



AeroMate™ WSC

Wireless Sensors and Controls

9203-2031051 1X Valve Controller

FEATURES:

- **One Solenoid Valve**
pneumatic dual-port valve
- **Valve Control Timers**
on, off and delay timers
- **Two Switch Sensors**
timer override control
- **Rechargeable Batteries**
replaceable Nimh batteries
- **Data Logging**
user configurable data logs
- **Network Ready**
2.4 GHz Zigbee Wireless
- **Three Event Tags**
V1 Open, Close and Delay
- **ModBus RTU Slave**
R/W coils and data registers

PC SOFTWARE:

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

APPLICATIONS:

- **Pneumatic Control**
- **Intermitter / 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 Single-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 a latching, pneumatic solenoid valve rated for up to 100 psi. Cycle timing is in hrs:min:sec or day-of-week and time-of-day for standalone valve control. Two independent switch sensor inputs provide timer override control. vTagNet technology allows the configuration of both valve and switch sensor event tags for 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

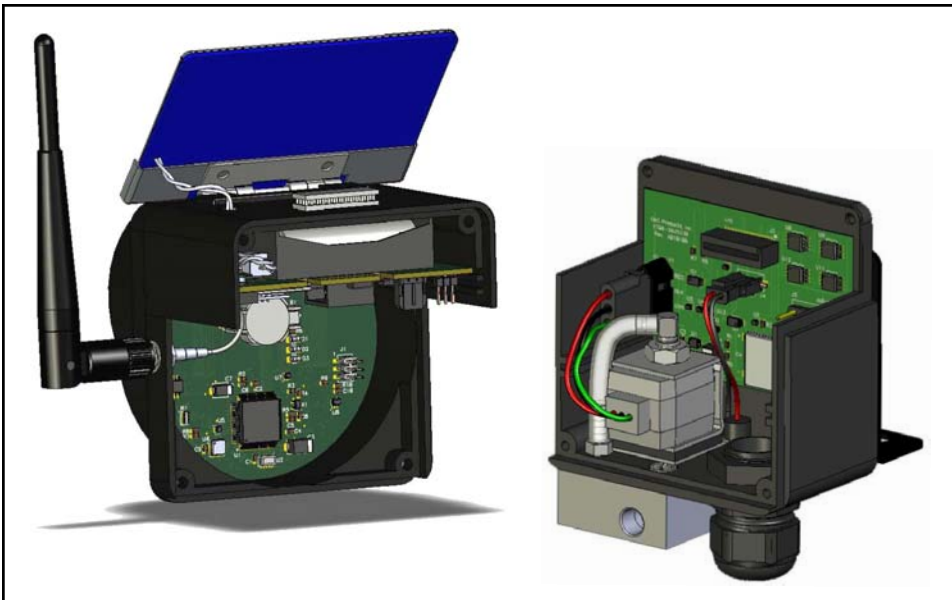
Open wire tag connectivity and ModBus RTU support.

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®

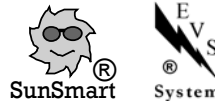
"Turning good ideas into great sensors and controls."



P/N 9203-2031051. AeroMate front cover assembly and single-valve module shown disassembled. Front cover assembly, shown with wireless installed, is easily removed for routine valve maintenance.

Single-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:

Type	Latching solenoid w/ stainless steel armature
Manifold	dual 1/4-NPT ports 316 stainless steel
Pressure	100 ±10 psi maximum
Timers	Close, Open and Delay (hrs:min:sec and DOW)

Switch Inputs:

Inputs	2X 0-30 Vdc range Active Hi/Low settable, time constant settable
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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 status.
 - Input switch status.
- Totals Page
 - V1 OFF and ON 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 tags.
- Timers
 - V1 timer & action tag setup.
- Input Switch Setup
 - Switch Hi/Low active state.
 - Switch input time constant.
 - Switch event tags.
- 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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