OEM Temperature Sensor

There are currently two interface types:

1. RS232 Serial
2. Logic level serial (3.3v)

Connecting a logic level device to a RS232 serial port may damage the sensor.

Connecting to the Sensor

Use the serial port settings listed on the right. The sensor's default mode is sampling at 2Hz.

Output Format

This is a sample of sensor output data:

```
2464.082026, 19.818856
2464.078062, 19.818895
2464.080833, 19.818868
2464.077906, 19.818897
```

The first number is thermistor resistance in ohms, the second is temperature in degrees. The temperature calculation uses calibration coefficients stored internally.

Commands

The sensor uses a simple command line interface. Commands are lower case. Type the command, then press enter, or send CR (0x0D). LF characters (0x0A) are ignored.

STOP

Stops sampling.

START

Resumes sampling. The sensor will start outputting data in the format shown above at the programmed period (see period command below).

PERIOD

Sets the sample period in milliseconds. The range is 500ms to 3600000 ms (1 hour). The period setting is volatile – it will revert to 500ms if the sensor is disconnected.

```
S9>period 500
OK
```

Serial Port Settings

9600 Baud
8 bits
No parity
1 stop bit
No flow control

Terminal Program Settings

CR ('\r') for new line
LF ('\n') not required

SAMPLE

Takes a sample immediately and returns the result.

```
S9>sample
2464.077906, 19.818897
OK
```

VER

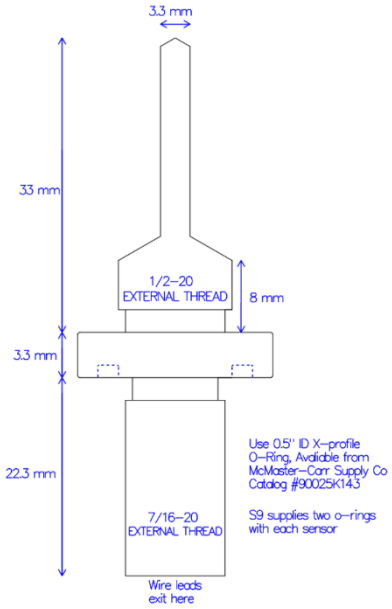
Reports the sensor serial number (referred to as a Module ID or MID), the calibration coefficients, reference resistor value and the firmware version.

```
S9>ver
MID=T003
C0=0.000855
C1=0.000293
C2=0.000000
C3=0.000000
R0=10000.000
UID=000000000F0F1A08535722E74FBC90B1
S9T0 V0.45
OK
```

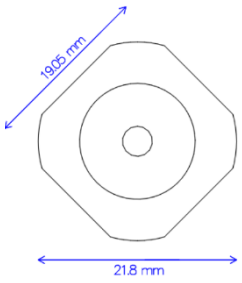
Specifications

Temperature Range: -5 to +45°C Initial Accuracy: ±0.005°C (-5 to +35°C) Stability: 0.00025°C/month Resolution: 0.0001°C Time constant: 800 milliseconds (still water)	Power: 3.3VDC to 18.5VDC Housing: Brass Pressure: 5000PSI

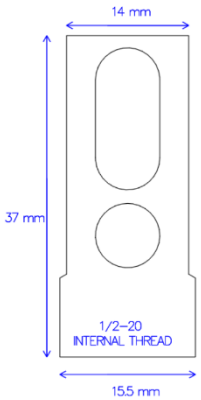
Side View



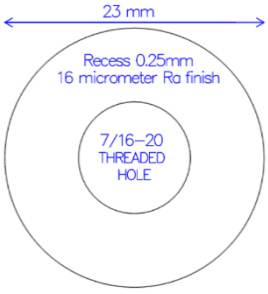
Top View



Sensor Guard Side View



Recommended Mate Pattern



Connect DB9F pin 2 to TXO; pin 3 to RXI, pin 5 to GND.

Connect 3.3V to 12V power supply to V+ and GND.

Current draw is approximately 10mA.