Maretron
Vessel Monitoring & Control Systems

Installation Instructions
VS-07.0HG Vacuum Switch

Introduction

The Maretron VS-07.0HG is a accessory for the SIM100 Switch Indicator Module/ The VS-07.0HG has a set of normally open contacts that will close whenever a vacuum in excess of 7.0" Hg (3.4 PSI or 0.237 bar) is detected. The VS-07.0HG has a factory installed 8KΩ end of line resistor so that the SIM100 can detect and report any break in the connecting wires.

Instructions

Please follow these instructions to connect the VS-07.0HG to the NMEA 2000 network via a Maretron SIM100 Switch Indicator Module. The wiring diagram appears in Figure 1 on the reverse side of this page. The diagram shows a connection to channel #1, but connections to other channels are similar.

1. Install two wires using the screws on the alarm contacts terminals from the VS-07.0HG to a free switch channel on the SIM100. To keep the end of line resistor in place, please do not remove the screws. The example in Figure 1 shows the VS-07.0HG connected to switch channel 1, terminals SW1A and SW1B.

2. Use a Maretron DSM250 display (firmware 1.3.5 or higher), or the DSM250 Viewing function of Maretron N2KAnalyzer software, or other Maretron display product capable of configuring the SIM100 to set the switch channel mode (indicated as "Channel #*x* Mode" on the DSM250) for the appropriate channel to the "End of Line Resistor" setting. For this example, you would set "Channel #1 Mode" to "End of Line Resistor".

3. Supply Power to the NMEA 2000 network, Verify that the switch channel indicates an "off" (normal) state using Maretron N2KView software, N2KAnalyzer, or other product capable of displaying switch indicator state.

4. Testing the vacuum switch can be accomplished using a hand vacuum pump. Supply minimum of 10" Hg vacuum to the VS-07.0HG and verify that the switch channel indicates an "on" state.

5. Disconnect either of the two VS-07.0HG switch wires from the SIM100 and verify that the switch channel indicates an "error" state.

6. Reconnect the alarm wires to the SIM100 and verify that the switch channel indicates an "off" (normal) state.

7. Install the supplied rubber boot over the vacuum switch.

WARNING: The VS-07.0HG is shipped with an 8KΩ end-of-line resistor installed between the alarm contacts terminals. Do not remove this resistor as it is required for proper operation.

Suitability of application is responsibility of the user. Extreme heat and vibration should be avoided at mounting points such as on top of an engine over a hot manifold (MAX operation temp 250°F/121°C).

Always install by using a wrench on the hex base. Torquing at any other part of the switch voids the warranty or may cause malfunction. **A Polyimide film diaphragm is used in the pressure switch and is not recommended for use with water.** Compatibility with the brass or steel external pressure switch material is the responsibility of the user. Contact Maretron whenever use of switch or fluid compatibility is questioned.

PERSONAL INJURY

DO NOT USE this product as a safety or emergency stop device, or in any other application where failure of the product could result in personal injury. **Failure to comply with these instructions could result in death or serious injury.**

(continued on reverse)

Figure 1 - Wiring Diagram

Device Specifications

Parameter	Value
Switch Threshold Vacuum	7.0”Hg (3.4PSI, 0.237 bar)
Max operating pressure	150 PSI (10.3 bar)
Diaphragm	Polyimide film
Operating Temperature Range	-40° to 250°F (-40°C to 121°C)
Connector	1/8-27 NPT Male Thread
Circuitry	SPST-N.O. with 8 KΩ end of line resistor
Base	Brass
Cover	Glass-reinforced polyester

For installation support, please contact:

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