



## *Universal Switch Airspeed Kit*

### **Model: USW-1**

The universal switch airspeed kit includes an ASW-1 airspeed switch and a Universal Switch-SPDT controller. This combination of components allows for the switching of electrical loads up to 10 amps and up to 30 volts based on aircraft speed. The airspeed set point is factory calibrated to 100 knots, however, it may be field adjusted to switch at any airspeed between 55 and 140 knots. The Universal Switch-SPDT controller provides both a normally open and a normally closed contact for controlling any electrical load up to 10 amps. This allows electrical loads to either be on or off above or below the airspeed set point. The system works with aircraft power systems from 10-30 volts.

USW-1 is not TSO'd and must only be used in aircraft certified in the Experimental category.

USW-1 must be installed using the current aircraft standards and practices. Refer to AC 43.13-2A/1B. The installer/builder is solely responsible for determining the suitability of the installation and use of this product.

## **Installation instructions:**

- 1) Connect the wiring harness from the Universal Switch-SPDT controller as shown in the wiring diagram.
  - a. Connect aircraft power and ground to the white/red and black wires.
  - b. Connect the airspeed switch to the white/black and black wires.
  - c. Connect the electrical load to be controlled to the OUTPUT terminals using the Common, Normal-open, Normal-closed wires. Up to 10 amps of load current may be switched. (note: these terminals are isolated from the input terminals and may be used to switch the power or the ground connections to the electrical load)
  
- 2) Connect the ASW-1 airspeed switch to the aircraft pitot system and static system using the ports labeled “p” and “s”. Mount the ASW-1 to the aircraft using the mounting tabs.
  
- 3) Mount the Universal Switch-SPDT controller to the aircraft using the mounting tabs on the enclosure. The control box can be mounted in any orientation.

## **PRODUCT OPERATION:**

The airspeed switch will command the Universal Switch-SPDT to be conductive in the normal-closed position when the aircraft is operating below the airspeed set point. Above the airspeed set-point the Universal Switch will be conductive in the normal-open position. The airspeed set point is adjustable via the small screw as indicated in the wiring diagram. Note: This airspeed switch may additionally be used to control a Safety-Trim controller or an IFC-1 intelligent flap controller, however they will all share the same airspeed set-point. Ensure this is satisfactory for all the systems being controlled.

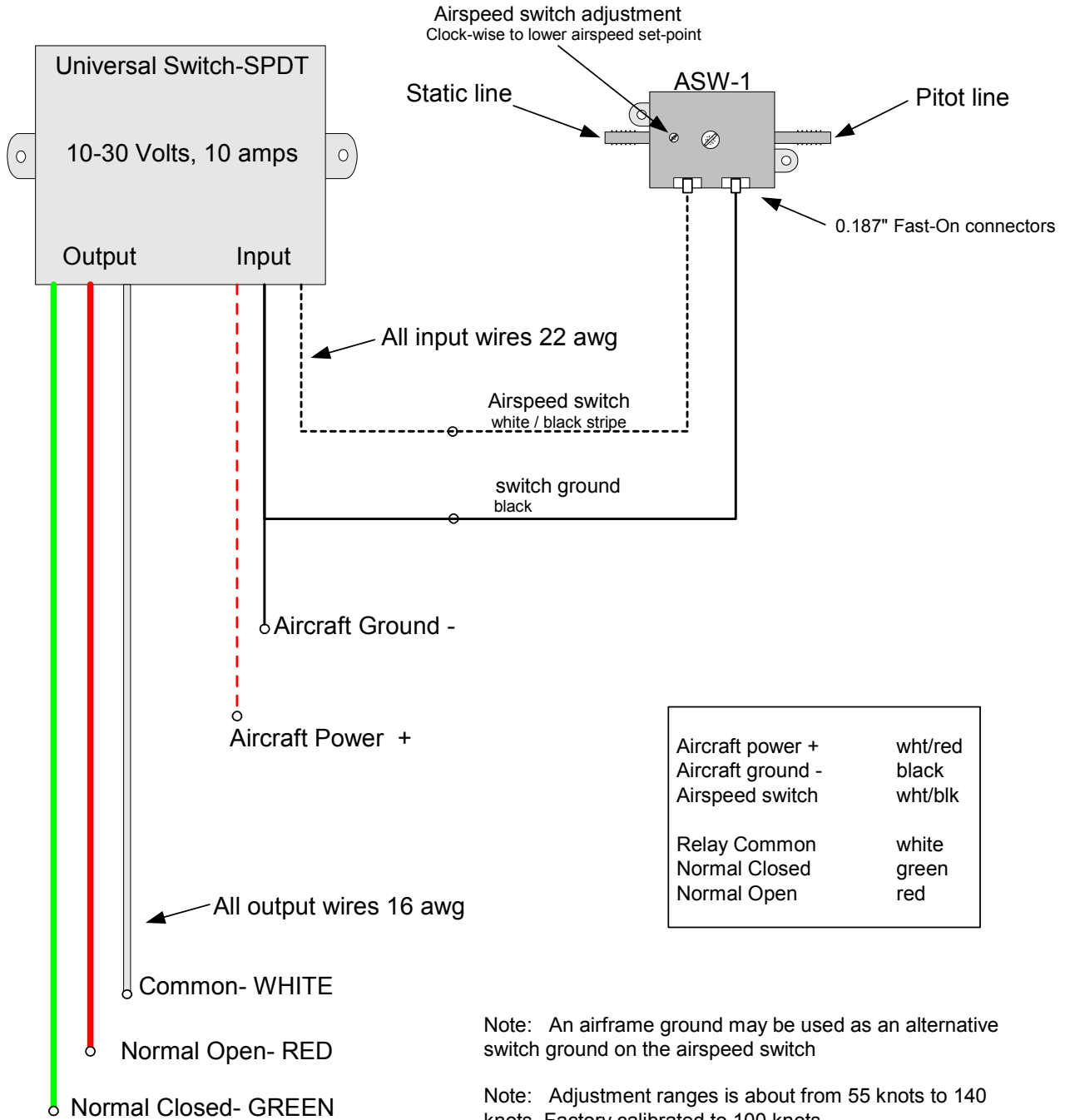
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# USW-1 wiring diagram



Note: An airframe ground may be used as an alternative switch ground on the airspeed switch

Note: Adjustment ranges is about from 55 knots to 140 knots. Factory calibrated to 100 knots.

Note: Static connection must be made to Aircraft Static port

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