B60 Thermobuffer Freezer/Cooler Sensor

Temperature Sensors

Rev. 10/05/23

Features & Options

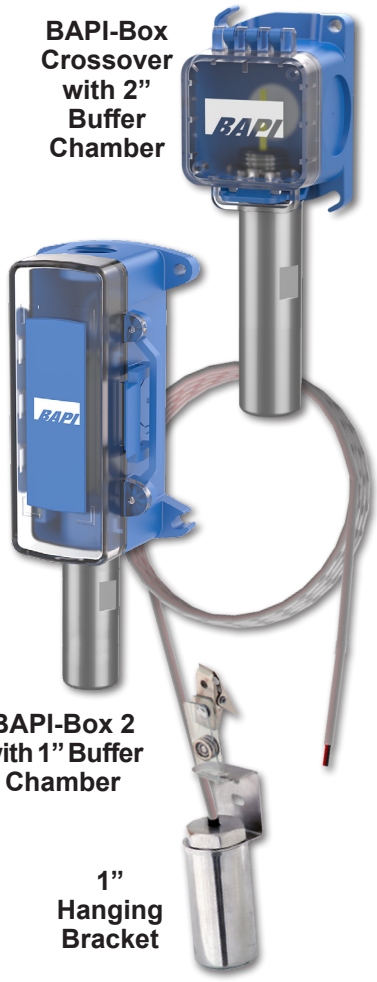
- Fluid-Filled Chamber Tracks Temperature of Freezer or Cooler Contents, Not Air Temperature, Decreasing False Alarms
- Easy Wall Mount or Wire Shelf Hanger
- Available with Extreme Temp Sensor for -328 to 32°F (-200 to 0°C)

The BAPI Thermobuffer Temperature Sensor is used to simulate the refrigerator contents rather than the refrigerator air temperature. The fluid-filled chamber allows for slower reaction to abrupt temperature changes, yet still maintains long-term accuracy if the change remains permanent. It eliminates the temperature spikes due to frequent refrigerator or freezer door opening and decreases false alarms.

The Thermobuffer comes in three buffer sizes 1", 2" and 4" and is designed to save valuable shelf space by mounting to the wall or by hanger in a refrigerator or freezer. The buffer chamber is machined in 304 Stainless Steel or aluminum and accommodates a variety of temperature sensors or transmitters to interface with all BAS systems.

The BAPI-Box Crossover

The BAPI-Box Crossover enclosure features a hinged cover with thumb latch for easy termination. A pierceable knockout plug is available for the open port. See the Accessories section for more info. *(Shown with knockout plug sold separately.)*



Specifications

Sensor: Thermistor, RTD or Transmitter
(See Sensors Section for specifications.)

Probe: Stainless steel

Wire: 22 awg stranded, 2 or 3 wires

Insulation:
Etched Teflon or FEP-Jacketed; PTFE for 1K[1]

Wiring to Probe:
Extreme Temp Probe 1K[1]: PTFE-Jacketed Cable, -328 to 32°F (-200 to 0°C)

Buffer Chamber Construction:
M304: Bar stock 304 stainless steel
MAL: Bar stock aluminum
Hanging Bracket: Bar stock 304 stainless steel

Chamber Fluid: Customer supplied
Glycol Mix, Food grade required
1" Chamber: ~5 ml of fluid
2" Chamber: ~24 ml of fluid
4" Chamber: ~32 ml of fluid

Note: Unit requires customer-supplied food grade glycol antifreeze for proper operation.

Enclosure Ratings:
BAPI-Box Crossover:
IP10, NEMA 1 (IP44 with knockout plug in open port)

BAPI-Box 2: IP66, NEMA 4X

Enclosure Material:
BAPI-Box 2: UV-resistant polycarb., UL94 V-0

BAPI-Box Crossover:
Cover: Polycarbonate, UL94 V-0
Base: Nylon, UL94 H

Environmental Operating Range:
Standard Temp Sensor: -40 to 185ºF (-40 to 85ºC)
Extreme Temp Sensor: -328 to 32°F (-200 to 0°C)
Temp. Transmitter: -4 to 158ºF (-20 to 70ºC)
Humidity: 0 to 100%RH, Condensing

Agency: CE, RoHS

Encl. Dimensions: H x W x D
BAPI-Box Crossover: 3.1 x 2.2 x 1.9" (79 x 56 x 49mm)
BAPI-Box 2: 4.9 x 2.8 x 2.35" (125 x 71.6 x 60mm)

(For enclosure and buffer chamber dimension drawings, see the end of the section.)

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Thermobuffer Freezer/Cooler Sensor

Replace the number and parenthesis with the designator for each selection in the Option Selection Guides below. Skip the designator and dashes for optional selections that are not required in your configuration. Additional options are available but not shown above. Contact BAPI for the complete list of options.

Thermobuffer Temperature Sensors

BA/ (**#1**) - (**#2**) - (**#3**) - (**#4**) - (**#5**) - (**#6**)

#1: Temp Sensor (Required)

1.8K ..... 1.8K Thermistor
3K ..... 3K Thermistor
10K-2 ..... 10K-2 Thermistor
10K-3 ..... 10K-3 Thermistor
10K-3[11K] ... 10K-3[11K] Thermistor
20K ..... 20K Thermistor

1K[375] ..... 1K Plat. RTD (375 curve)
1K ..... 1K Plat. RTD (385 curve)
1K[NI] ..... 1K Nickel RTD

#2: Buffer Material & Length (Required)

TB-M304-1 ..... 1” 304 SS Buffer
TB-M304-2 ..... 2” 304 SS Buffer
TB-M304-4 ..... 4” 304 SS Buffer
TB-MAL-2 ..... 2” Aluminum Buffer
TB-MAL-4 ..... 4” Aluminum Buffer

#3: Hanging Bracket (Optional)

HB..... Hanging Bracket, 30” FEP Cable

#4: Enclosure (Required)

BBX .... BAPI-Box Crossover (IP10, NEMA 1)
BB2..... BAPI-Box 2 (IP66, NEMA 4)
NB..... No Enclosure

#5: Custom Lead Length (Optional, for HB and NB units only)

5..... 5’ of FEP-Jacketed Cable
10..... 10’ of FEP-Jacketed Cable
25..... 25’ of FEP-Jacketed Cable

#6: Test & Balance or Terminal Strip (Optional, requires BBX or BB2 Encl.)

TB ..... Test & Balance Switch
TS ..... Terminal Strip Connection

Thermobuffer Temperature Transmitters

BA/ (**#1**)(**#2**) - (**#3**) - (**#4**) - (**#5**) - (**#6**) - (**#7**)

#1: Output (Required)

T1K ..... 4 to 20mA Output
TXS05 ..... 0 to 5V Output*
TXS10 ..... 0 to 10V Output*
TXS12 ..... 2 to 10V Output*
TXS15 ..... 1 to 5V Output*

#2: Temperature Range (Required)

[32 TO 212F] ... 32 to 212°F Range
[20 TO 120F] ... 20 to 120°F Range
[0 TO 100F] ..... 0 to 100°F Range
[0 TO 100C] ..... 0 to 100°C Range
[-7 TO 49C] ..... -7 to 49°C Range
[-18 TO 38C] .... -18 to 38°C Range

#3: Buffer Material & Length (Required)

TB-M304-1 ..... 1” 304 SS Buffer
TB-M304-2 ..... 2” 304 SS Buffer
TB-M304-4 ..... 4” 304 SS Buffer
TB-MAL-2 ..... 2” Aluminum Buffer
TB-MAL-4 ..... 4” Aluminum Buffer

#4: Hanging Bracket (Optional)

HB..... Hanging Bracket, 30” FEP Cable

#5: Enclosure (Required)

BB2..... BAPI-Box 2 (IP66, NEMA 4)

#6: Custom Lead Length (Optional, for HB units only)

5..... 5’ of FEP-Jacketed Cable
10..... 10’ of FEP-Jacketed Cable
25..... 25’ of FEP-Jacketed Cable

#7: Terminal Strip (Optional, requires BBX or BB2 Encl.)

TS ..... Terminal Strip Connection

*Voltage outputs are field selectable

Example Number: BA/(**10K-2**) - (**TB-M304-1**) - ( ) - (**BBX**) - ( ) - ( )

Parenthesis Removed: BA/10K-2-TB-M304-1-BBX

Description: 10K-2 Thermistor, Thermobuffer, 1” 304SS Buffer, BAPI-Box Crossover Enclosure

Your #: BA/

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