

开关指示器模块 SIM100

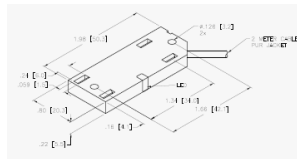
- 监测开关设备, 并将这些开关的状态信息传输到 **NMEA 2000®** 网络
- 监测及报告开路与闭路状态
- 可与 **Maretron**提供的侦测器共享, 包括
 - ✓ 热气, 烟雾, 舱底水位, 一氧化碳, 液化天然气侦测器等
 - ✓ 玻璃破裂, 门, 舱口和舷窗电磁开关



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-4100STE	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-1025	Magnetic Switch Rectangular (Indoor)
MS-1085-N	Magnetic Switch Rectangular (Outdoor)
MS-1055-N	Magnetic Switch Cylinder (Indoor/Outdoor)
MS-1075	Magnetic Switch Rectangular (Indoor/Outdoor)



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SIM100 配件



• 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



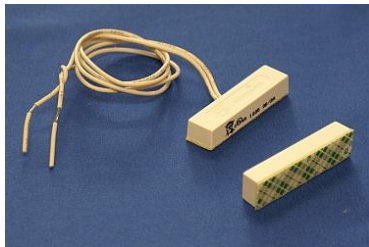
• GE Motion Detector

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

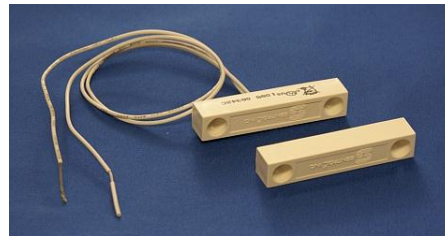


• Bilge Monitor

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



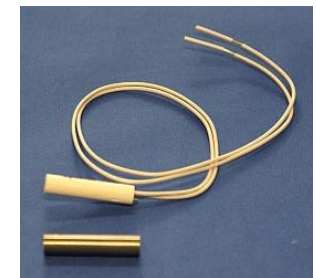
MS-1035
Magnetic Switch
Rectangular (Indoor)



MS-1085N
Magnetic Switch
Rectangular (Outdoor)



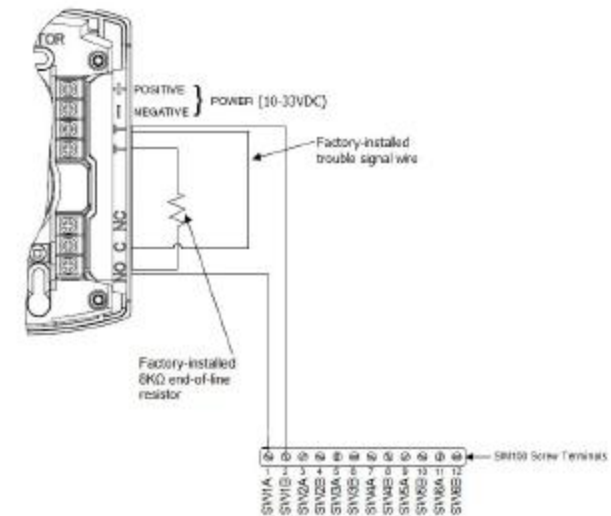
MS-1075
Magnetic Switch
Recessed (Indoor/Outdoor)



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

一氧化碳 (CO) 侦测器

- Maretron 零件料号 CO-CO1224T
- 连接到开关指示器模块(SIM100) (常开式警报接点)
- 未侦测到有电源供应时, 或此侦测器已达使用年限时(6年), Trouble继电器(Trouble Relay)会变成开路
- 如果设定正确, 当 Trouble Relay 变成开路, 其安装的线端电阻会出现断路, SIM100 会显示错误讯息(连接到 SIM100 的讯号线不慎脱落时亦相同)
- UL2075 认证通过 (强制安装 Trouble Relay)
- ABYC 不需要 UL2075 认证
- UL2034 认证通过, 但不是 UL2034-75 (用于游艇的一氧化碳警报器)
- 对于使用汽油主机的船只, ABYC 要求 UL2034-75



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>

瓦斯天然气侦测器

- Maretron 零件料号 LP-200012UL
- 连接到开关指示器模块 (SIM100)
(常开式警报接点)
- Maretron 加装了线端电阻, 以防止连接到 SIM100 的讯号线不慎脱落
- 未将 Trouble Relay 整合进来 (可以加入
监视电源供应的继电器 - 请见
Knowledge Base)
- 注: 仅适用 12 Volt

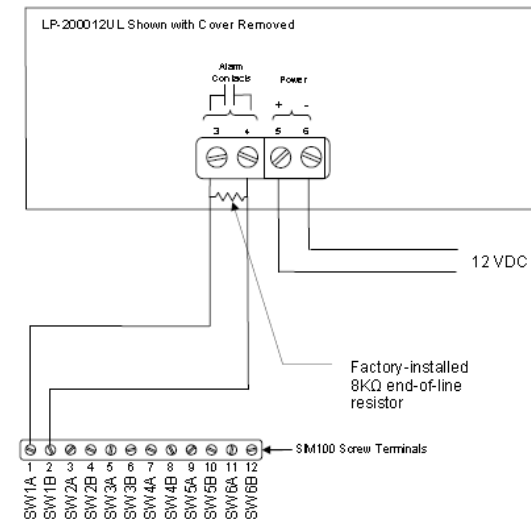
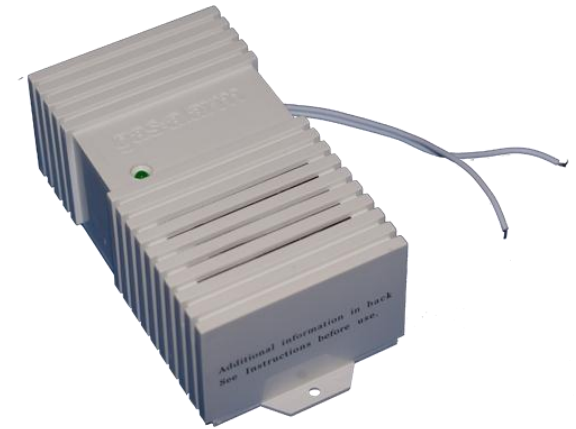


Figure 1 - Wiring Diagram

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

真空开关

- Maretron 零件料号 VS-07.0HG
- 连接到开关指示器模块 (SIM100)
(常开式警报接点)
- Maretron 加装了线端电阻, 以防止连接到 SIM100 的讯号线不慎脱落
- 无须供应电源, 因此不需要监视电源供应
- 开关触发点设定在7英吋真空汞柱 (7" Hg Vacuum) (0.24 Bar, 24 kPa, 3.4 PSI)
- 1/8" NPT 公螺纹
- 真空开关侦测器为完整的燃料监测系统的一部分



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

流体压力监测模块 (FPM100)

- 最多可监测六个压力/真空频道
- 使用工业标准的 4-20mA 传感器
- 输出的频道有短路保护装置
- 传感器直接由 NMEA 2000® 网络供电
- 可设定为监测流体压力或真空度
- 多种应用 - 水压, 液压, 泵的吸力或真空度 (例如燃油滤网被阻塞时)
- 可设定为油水箱液位高度监测
- 提供 11 种附属配件侦测器 (压力/真空传感器)

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 Switch
PT40-1000-01	Pressure Transducer Vacuum to 1 Bar



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船舵角度转接器

- 转接电阻式船舵角度传感器到 NMEA 2000®
- 美国标准 (240-30 ohm) 或欧洲标准 (10-180 ohm) 均可相容
- 可与模拟式仪表一起使用
- 端点校正法适用于不同的船舵最大转向角度

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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温度监测模块 TMP100

- 可监测 6 支外接的温度探针，且将信息传递到 NMEA 2000® 网络
 - ✓ 支援至 4 支热阻式探针 (-4°F to 176°F) 与 2 支高温热偶式探针 (32°F to 1652°F)
- 温度探针可应用范围
 - ✓ 舱室,机舱,设备,风管,水箱,主机排气温度 (EGT), 等



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.



- 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, Chargers, 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)



PART NUMBER	DESCRIPTION
TMP100-00	Temperature Module
TP-AMP-1	TMP100 Ring Terminal Bolt Temperature Probe
TP-P-1	TMP100 Ambient Air Temperature Probe
TP-EGT-1	TMP100 Immersion (Tanks, Plenums, etc.) Temperature Probe
	TMP100 Exhaust Gas Temperature (EGT) Probe



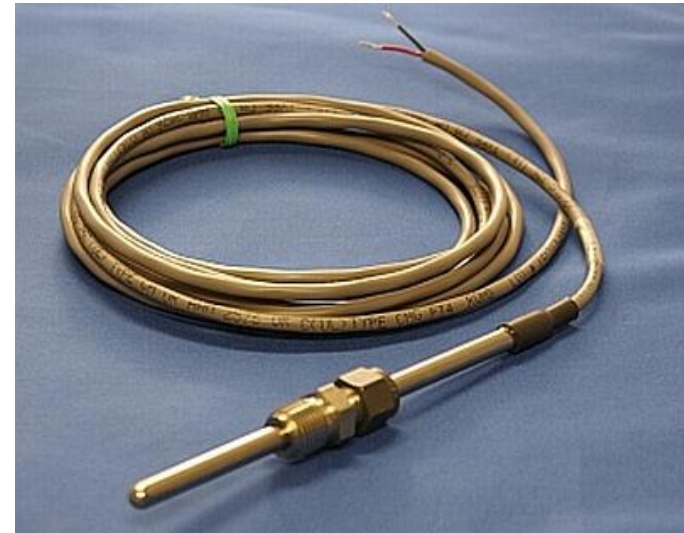
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TMP100 配件



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)



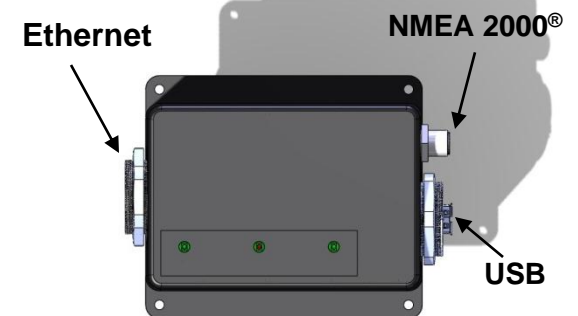
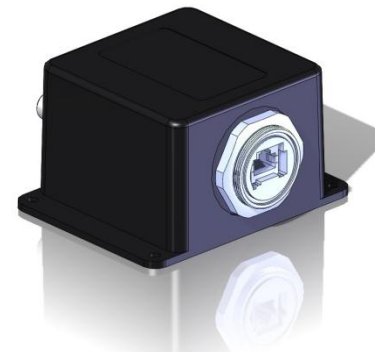
Ambient Air Probe
(-20°C to 80°C or -4°F to 176°F)



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

船只数据记录器 (VDR100)

- 所有 NMEA 2000® 的数据均被记录到 USB 随身碟中 (VDR100 类似飞机的黑盒子)
- USB 随身碟可储存一年以上的数据量
- N2KView® 可以读取 NMEA 2000® 数据来画出曲线图
- Maretron 提供的软件可以撷取 NMEA 2000® 资料, 输出为 Comma Delimited Files 的文件格式, 以作更完整的工作表分析
- Available Q2 2012



N2KExtractor™ – VDR100 资料撷取器

