

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.



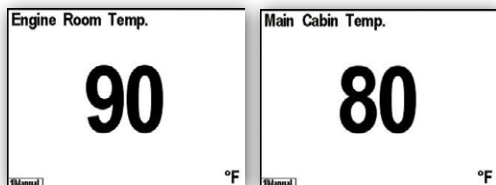
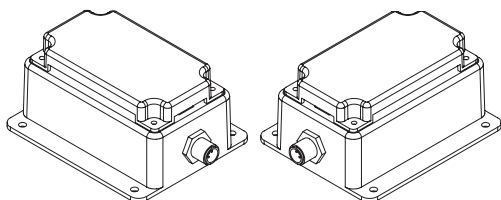
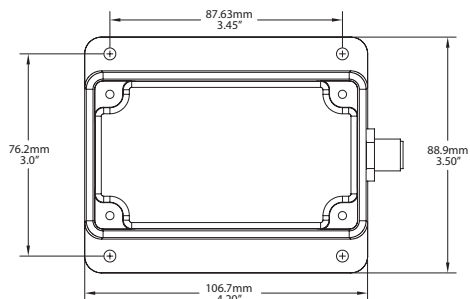
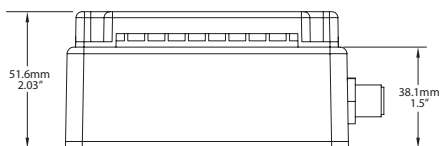
The following accessories are available for the TMP100:



Products

| PART NUMBER | DESCRIPTION |
|-------------|---|
| TMP100-01 | Temperature Module |
| TR3K | TMP100 Ring/Under Bolt Temperature Probe |
| TP-AAP-1 | TMP100 Ambient Air Temperature Probe |
| TP-IP-1 | TMP100 Immersion (Tanks, Plenums, etc.) 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, 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)



DSM150 & DSM250 Screen Shots

Specifications

| Parameter | Value | Comment |
|-------------------------------------|--------------------------------|----------------------------------|
| Measurement Range – Thermistor | -20°C to 80°C (-4°F to 176°F) | With supplied thermistor probe |
| Measurement Accuracy – Thermistor | ± 2°C (± 3.6°F) | With supplied thermistor probe |
| Measurement Range – Thermocouple | +0°C to 700°C (32°F to 1292°F) | With supplied thermocouple probe |
| Measurement Accuracy – Thermocouple | ± 2°C (± 3.6°F) | With supplied thermocouple probe |

Certifications

| Standard | Comment |
|---|-------------------------------|
| NMEA 2000® Standard | Level A |
| Maritime Navigation and Radio Communication Equipment & Systems | IEC 61162-3 |
| Maritime Navigation and Radio Communication Equipment & Systems | IEC 60945 |
| FCC and CE mark | Electromagnetic Compatibility |

NMEA 2000® Parameter Group Numbers

| Description | PGN # | PGN Name | Default Rate | | |
|---------------------------|----------------------------|---|--|------------------------|-----|
| Periodic Data PGNs | 130310 130311 130312 | Temperature Sources: Sea Temperature Outside Temperature Inside Temperature Engine Room Temperature Main Cabin Temperature Live Well Temperature Bait Well Temperature Refrigeration Temperature Heating System Temperature Freezer Temperature | 0.5 times/second | | |
| | | Response to Requested PGNs | 126464 PGN List (Transmit and Receive) | N/A | |
| | | | 126996 Product Information | N/A | |
| | | | 126998 Configuration Information | N/A | |
| | | Protocol PGNs | | 059392 ISO Acknowledge | N/A |
| | | | | 059904 ISO Request | N/A |
| | 060928 ISO Address Claim | | N/A | | |
| | 065240 ISO Address Command | | N/A | | |
| | 126208 NMEA | | N/A | | |
| Maretron Proprietary PGNs | 128720 | Configuration Exhaust Gas Temperature | N/A 0.5 times/second | | |

Electrical

| Parameter | Value | Comment |
|-------------------------------|---------------|---------------------------------|
| Operating Voltage | 9 to 32 Volts | DC Voltage |
| Power Consumption | 100 mA | NMEA 2000® Interface |
| Load Equivalence Number (LEN) | 2 | NMEA 2000® Spec. (1LEN = 50 mA) |
| Reverse Battery Protection | Yes | Indefinitely |
| Load Dump Protection | Yes | Energy Rated per SAE J1113 |

Mechanical

| Parameter | Value | Comment |
|-----------|---|--------------------------------|
| Size | 3.50" x 4.20" x 2.03" (89.9mm x 106.7mm x 51.6mm) | Including Flanges for Mounting |
| Weight | 13 oz. (368.5 g) | |

Environmental

| Parameter | Value |
|--------------------------|--|
| IEC 60945 Classification | Exposed |
| Degree of Protection | IP64 |
| Operating Temperature | -25°C to 55°C |
| Storage Temperature | -40°C to 70°C |
| Relative Humidity | 93%RH @40° per IEC60945-8.2 |
| Vibration | 2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8.7 |
| Solar Radiation | Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10 |
| Corrosion (Salt Mist) | 4 times 7days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12 |
| Electromagnetic Emission | Conducted and Radiated Emission per IEC 60945-9 |
| Electromagnetic Immunity | Conducted, Radiated, Supply, and ESD per IEC 60945-10 |
| Safety Precautions | Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12 |

