

Vernier, BME Sensors,

Stainless Steel Temperature Probe, TMP-BTA Specifications

- Temperature range: -40 to 135°C (-40 to 275°F)
- Maximum temperature that the sensor can tolerate without damage: 150°C
- Typical Resolution:
 - 0.17°C (-40 to 0°C)
 - 0.03°C (0 to 40°C)
 - 0.1°C (40 to 100°C)
 - 0.25°C (100 to 135°C)
- Temperature sensor: $20\text{ k}\Omega$ NTC Thermistor
- Accuracy: $\pm 0.2^{\circ}\text{C}$ at 0°C , $\pm 0.5^{\circ}\text{C}$ at 100°C
- Response time (time for 90% change in reading):
 - 10 seconds (in water, with stirring)
 - 400 seconds (in still air)
 - 90 seconds (in moving air)
- Probe dimensions:
 - Probe length (handle plus body): 15.5 cm
 - Stainless steel body: length 10.5 cm, diameter 4.0 mm
 - Probe handle: length 5.0 cm, diameter 1.25 cm

Hand Dynamometer, HD-BTA,

Accuracy: $\pm 0.6\text{ N}$

- Power: 7 mA @ 5VDC
- Typical Resolution: 0.2141 N
- Safety range (maximum force without damage done to sensor): 0 to 850 N
- Operational range: 0 to 600 N

<https://www.vernier.com/files/manuals/hd-bta/hd-bta.pdf>

Blood Pressure Sensor

BPS-BTA

Specifications

- Pressure range: 0 mmHg to 258 mmHg
- Maximum pressure without permanent damage: 1550 mmHg
- Typical accuracy: ± 1 mmHg
- Temperature compensated: -20°C to 85°C
- Sensing element: SSCMRRN005PGAA5
- Combined linearity and hysteresis: typical $\pm 0.25\%$
- Response time: 1 millisecond

<https://www.vernier.com/files/manuals/bps-bta/bps-bta.pdf>

Spirometer

SPR-BTA

Specifications

- Flow rate: ± 10 L/s
- Dead Space: 93 mL
- Nominal Output: 128 mV/[L/s]
- Detachable Flow Head
 - Dimensions: 80.5 mm (diameter) \times 101.5 mm (length)
 - Mass: 80 g
 - Construction: Clear acrylic plastic
- Handle
 - Dimensions: 127 mm \times 23 mm \times 35 mm
 - Mass: 85 g
 - Construction: Black ABS plastic
- Cable length: 1.5 meters

<https://www.vernier.com/files/manuals/spr-bta/spr-bta.pdf>

Hand-Grip Heart Rate Monitor

HGH-BTA

Specifications

- Battery Type: CR 2025 (user-replaceable)
- Battery Lifetime: 200 hrs
- Operating Temperature: -10 to 50°C
- Radios: Bluetooth and 5 kHz RF transmission
- Wireless range:
 - RF Transmission: 80 to 100 cm
 - Bluetooth: 10 m or more unobstructed

<https://www.vernier.com/files/manuals/hgh-bta/hgh-bta.pdf>