

S-TMB-M002 • S-TMB-M006 • S-TMB-M017

## 12-Bit Temperature Smart Sensor

A 12-bit temperature Smart Sensor that provides  $< \pm 0.2^{\circ}\text{C}$  total accuracy ( $< \pm 0.36^{\circ}\text{F}$ ) and resolution of  $< \pm 0.03^{\circ}\text{C}$  ( $< \pm 0.054^{\circ}\text{F}$ ) over the range of  $0^{\circ}$  to  $50^{\circ}\text{C}$  ( $32^{\circ}$  to  $122^{\circ}\text{F}$ ).



### Supported Measurements

Temperature, Water Temperature

### Features

- Measurement range of  $-40^{\circ}$  to  $100^{\circ}\text{C}$  ( $-40^{\circ}$  to  $212^{\circ}\text{F}$ )
- Stainless-steel sensor tip
- Sensor and cable rated for immersion in water or soil up to  $50^{\circ}\text{C}$  for up to 1 year

### Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email [sales@onsetcomp.com](mailto:sales@onsetcomp.com)
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support [www.onsetcomp.com/support/contact](http://www.onsetcomp.com/support/contact)
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

Onset Computer Corporation  
470 MacArthur Boulevard  
Bourne, MA 02532

## 12-Bit Temperature Smart Sensor (S-TMB-M0xx) Specifications

<b>Measurement Range</b>	-40° to 100°C (-40° to 212°F) - sensor tip
<b>Accuracy</b>	< ±0.2°C from 0° to 50°C (< ±0.36°F from 32° to 122°F)*
<b>Resolution</b>	<0.03°C from 0° to 50°C (<0.054°F from 32° to 122°F)
<b>Drift</b>	<0.1°C (0.18°F) per year**
<b>Response Time (to 90% of change)</b>	<2 minutes typical in 2 m/sec (4.5 mph) moving air flow <1 minute typical in stirred water bath
<b>Environmental Operating Ranges</b>	Smart sensor adapter: -40° to 75°C (-40°F to 167°F); weatherproof, IP67 Stainless-steel sensor tip and cable jacket: Waterproof over the range of -40° to 50°C (-40°F to 122°F) for 1 year; operation up to 100°C (212°F) in air
<b>Housings</b>	Stainless steel waterproof sensor tip; weatherproof polyamide housing for smart sensor adapter
<b>Dimensions</b>	Temperature probe: 5.0 x 26 mm (0.2 x 1.0 inches)
<b>Weight</b>	2 meter: 94 g (3.3 oz) 6 meter: 147 g (5.2 oz) 17 meter: 318 g (11.2 oz)
<b>Bits per Sample</b>	12
<b>Number of Data Channels***</b>	1
<b>Measurement Averaging Option</b>	Yes
<b>Cable Lengths Available</b>	2 m (6.6 ft) S-TMB-M002 6 m (19.7 ft) S-TMB-M006 17 m (55.8 ft) S-TMB-M017
<b>Length of Smart Sensor Network Cable</b>	0.5 m (1.6 ft) for all models

### Notices

\*Radiation Shield strongly recommended for use in sunlight (listed in Compatible Items)

\*\*The drift specification of <0.1°C (0.18°F) per year may be exceeded when using the probe continuously in water >50°C (122°F).

\*\*\*A single HOBO station can accommodate 15 data channels and up to 100 m (328 ft) of smart sensor cable (the digital communications portion of the sensor cables).