



# AeroMate™ WSC

Wireless Sensors and Controls

9203-2031070 4X4 Switch Router

## FEATURES:

- **Four Switch Sensors**  
normally open or closed
- **Four Switch Outputs**  
Low Side, 20V @ 2 A Drive
- **Output Switch Control**  
active Hi or Low and time
- **Data Logging**  
Automatic event logs
- **Rechargeable Batteries**  
replaceable Nimh AA cells
- **Network Ready**  
2.4 MHz Zigbee Wireless
- **Three Event Tags**  
active Hi and Low inputs
- **ModBus RTU Slave**  
R/W coils and data registers

## PC SOFTWARE:

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

## APPLICATIONS:

- **Switch Translation**
- **Digital Signal Router**
- **Switch Signal Router**
- **Switch Event Logger**
- **Distributed Controls**
- **Plunger / Gas Lift**
- **Compressor Control**
- **Well Head Control**

### Compact ...

4X switch sensor and controller provides a low maintenance solution for switch sensing and control. Whether the need is for data logging, switch translation or a component in a wireless, distributed control network, the AeroMate 4X Switch Router is the right choice at the right price.

### Rugged ...

and durable, AeroMate's molded enclosure protects against harsh weather, corrosive gases, salt spray and physical demands of industrial environments. Watertight bushing or 1/2" conduit and removable terminal blocks provide simple and easy hook up. Conformal coated electronics and gold plated contacts round out AeroMate's suite of environmental protection features.

### Features ...

include four switch sensing inputs and four output switch controls. Input switch sensing is user configurable for active high, active low and input time constant. Outputs are configurable for active high, active low and pulse width. vTagNet technology allows configuration of input event and output action tags for flexible I/O control and collaboration with other wireless sensors and controls. Switch event data logging allows easy integration into remote access

### 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

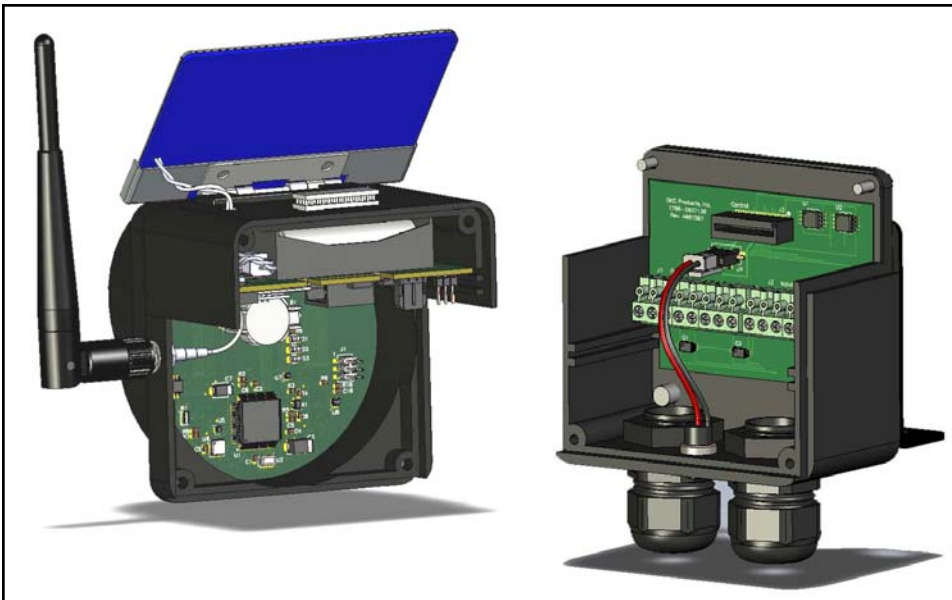
Open wire tag connectivity and ModBus RTU support.

### Reliable ...

long term performance is a major benefit gained from the evolution and refinement of the AeroMate's advanced electronics. The patented SunSmart power management technology ensures 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 9203-2031070. AeroMate front cover assembly and switch router module shown disassembled. Front cover assembly, shown with wireless kit, is easily removed for routine sensor maintenance.

## 4X Switch Router Specifications:

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



### Enclosure:

Weight	2.0 lbs. (0.7 kg.) Shipping 2 lbs. (0.9 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 Battery Holder 2500 mA-H Nimh Cells
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 Range	Using 2.5 mm Power Jack: 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	1129 Records

### Switch Inputs:

Inputs	4X 0-30 Vdc range Active Hi/Low settable, time constant settable de-bounced inputs
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### Switch Outputs:

Outputs	4X NPN low side switch Active Hi/Low settable Pulse width settable Max. +20 Vdc @ 2 A Common Ground
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### Wireless:

Type	2.4 GHz, 802.14.5
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
  - Input switch 1-4 status.
  - Output switch 1-4 status.
- Operation Page
  - Battery and charge status.
  - Temperature history.
  - Wireless network status.
- Device Page
  - Device identification.
  - Manufacturing information.
  - Service call information.




### SET Key:

- Input Setup
  - Switch Hi/Low active state.
  - Switch input time constant.
  - Input switch Event Tag.
- Output Setup
  - Switch Hi/Low active state.
  - Switch output pulse width.
  - Output switch Action Tag.
- System Setup
  - Date/Time clock 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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