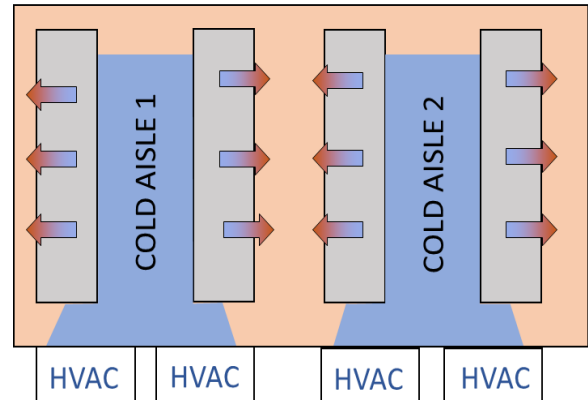
Display Interface

The ASMUC features a large 132x64 pixel display with an intuitive and easy to read interface. The easy to use interface will help speed up system installation and maintenance. All parameters from any connected HVAC can be seen and adjusted from the multi-unit controller. Multiple access levels give trained technicians programming flexibility while protecting the HVAC system from unintended changes.



Zone Control

Optional zone control allows users to optimize the control scheme for building arrangements such as hot/cold aisle containment (see right). Up to 4 independently controlled and monitored zones can be established. Should the temperature in a zone increase, the controller will engage units in that zone for backup. Similarly, if a unit is locked out due to alarm, the controller will prioritize standby units in the same zone to compensate.



Predictive Maintenance

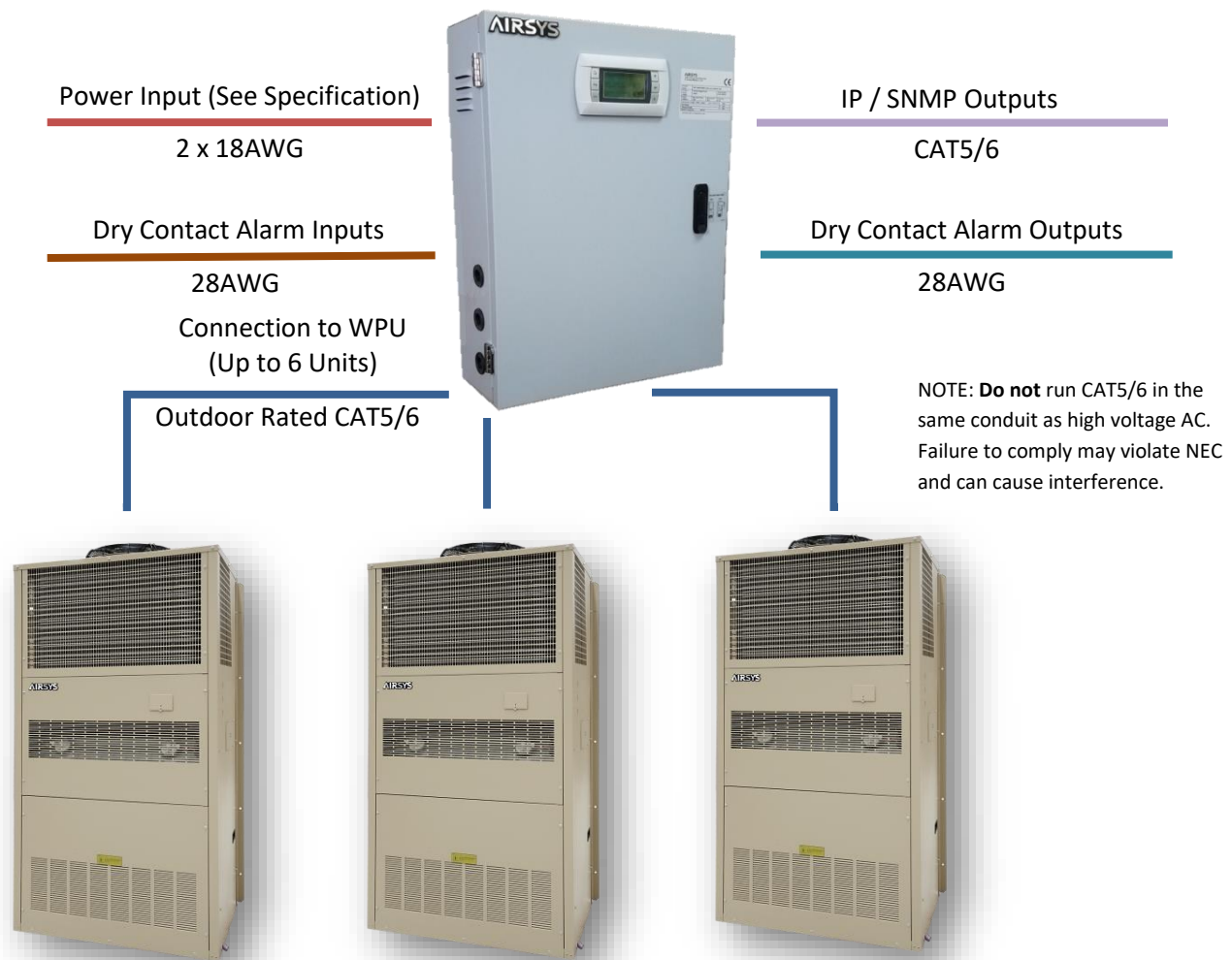
The ASMUC continuously monitors key maintenance parameters and makes them easily accessible both at the local display and remotely. These parameters include:

- Instantaneous power consumption
- Condenser “wash me” monitor
- High side pressure and temperature
- Low side pressure and temperature
- Average power consumption
- Condensing temperature
- Superheat and subcooling
- Supply air temperature

These parameters, when combined with any patterns in historical alarms, enable experienced HVAC technicians to quickly identify potential issues before an expensive repair is needed.

EXAMPLE: Replacing a run capacitor near the end of its life is much easier and less costly than waiting until it starts to cause problems with the compressor.

ASMUC Input/Output Connections



Dry Contact Alarms (Optional)

Alarm Inputs

- **Smoke/Fire Alarm**
All components will immediately shut down and the outside air damper will fully close until alarm is cleared.
- **Generator Run**
Free cooling is disabled to prevent diesel fumes from entering the building. Compressor speed will be limited in all variable speed models to reduce power draw from generator.
- **DC Failover** (Only when DC Fail-Over is installed on WPU)
When AC power is lost, max fan speed is reduced and compressors and heaters are disabled to facilitates free cooling or fresh air emergency ventilation

Alarm Outputs

- **High Temp Alarm**
Indicates the building has exceeded the pre-set high temp alarm setpoint.
- **HVAC Fail Alarms**
Indicates a major alarm on an HVAC unit. Up to 3 HVAC unit failures can be monitored through dry contacts. IP/SNMP is recommended for installation of more than 3 units.
- **Dirty Filter**
Indicates the primary air filter in at least one unit requires replacement.

Dimensions

