

# NMEA2000® Exhaust Gas Temperature Sensor



- Display actual exhaust gas temperature in °C
- Accurate Type T Thermocouple probe element from -20°C to 300°C
- Stainless Steel sheathed 3 metre screened thermocouple cable
- Corrosion resistant Duplex Stainless Steel probe housing
- Detect partial cooling water blockages before damage occurs
- Display on Master Consoles or on separate Alarm Panels
- Blue LED confirming NMEA2000® transmission
- Manufactured to NMEA2000® standard

The Oceanic Systems' NMEA2000® 4510 Exhaust Gas Temperature Sensor and 4511 Exhaust Gas Temperature Probe are designed to measure the exhaust gas temperature of a marine engine or generator. It uses a highly accurate Type T thermocouple and report the temperature directly onto the NMEA2000® network.

The probe is designed to be easily mounted in the exhaust hose with an armoured stainless steel sheathed cable to the NMEA2000® sensor module mounted within 3 metres. The probe mount is a corrosion resistant duplex stainless steel pocket that is sealed to prevent any exhaust leaks.

The standard NMEA2000® output messages can be displayed on any suitably equipped NMEA2000® displays to show the actual temperature so that partial cooling water blockages can be seen before any damage occurs.

We also have a free standing Exhaust Gas Over temperature Alarm Panel with alarm provisions for 3 main engines and two generator sets with a high intensity audible and visual alarm for helm position mounting.

The 4510 Exhaust Gas Temperature Sensor is an important part of the Oceanic Systems' complete vessel monitoring and control system.

# NMEA2000® Exhaust Gas Temperature Sensor Part Nos. 4510, 4511

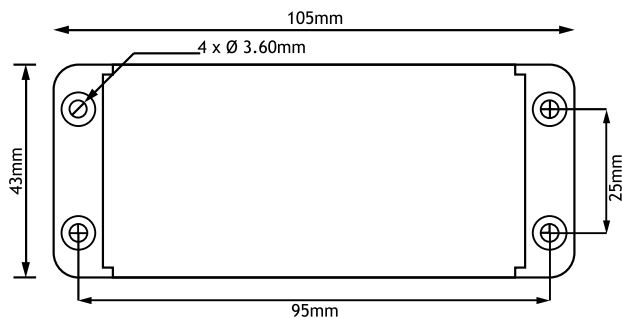
4510 NMEA2000® Exhaust Gas Temperature Sensor Control Box



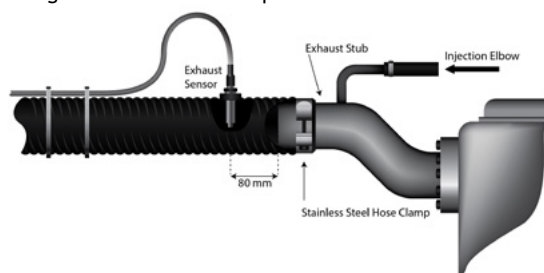
4511 Exhaust Gas Temperature Probe



Mounting Information for the Exhaust Gas Temperature Sensor



Mounting the Exhaust Gas Temperature Probe



4510 Exhaust Gas Temperature Sensor

## NMEA2000® Parameter Group Numbers (PGNs)

Type	PGN No	PGN Name
Periodic Data PGNs	PGN130316	Temperature Extended Range
Protocol	PGN126464	Tx/Rx PGN List
	PGN126996	Product Information
	PGN059392	ISO Acknowledge
	PGN059904	ISO Request
	PGN060928	ISO Address Claim
	PGN126208	Command/Request Group
	PGN130312	Temperature

## Design Standard

Parameter	Comment
NMEA2000®	Network standard
Maritime Nav and RadioComm Equipment	IEC60945
CE and FCC	Electromagnetic Compatibility

## Electrical and Mechanical

Parameter	Value	Comment
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	45mA	Average Operating
Load Equivalence Number	1	LEN
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	SAE J1113
Size	105 x 43 mm	
Weight	100gr	

## Environmental

Parameter	Value
IEC 60954 Classification	Protected
Degree of Protection	IP30
Operating Temperature	-25°C to 50°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
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

4511 Exhaust Gas Temperature Probe

## Electrical and Mechanical

Type 'T' Thermocouple	
Cable Length	3Mtr

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