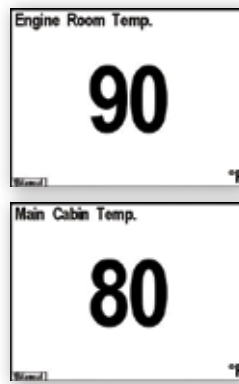


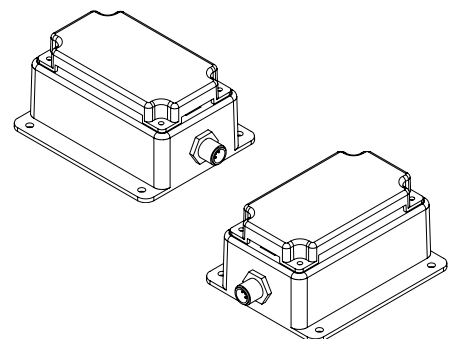
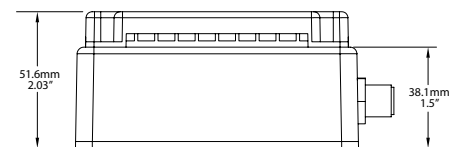
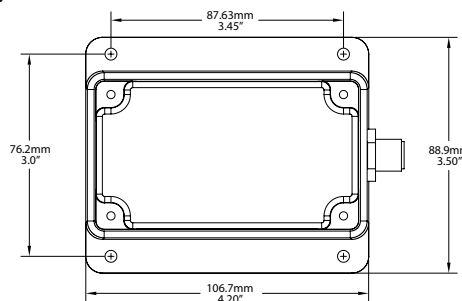
TMP100

Temperature Module

The 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.



DSM Series
Screen Shots



Product Features

- 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 bait well, 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)

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

Available accessories for the TMP100:



TR3K



TP-AAP-1



TP-IP-1



TP-EGT-1

SPECIFICATIONS

PARAMETER	VALUE	COMMENT
Number of Thermistor Channels	4	
Number of Thermocouple Channels	2	
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 900°C (32°F to 1652° F)	With supplied thermocouple probe
Measurement Accuracy – Thermocouple	± 2°C (± 3.6°F)	With supplied thermocouple probe

NMEA 2000® PARAMETER GROUP NUMBERS (PGNs)

DESCRIPTION	PGN#	PGN NAME	DEFAULT RATE
Periodic Data PGNs	130310	Environmental Parameters (not recommended for new designs; included for backward compatibility)	2 times/second
	130311	Environmental Parameters (not recommended for new designs; included for backward compatibility)	2 times/second
	130312	Temperature	0.5 times/second
	130316	Temperature, Extended Range	0.5 times/second
	130823	Temperature, High Range (Exhaust Gas Temperature) (Maretron Proprietary)	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 Request/Command/Acknowledge	N/A
Maretron Proprietary PGNs	126720	Device Configuration Information	N/A
	130818	Device Label	N/A

ELECTRICAL

PARAMETER	VALUE	COMMENT
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	<50mA	NMEA 2000® Interface
Load Equivalence Number (LEN)	1	NMEA 2000® Spec. (1LEN = 50mA)
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" (88.9mm 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, 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

CERTIFICATIONS

PARAMETER	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