



# AeroMate™ WSC

Wireless Sensors and Controls

9203-2031050 2X Valve Controller

## FEATURES:

- **Two Solenoid Valves**  
pneumatic dual-port valves
- **Individual Valve Control**  
separate timers and controls
- **Versatile Cycle Control**  
Day-of-Week and Time-of-Day
- **Rechargeable Batteries**  
replaceable Nimh batteries
- **Data Logging**  
user configurable data logs
- **Network Ready**  
2.4 GHz Zigbee Wireless
- **Four Event Tags**  
V1 / V2 Open and Close
- **ModBus RTU Slave**  
R/W coils and data registers

## PC SOFTWARE:

- **ChartWriter™**  
graphical program generator
- **Data Manager**  
Data log manager & viewer

## APPLICATIONS:

- **Pneumatic Control**
- **Intermittent / Timer**
- **Plunger / Gas Lift**
- **Compressor Control**
- **Chemical Injection**
- **Pipeline Maintenance**
- **Well Water Monitoring**
- **Distributed Controls**

### Compact ...

electronic controller provides an easy to use, low maintenance solution for low pressure, pneumatic control. Whether the need is for a standalone controller or a component in a wireless, distributed control network, the AeroMate Dual-Valve controller is the right choice at the right price.

### Rugged ...

and durable, AeroMate's molded enclosure protects against harsh weather, corrosive gases, salts and the physical demands of industrial environments. Stainless steel valve components provide protection against corrosive gasses and liquids. Conformal coated electronics and gold plated contacts round out the AeroMate's suite of environmental protection features.

### Features ...

include two pneumatic solenoid valves that are operated independently or in synchronization. Cycle timing is in hrs:min:sec or day-of-week and time-of-day for standalone valve control. vTagNet technology allows configuration of valve event and action tags for flexible internal control and collaboration with other wireless sensors and controls. Data monitoring and event logging provide all the ingredients for integration into remote access and control systems.

### Onboard ...

intelligence is the difference between getting what you want and accepting what you have. AeroMate's ChartWriter™ graphical program editor and compiler makes getting what you want as simple as drawing a flow diagram. Combine easy, graphical programming with the flexible vTagNet technology and an intelligent, collaborative sensing and control system is only limited by the imagination.

### Flexible Power ...

system uses rechargeable, AA 2500 mA-H Nimh batteries or external 3.6 Vdc to 24 Vdc power source. An external power jack allows easy hook-up to power sources and solar panels for added battery charging. External power sources are used without the AeroMate rechargeable batteries installed.



Graphical flow chart programming utility.

vTagNet™  
Technology

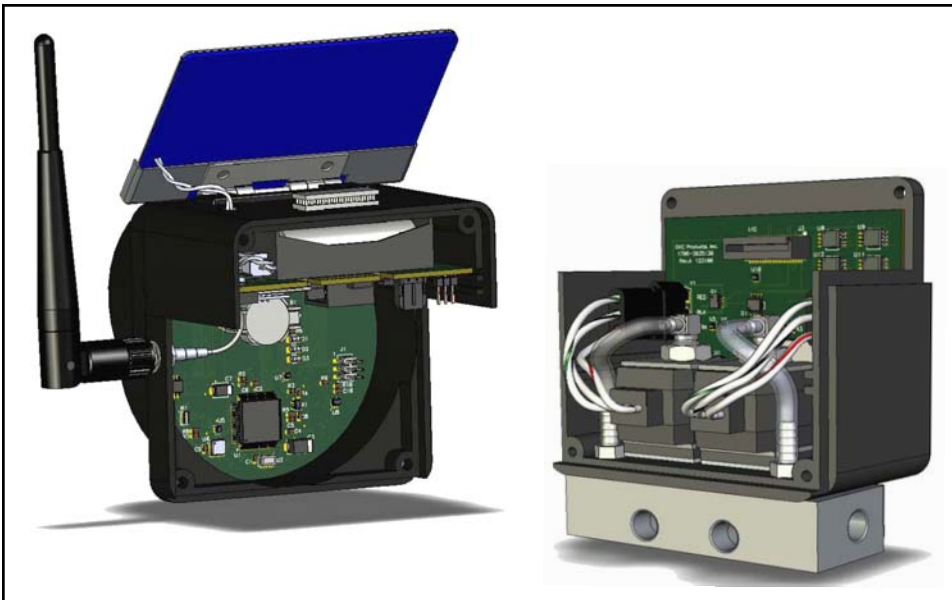
Open wire tag connectivity and ModBus RTU support.

### Reliable ...

long term performance is a major benefit gained from the evolution and refinement of the AeroMate's advanced electronics. The patented Enhanced Valve Switching (EVS) and SunSmart technologies ensure reliable, long term performance irrespective of battery charge status and temperature. All electrical connections are protected from damaging static electric shock and lightning discharge. A time tested user interface, low power operation and rugged packaging provide a high level of field reliability.

# OKC Products®

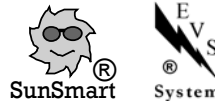
"Turning good ideas into great sensors and controls."



P/N 9203-2031050. AeroMate front cover assembly and dual-valve module shown disassembled. Front cover assembly, shown with wireless installed, is easily removed for routine valve maintenance.

## Dual-Valve Specifications:

Manufactured under U.S. Patent No.s 6,194,793 B1 and 6,462,507 B2.



### Enclosure:

Weight	2.1 lbs. (0.9 kg.) Shipping 4 lbs. (1.8 kg.)
Dimensions	3.7"W x 5.0"H x 4.2"D (9 cm x 13 cm x 11 cm)
Type	Gasket Sealed NEMA 4X
Material	Thermoplastic Polyurethane

### Power:

Standard	3 x AA Cell Battery Holder 2500 mA-Hr @ 3.6 Vdc
Drain	50 mW Average w/o XBee
External	<i>With Batteries Removed:</i> Using 2.5 mm Power Jack 3.6 - 24.0 Vdc @ 50 mW

### Charger:

Internal	Two Season Adjustable Shatterproof Solar Panel 3.0 Vdc @ 750 mW
External	Using 2.5 mm Power Jack:
Range	4.5 - 8.0 Vdc with 1.2 W max. power dissipation

### Display:

Type	32-character LCD Display w/ Auto-Contrast Control
Window	Polycarbonate Coated

### Temperature:

Operating	-20°F to 150°F (-30°C to 65°C)
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### Log Data Memory:

Type	Non-volatile FRAM
Amount	1x 32kx8 bytes
Log Size	1310 Records

### Pneumatic Control:

Number	Two (2) independent pneumatic valves
Type	Latching solenoid w/ stainless steel armature
Manifold	2X dual 1/4-NPT ports 316 stainless steel
Pressure	100 ±10 psi maximum

### Solenoid Control:

Timers	V1 Off and V1 On V2 Off and V2 On (hrs:min:sec and Day-of-Week)
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### Wireless:

Type	2.4 GHz, Zigbee
Drain	90 mW Average (XBee)
Range	Interchangeable modules.
XBee	Up to 300' (100 m) LOS
XBee Pro	Up to 4000' (1.2 km) LOS

### Certifications: (Pending)

CSA	Intrinsically Safe - Class I Group C and D
Others	(...)

## Display Items

### DATA Key:

- Status Page
  - EVS and valve state.
  - Valve V1 status.
  - Valve V2 status.
- Totals Page
  - V1 CLOSE & OPEN totals.
  - V2 CLOSE & OPEN totals.
- Operation Page
  - Battery and charge status.
  - Temperature history.
  - Wireless network status.
- Device Page
  - Device identification.
  - Manufacturing information.
  - Service call information.

### SET Key:

- Operation
  - Manual valve override.
  - Valve event tag setup.
- Timers
  - V1 timer & action tag setup.
  - V2 timer & action tag setup.
- System
  - Date/Time clock setup.
  - Day of week setup.
  - Wireless network setup.
  - Network & log update setup.

## Control Keys

- PWR** Power On/Off switch.  
Loads application program.
- DATA** Selects status, operation and  
device displays.
- SET** Selects items and variables  
that are user settable.

## Set Keys

- Move cursor right.  
Selects menu item.
- Increment cursor selection.  
Move to next item.
- Decrement cursor selection.  
Move to previous item.

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