

Switch Indicator Module

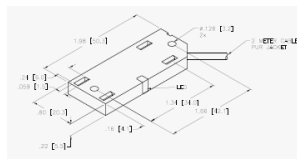
- **Monitors Switch Closure Devices and Broadcasts Status Over NMEA 2000® Network**
- **Detects and Reports Opens, Shorts, etc.**
- **Works with Maretron Supplied Detectors**
 - ✓ Heat, smoke, bilge water, carbon monoxide, LP Detector
 - ✓ Magnetic switches, glass break, door, hatch, portholes, etc.



GE Motion Sensor



GE Motion Sensor



High Bilge Water

SIM100 Switch Indicator Module

Maretron's Switch Indicator Module monitors switch closure devices including, but not limited to, safety equipment (e.g., heat, smoke, carbon monoxide, explosive vapor detectors), security systems (e.g., motion, vibration, glass break, door and port hole magnetic switches), and vessel monitoring equipment (e.g., valve closed/open, high water bilge). The SIM100 continually monitors these switch closure devices and broadcasts information over the NMEA 2000® network about the switch state so the crew can be alerted to potential conditions or problems that warrant further investigation. Advanced features of the SIM100 include the ability to detect whether or not power has been disconnected from the monitored device or if the signal wires have been disconnected due to either corrosion, tampering, or for any other reason (if the monitored device is so equipped). With the SIM100, you can rest assured that critical sensors are receiving power, signal wires are connected, and all the safety, security and vessel functions are under constant supervision.



- Monitors and reports switch status
- Can detect and report problems like opens and shorts in switch circuits
- Compatible with Maretron Supplied
 - Heat Detectors
 - Smoke Detectors
 - Carbon Monoxide Detectors
 - Bilge Water Detectors
- Also Compatible With
 - Magnetic Switches
 - Glass Break Detectors
 - Door, Hatch, and Porthole Magnetic Switches

Products	
PART NUMBER	DESCRIPTION
SI100-01	Switch Indicator Module
SH-41920TE	Smoke/Heat Detector
CO1000-S-W	Carbon Monoxide (CO) Detector (Surface Mount White)
LP1000-S-W	Liquid Petroleum (LPG) Detector (Surface Mount White)
BW100	Bilge High Water Detector
MD-6157-N	Motion Detector
MS-1026	Magnetic Switch Rectangular (Indoor)
MS-1085-N	Magnetic Switch Rectangular (Outdoor)
MS-1066-S	Magnetic Switch Cylinder (Indoor/Outdoor)
MS-1076	Magnetic Switch Porthole (Indoor/Outdoor)



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SIM100 Accessories



• GE Smoke/Heat Detector

- ✓ 12/24 Volt Supply
- ✓ Photoelectric Smoke Detector
- ✓ Fixed temp - 135°F ± 5°F
- ✓ Rate-of-rise 15°F/min > 105°F
- ✓ Sounder 85dB at 10 feet
- ✓ Self Diagnostics, Trouble Relay indicates Loss of Power and Smoke Detector Out of Sensitivity



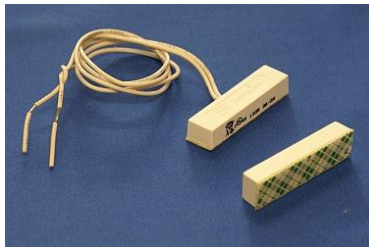
• GE Motion Detector

- ✓ Six interchangeable lenses for flexible coverage patterns
- ✓ Swivel bracket for accurate aiming
- ✓ Motion verification through advanced signal processing reduces false alarms

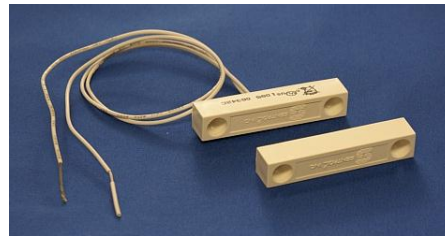


• Bilge Monitor

- ✓ No Moving Parts (Proximity Switch)
- ✓ Mount Directly in Bilge at High Water Indication Mark
- ✓ Inadvertent Disconnect Detected and Signaled



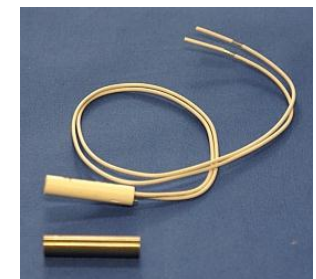
MS-1035
Magnetic Switch
Rectangular (Indoor)



MS-1085N
Magnetic Switch
Rectangular (Outdoor)



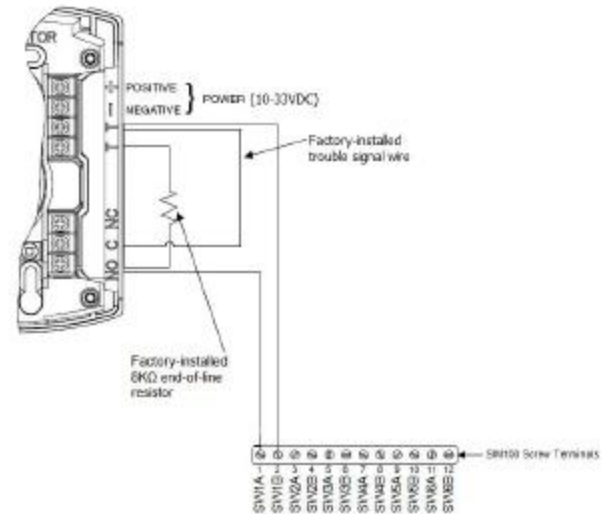
MS-1075
Magnetic Switch
Recessed (Indoor/Outdoor)



MS-1055-N Magnetic
Switch Cylinder
(Indoor/Outdoor)

Carbon Monoxide Detector

- Maretron Part Number CO-CO1224T
- Connects To SIM100 (Normally Open Alarm Contact)
- Trouble Relay Opens when No Detector Power or End of Life Timer (6 Years)
- When Trouble Relay Opens, Fitted End-of-Line Resistor Disconnected and SIM100 Indicates Error if Properly Configured (true for Disconnected Wires as Well)
- UL2075 Approved (Mandatory Trouble Relay)
- ABYC Does Not Require UL2075
- UL2034 Approved but Not UL2034-75 (Carbon Monoxide Alarms for Use on Recreational Boats)
- ABYC Requires UL2034-75 for Gasoline Powered Boats



Search Knowledge Base for "Trouble Relay"

<http://www.maretron.com/support/manuals/CO-CO1224T%20Installation%20Instructions%201.0.pdf>

<http://www.systemsensor.com/pdf/A05-0437.pdf>

<http://www.systemsensor.com/pdf/I56-3111.pdf>

Gas Detector

- Maretron Part Number LP-200012UL
- Connects To SIM100 (Normally Open Alarm Contact)
- Maretron Fits End-of-Line for Inadvertent Disconnect of Signal Wires to SIM100
- No Integrated Trouble Relay (Power Supervision Relay Can be Added – See Knowledge Base)
- Note: 12 Volt Only

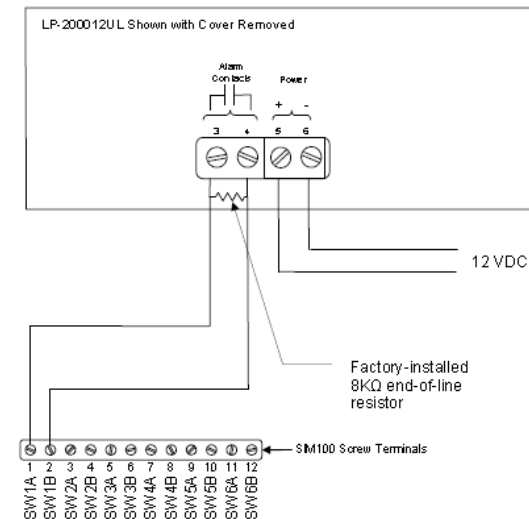


Figure 1 - Wiring Diagram

Search Knowledge base for “power supervision relay”

<http://www.maretron.com/support/manuals/LP-200012UL%20Installation%20Instructions%201.0.pdf>

http://www.security.honeywell.com/star/hsce_files/Files/E-E-NaturalGas.htm

Vacuum Switch

- Maretron Part Number VS-07.0HG
- Connects To SIM100 (Normally Open Contact)
- Maretron Fits End-of-Line Resistor for Inadvertent Disconnect of Signal Wires to SIM100
- No Power Required, thus No Need for Power Supervision
- Switch Point Set to 7" Hg Vacuum (0.24 Bar, 24 kPa, 3.4 PSI)
- 1/8" NPT Male Threads
- Vacuum Switch is Part of a Comprehensive Fuel Monitoring System



Vacuum Switch and Hood



Replace or Supplement Traditional Analog Gauges

<http://www.maretron.com/support/manuals/VS-07.0HG%20Installation%20Instructions%201.0.pdf>
http://content.honeywell.com/sensing/hss/hobbscorp/pdf/cat_pav.pdf

Fluid Pressure Monitor (FPM100)

- Monitor Up to Six Pressure/Vacuum Channels
- Uses Industry Standard 4-20mA Sensors
- Output Channels are Short Circuit Protected
- Sensors Powered Directly from NMEA 2000® Network
- Configurable for Fluid Pressure and Vacuum
- Many Applications – Water Pressure, Hydraulic Pressure, Pump Suction or Vacuum (Clogged Filters)
- Configurable for Tank Level Monitoring
- 11 Accessory Probes (Pressure/Vacuum Transducers)

FPM100 Fluid Pressure Monitor



Maretron's Fluid Pressure Monitor is used to adapt up to six pressure transducers to the NMEA 2000® network (pressure transducers sold separately). This allows you to observe fluid pressures and tank levels anywhere on the vessel where there are NMEA 2000® compatible displays. With the appropriate transducer, the FPM100 reports either pressure or vacuum for a variety of applications including water pressures, oil pressures, hydraulic pressures, or system vacuum for detecting clogged filters.

The FPM100 also has a tank level mode, so that fluid levels in a tank can be monitored via a pressure transducer mounted at the bottom of the tank and transmitted over the NMEA 2000® network. This allows you to monitor the fluid levels in tanks that are extremely deep, have internal structures, or are otherwise not suited for other tank level sensing technologies. In this mode, the FPM100 can be calibrated for irregular tank shapes so that you know the true level of the tanks.

The Maretron FPM100 has the following features:

- NMEA 2000® interface
- Adapts up to six pressure transducers to the NMEA 2000® network
- Each channel independently programmed to match pressure transducer characteristics
- Each channel independently programmed in pressure/vacuum mode or tank level mode



Products

PART NUMBER	DESCRIPTION
FPM100-01	Fluid Pressure Monitor
PT0-3PSI-01	Pressure Transducer (0 to 3 PSI)
PT0-5PSI-01	Pressure Transducer (0 to 5 PSI)
PT0-10PSI-01	Pressure Transducer (0 to 10 PSI)
PT0-50PSI-01	Pressure Transducer (0 to 50 PSI)
PT0-100PSI-01	Pressure Transducer (0 to 100 PSI)
PT0-200PSI-01	Pressure Transducer (0 to 200 PSI)
PT0-300PSI-01	Pressure Transducer (0 to 300 PSI)
PT0-500PSI-01	Pressure Transducer (0 to 500 PSI)
PT0-1000PSI-01	Pressure Transducer (0 to 1000 PSI)
PT0-3000PSI-01	Pressure Transducer (0 to 3000 PSI)
PTSHB-01	Pressure Switcher
PT40-100-01	Pressure Transducer Vacuum to 1 Bar

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Rudder Angle Adapter

- Adapts Resistive Rudder Senders to NMEA 2000®
- American (240-30 ohm) or European (10-180 ohm) Standard Compatible
- Can Be Used With or Without Analog Gauges
- End Point Calibration for Different Rudder Stop Angles

RAA100 Rudder Angle Adapter

Maretron's RAA100 is used to adapt commercially available resistive rudder senders to the NMEA 2000® network. This allows you to observe rudder angle anywhere on the vessel where there are NMEA 2000® compatible displays such as the Maretron DSM250 or DSM200.

The RAA100 is compatible with both the American standard (240-30 ohms) and European standard (10-180 ohm) resistive senders. In fact, the RAA100 can be calibrated for any resistance between 0 and 300 ohms.

You can also use the RAA100 with analog gauges at the same time as NMEA 2000® so you don't have to give up existing analog gauges to enjoy the advantages of digitally networked information.

The Maretron RAA100 has the following features:

- NMEA 2000® Interface
- Adapts American standard (240-30 ohm) resistive senders to NMEA 2000® Network
- Adapts European standard (10-180 ohm) resistive senders to NMEA 2000® Network
- Can be Calibrated for any Resistive Sender Ranging from 0-300 Ohms or 300-0 Ohms
- Three Point Electronic Calibration eliminates need for Mechanical Adjustment or Calibration
- Can be Used Standalone Without Analog Gauges



Part Number	Description
RAA100-01	Rudder Angle Adapter

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Temperature Module

- **Monitors Up to 6 External Temperature Probes and Broadcast Data Over NMEA 2000® Network**
 - ✓ **Four Channels of Thermistor Probes (-4°F to 176°F) and Two Channels of Thermocouple Probes (32°F to 1652°F)**
- **Probe Applications**
 - ✓ **Cabin, Engine Room, Equipment, Air Duct, Tanks, Exhaust Gas Temperature (EGT), etc.**



Ambient Air Probe



Ring Terminal Probe



Exhaust Gas Temperature Probe

TMP100 Temperature Module



Maretron's TMP100 measures the temperature for up to 6 temperature probes and reports the information over an NMEA 2000® network. The TMP100 supports up to 4 thermistor probes and 2 high temperature thermocouple probes. Optional thermistor probes (-20°C to 80°C or -4°F to 176°F) cover a wide range of applications including cabin air temperature, engine room air temperature, refrigerator/freezer temperature, under bolt temperature (inverters, charges, pumps, motors, etc.), tank temperatures (live well bait, hot water, etc.), and air duct temperatures. The optional thermocouple probes (0°C to 900°C or 32° to 1652°F) are used to measure Exhaust Gas Temperature (EGT) as part of a comprehensive fuel management system.



Products

PART NUMBER	DESCRIPTION
TMP100-00	Temperature Module
TP-AM-1	TMP100 Ambient Air Temperature Probe
TP-UB-1	TMP100 Under Bolt Temperature Probe
TP-T-1	TMP100 Tank Temperature Probe
TP-EGT-1	TMP100 Exhaust Gas Temperature (EGT) Probe

- Six External Temperature Probes are Measured and Broadcast Over NMEA 2000 Network
- Four Channels for Thermistor Probes and 2 Channels for High Temperature Thermocouple Probes
- Wide Variety of Applications Supported with Optional Temperature Probes
 - Cabin Temperature
 - Engine Room Temperature
 - Under Bolt Temperature (Inverters, Charges, Pumps, etc.)
 - Refrigerator/Freezer Temperature
 - Tank Temperatures (Live Well Bait, Hot Water, etc.)
 - Air Duct Temperature
 - Exhaust Gas Temperature
- Optional Temperature Probes
 - Ambient Air Temperature Probe (-20°C to 80°C or -4°F to 176°F)
 - Ring Terminal Probe (-20°C to 80°C or -4°F to 176°F)
 - Immersion Probe for Tanks or Plenums (-20°C to 80°C or -4°F to 176°F)
 - Exhaust Gas Temperature Probe (0°C to 900°C or 32° to 1652°F)

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TMP100 Accessories



Ring Terminal Probe
(-20°C to 80°C or -4°F to 176°F)



Immersion Probe
(-20°C to 80°C or -4°F to 176°F)



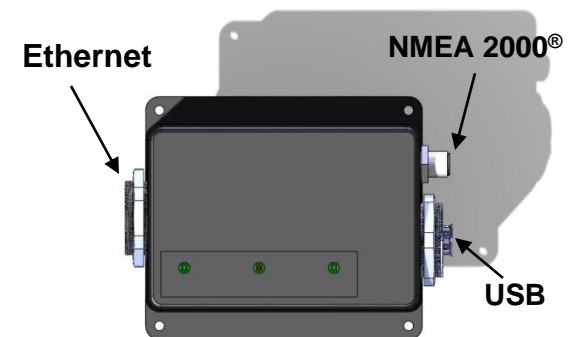
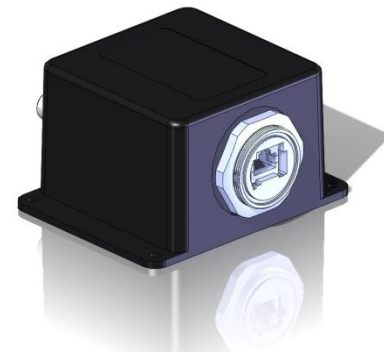
Ambient Air Probe
(-20°C to 80°C or -4°F to 176°F)



Exhaust Gas Temperature Probe
(0°C to 900°C or 32° to 1652°F)

Vessel Data Recorder (VDR100)

- All NMEA 2000[®] Data Recorded onto USB Thumb Drive (Similar to Airplane Black Box)
- USB Thumb Drives Holds One Year or More Worth of Data
- N2KView[®] Capable of Reading NMEA 2000[®] Data for Graphing Purposes
- Comes with Software for Extracting NMEA 2000[®] Data to Comma Delimited Files for Comprehensive Spreadsheet Analysis
- Available Q2 2012



N2KExtractor™ – VDR100 Data Extractor

