☰Capacitec

HPB- 500 Button Probe
Temperature Ranges A and E

Specifications

Temperature Ranges:

> **Temperature Range A**
>> Low: 32º F [0º C]
>> High: 302º F [150º C]
> **Temperature Range E**
>> Low: -100º F [-73º C]
>> High: 400º F [205º C]

Cable

Guard

Sensor

Linear Range: : 0.325 inches [8.26 millimeters] with a 5 foot [1.52 meters] long Capacitec L2 cable. For cables longer than 5ft consult factory.

Maximum Range: 0.500 inches [12.70 millimeters]

Calibration:
- A 20 point archived calibration record of voltage output versus nominal displacement is provided standard with every probe.
- Several NIST traceable calibrations are available.

Material: Case, guard, and sensor are 303 stainless steel

Driven Guard: The guard element is driven with an electronic voltage of 2V to 20V peak to peak. Note, guard must not be grounded.

Dip Coating: "-D" epoxy dip coatings are optional to prevent accidental earth grounding or shorting of the elements.
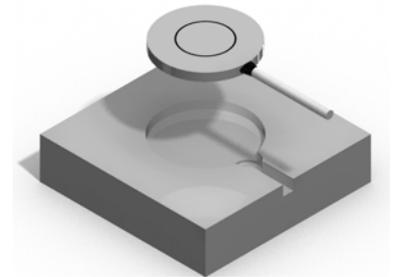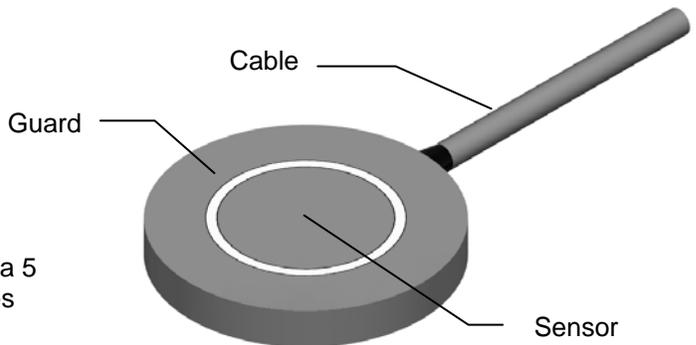
Mounting:
- Capacitec HPB probes are intended to be mounted within a countersink.
- See mounting drawing on page 6 for details.

Cable:
- Coaxial Capacitec L2 or L3 cable is standard.
- Probe must be calibrated with the cable type and length selected.
- Cable must not be cut or spliced.

Probe Thickness: There is one standard thickness and 2 non-standard thicknesses. See drawing for dimensions.

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EU Email: eurosales@capacitec.com
Web: www.capacitec.com

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HPB- 500 High Temperature Button Probe
Temperature Ranges V and S

Specifications

Temperature Ranges:

    Temperature Range V
        Low: -100⁰ F [-73⁰ C]
        High: 1600⁰ F [871⁰ C]
    Temperature Range S
        Low: -100⁰ F [-73⁰ C]
        High: 1832⁰ F [1000⁰ C]

Linear Range: 0.325 inches [8.26 millimeters] with a 5 foot [1.52 meters] long Capacitec T cable. For cables longer than 5ft consult factory.

Maximum Range: 0.500 inches [12.70 millimeters]

Calibration:
- A 20 point archived calibration record of voltage output versus nominal displacement is provided standard with every probe.
- Several NIST traceable calibrations are available.

Material: Case, guard, and sensor are Inconel 600® (range V) or Haynes 230® (range S)

Driven Guard: The guard element is driven with an electronic voltage of 2V to 20V peak to peak. Note, guard must not be grounded.
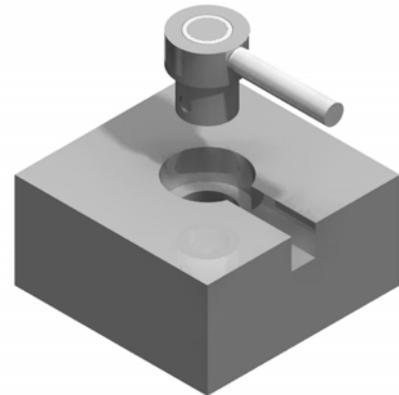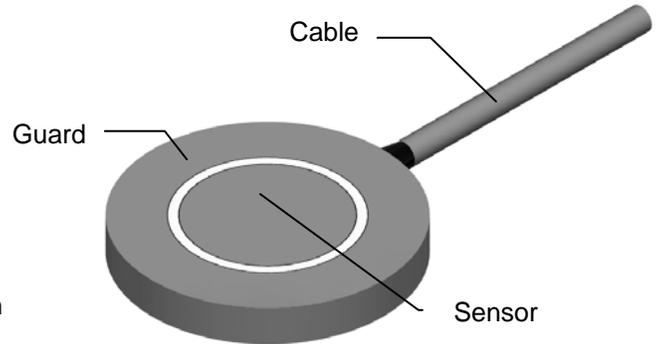
Mounting:
- Capacitec HPB probes are intended to be mounted within a countersink.
- See mounting drawing on page 7 for details.

Cable:
- High temperature insulated Capacitec T type, is standard.
- Probe must be calibrated with the cable type and length selected.
- Cable must not be cut or spliced.

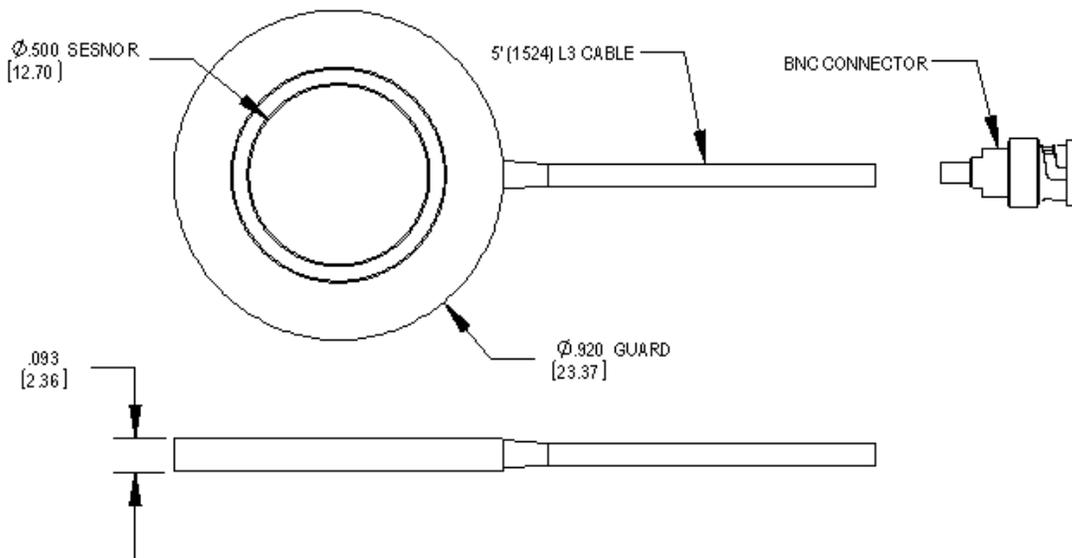**Probe Lengths:** There is one standard thickness. See drawing for dimensions.

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HPB- 500 Button Probe
Part Number Reference Guide

HPB – 500 X - X - XX - XX - X

PROBE LENGTH	OPERATING TEMPERATURE	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE

A - .093" (2.36)

A - 32 to 302°F (0 to 150°C)

L2 - .093" coax (2.36)

5 - 5' Standard (1524)

M – 10-32 Microdot (Not compatible with I2 or N cable)

B - .065" (1.65)

E - ¯100 to 400°F (-73 to 205°C)

L3 - .063" coax (1.60)

X - Other in ft.

B – BNC

C – (High Temp) .125" (3.18)

V - ¯100 to 1600°F (-73 to 371°C)

I2 - .125" coax (3.18)

MCX – MCX (Not compatible with I2 or N cable)

S - ¯100 to 1832°F (-73 to 1000°C)

T – High Temp .063" coax (1.60)

N – High Temp .140" coax (3.56)

(DIMENSIONS) IN MILLIMETERS

EXAMPLE: HPB-500A-A-L3-5-B

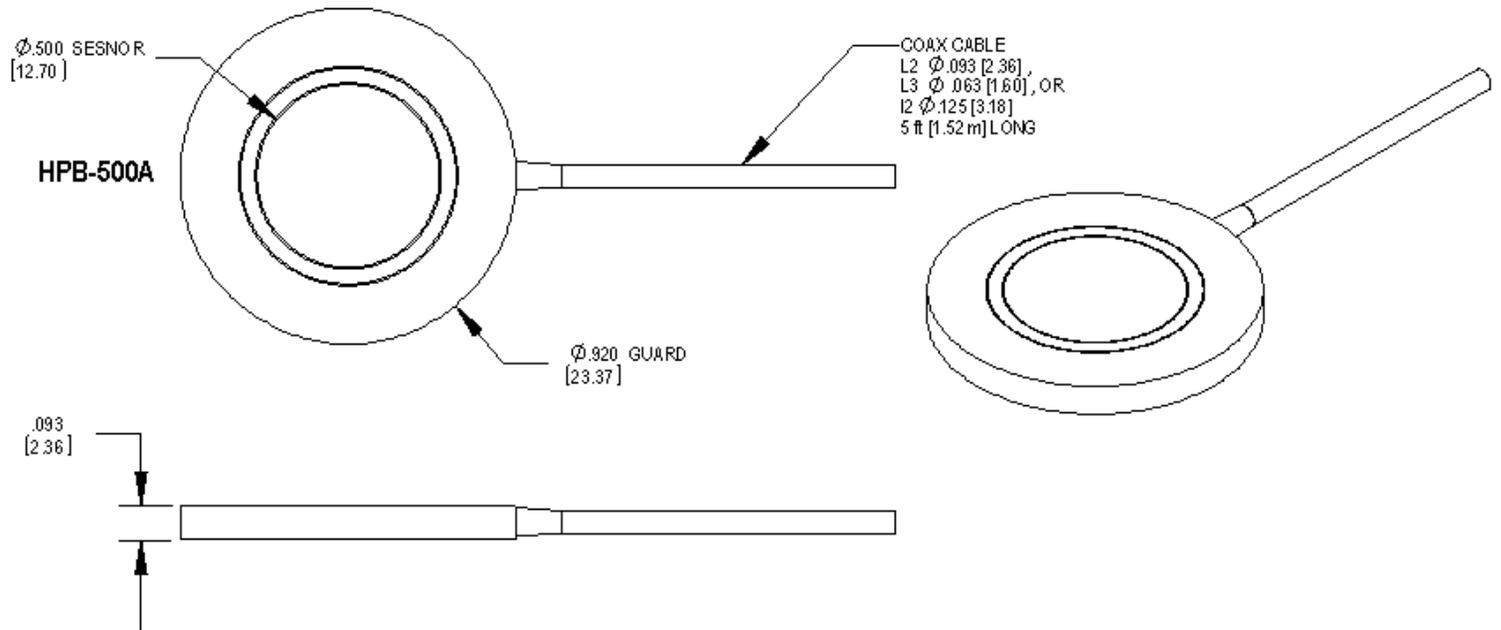**HPB-500A**
A TEMPERATURE RANGE

Ø.500 SESNOR [12.70]

5' (1524) L3 CABLE

BNC CONNECTOR

Ø.920 GUARD [23.37]

.093 [2.36]

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HPB-375
Standard Button Probe
Temperature Ranges A and E
Thickness A

DIMENSIONS ARE NOMINAL VALUES

CUSTOM THICKNESS OPTIONS	
OPTION	THICKNESS
B	.065 [1.65]
C	.125 [3.17]

TEMPERATURE RANGE				
OPTION	RANGE (°F)		RANGE (°C)	
	LOW	HIGH	LOW	HIGH
A	32°	302°	0°	150°
E	-100°	400°	-73°	205°

Ø.500 SESNOR
[12.70]

HPB-500A

COAX CABLE
L2 Ø.093 [2.36],
L3 Ø.063 [1.60], OR
I2 Ø.125 [3.18]
5 ft [1.52 m] LONG

Ø.920 GUARD
[23.37]

.093
[2.36]

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HPB-500
Standard High Temperature
Button Probe
Temperature Ranges V and S
Thickness C
DIMENSIONS ARE NOMINAL VALUES

Ø.500 SENSOR
[12.70]

T CABLE
Ø.063 [1.60] OR
N3 CABLE
Ø.080 [2.03]
5 ft [1.52m] LONG
STANDARD

Ø.920 GUARD
[23.37]

0.125
[3.18]
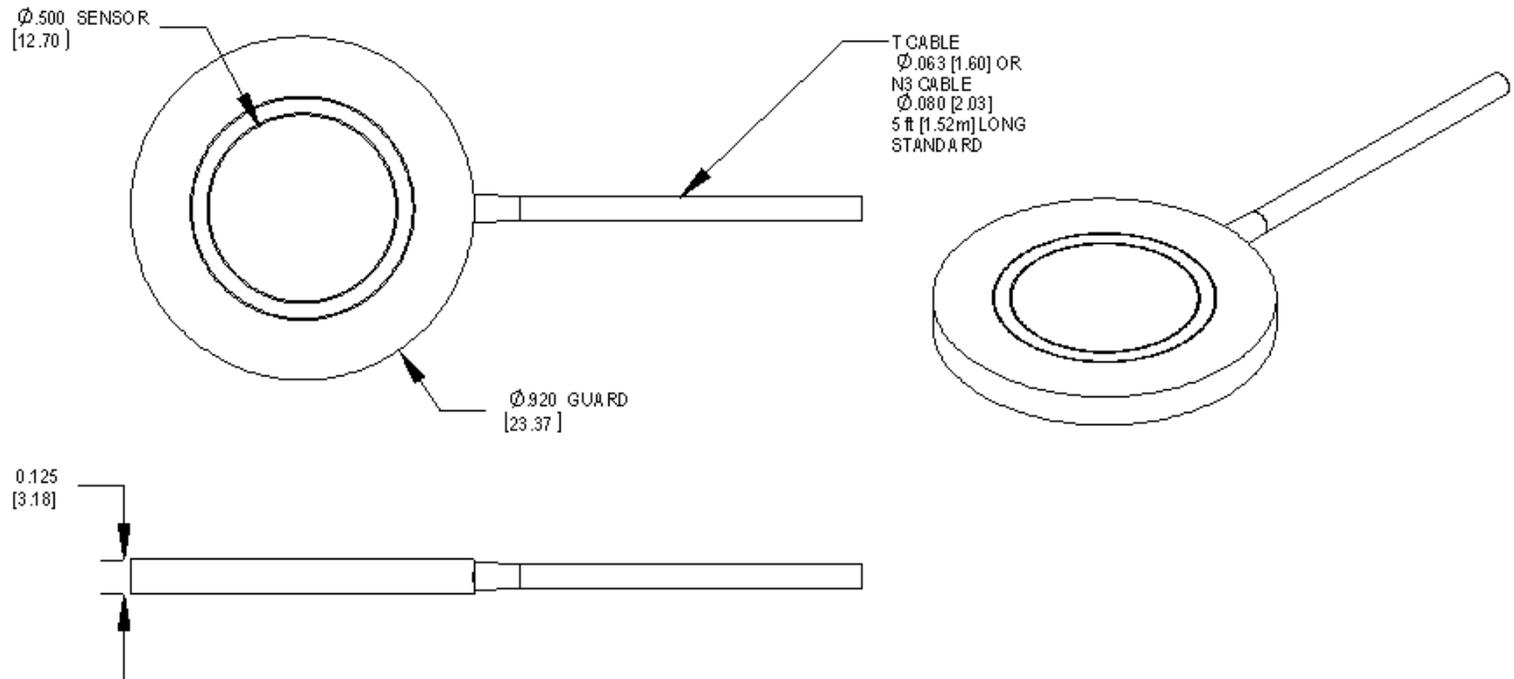
TEMPERATURE RANGE				
OPTION	RANGE (°F)		RANGE (°C)	
	LOW	HIGH	LOW	HIGH
V	-100°	1600°	-73°	871°
S	-100°	1832°	-73°	1000°

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Standard Button Probe Install
Temperature Ranges A and E

PROBE ⌀ + .020

⌀.250
[6.350]

A   A

CAPACITEC SUPPLIED OR CUSTOM
CUSTOMER SUPPLIED CASE

.125
[3.175]

.513
[13.018]

PROBE THICKNESS + .007

.025
[0.635]

SECTION A-A

TYPICALLY CAPACITEC INSTALLED

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$\varnothing.238^{+.004}_{-.000}$

$\left[6.045^{+0.102}_{0.000}\right]$

CAPACITEC OR CUSTOM
CUSTOMER SUPPLIED PART

A   A

$\varnothing.355\pm.003$

$\left[9.017\pm0.076\right]$

$.125\pm.003$

$\left[3.175\pm0.076\right]$

SECTION A-A

$.250\pm.010$

$\left[6.350\pm0.254\right]$

MIN

$.157^{+.004}_{-.000}$

$\left[3.988^{+0.102}_{0.000}\right]$

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