



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 new 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.)*

BAPI-Box Crossover with 2" Buffer Chamber



BAPI-Box 2 with 1" Buffer Chamber

1" Hanging Bracket



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: ~7 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 185°F (-40 to 85°C)
Extreme Temp Sensor: -328 to 32°F (-200 to 0°C)
Temp. Transmitter: -4 to 158°F (-20 to 70°C)
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)

[\(For enclosure dimension drawings, see the end of the section.\)](#)



Use the Option Selection Guide below to create your custom part number. Replace the number and parenthesis with the designator for each selection. Skip the designator and dashes for optional selections that are not required in your configuration.



Thermobuffer Freezer/Cooler Sensor Option Selection Guide

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[Ni] 1K Ω Nickel RTD
- 1K 1K Plat. RTD (385 curve)
- 1K[1] 1K Plat. RTD, Extreme Temp,
-328 to 32°F (-200 to 0°C),
PTFE Insulation Leads

1K Plat. RTD Transmitters below with 4 to 20 mA Output - require a BAPI-Box 2 Enclosure

- T1K[32 TO 212F] 32 to 212°F Range
- T1K[20 TO 120F] 20 to 120°F Range
- T1K[0 TO 100F] 0 to 100°F Range
- T1K[0 TO 100C] 0 to 100°C Range
- T1K[-7 TO 49C] -7 to 49°C Range
- T1K[-18 TO 38C] -18 to 38°C Range

Matched Transmitters are also available. Contact your BAPI representative for ordering.

Additional options are available for these units but not shown in this Selection Guide. Contact your BAPI representative for the complete list of options. Submittal sheets without List Prices can be downloaded from our website at www.bapihvac.com

#2: Buffer Material and Length (required)

- TB-M304-1 1" 304 SS Buffer
(Overall length 1.9")
- TB-M304-2 2" 304 SS Buffer
(Overall length 4.3")
- TB-M304-4 4" 304 SS Buffer
(Overall length 6.3")
- TB-MAL-2 2" Aluminum Buffer
(Overall length 4.3")
- TB-MAL-4 4" Aluminum Buffer
(Overall length 6.3")

#3: Hanging Bracket Mounting (optional)

- HB Hanging Bracket
(30" FEP-Jacketed Cable)

#4: Enclosure Style (required)

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

#5: Custom Lead Length

- (for HB and No Box units)
- 5 5' of FEP-Jacketed Cable
- 10 10' of FEP-Jacketed Cable
- 25 25' of FEP-Jacketed Cable

#6: Test & Bal. or Terminal Strip (optional)

- TB Test & Balance Switch
- TS Terminal Strip Connection

Example Number:

BA/ (**10K-2**) - (**TB-M304-1**) - () - (**BBX**) - () - () = BA/10K-2-TB-M304-1-BBX

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

Your Number: BA/

