

## B100 & E100 Heat Trace/Freeze Protection Thermostats

- B100 Direct Mount for Freeze Protection (Ambient)
- E100 Remote Mount for Heat Trace (Bulb & Capillary)
- 22 Amp Resistive Switch
- Single and Dual Output Models
- ± 1% Setpoint Repeatability
- Fast Response for Protection of Valves and Piping
- NEMA 4X, 7 and 9 Enclosures

### Applications

- E100 NEMA 4X Line or Pipe Sensing
- B100 NEMA 4X Ambient Air Sensing
- E121/122/122P NEMA 7 Line or Pipe Sensing
- B121 NEMA 7 Ambient Air Sensing

**WARNING: Hazard of Fire.** These devices function as temperature controls only. Because they do not fail-safe, an approved temperature and/or pressure safety control must be used for safe operation.

*B100 / E100  
 NEMA 4X*



(Models E121/122, B121 only)

*B121 / E121  
 NEMA 7*



### Description

Maintaining proper viscosity and flow is critical in heat trace or freeze protection applications. The E100 remote mount thermostats utilize a stainless steel bulb and capillary design to accurately sense temperature at key points along a pipe. The B100 direct mount thermostats feature liquid-filled

thermal assemblies and sense air temperatures from 15 to 140°F. Both models are epoxy coated to seal from moisture and contaminants in compliance with NEMA 4X requirements. NEMA 7 stats E121/122/122P and B121 are designed for Class I, Division I and 2, Groups B, C, D, and Class 2, Division I and 2, Group E, F, G.

### Specifications

<b>Ambient Temperature Limits</b>	-40° to +160°F (B100); -58°F to +160°F (B121, B122, E122, E121) (-40 to +71°C); set point typically shifts
<b>Switch Output</b>	One SPDT (types B100, E100, B121, E121); two SPDT (types E122, E122P)
<b>Electrical Rating</b>	22 Amps 125/250/480 Vac resistive
<b>Weight</b>	Types B100, E100: 1 lb., 8 oz (0,68 kg) Types B121, E121, E122, E122P: 3 lbs., 10 oz (1,6 kg.)
<b>Electrical Connection</b>	Types E121, E122, E122P, B121: terminal block; Types B100, E100: direct to switch
<b>Temperature Assembly</b>	Types E100, E121, E122, E122P: 10 feet stainless steel bulb and capillary Types B100, B121: immersion stem
<b>Fill</b>	Non-toxic oil filled
<b>Temperature Deadband</b>	Typically 2% of range
<b>Bulb Dimensions (E100, E121, E122)</b>	Length 11-5/8", OD 1/8"
<b>(B100, B121)</b>	Length 2-11/16", OD 9/16"

ACCESSORIES  
 AND CONTROLS

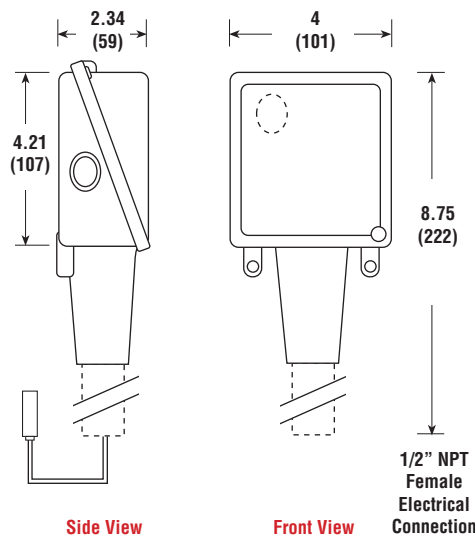
## B100 & E100

Heat Trace/Freeze

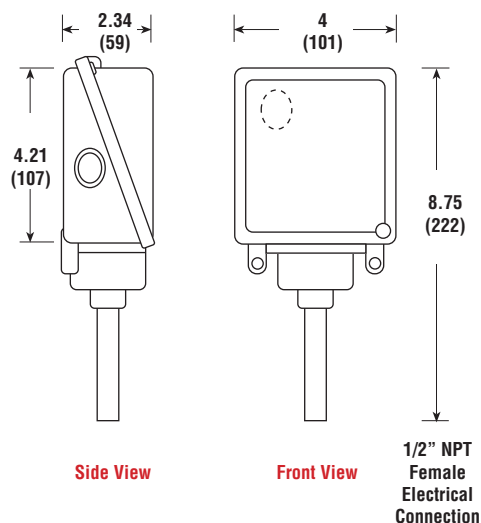
Protection Thermostats (*cont'd.*)

**Dimensions**

**E100 Heat Trace, NEMA 4X  
Line and Pipe Sensing**

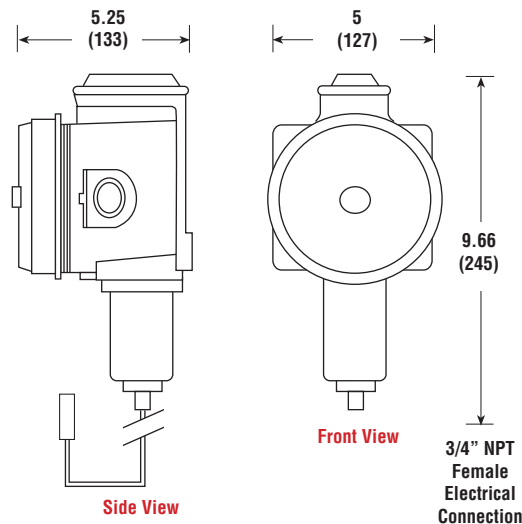


**B100 Freeze Protection, NEMA 4X  
Ambient Sensing**

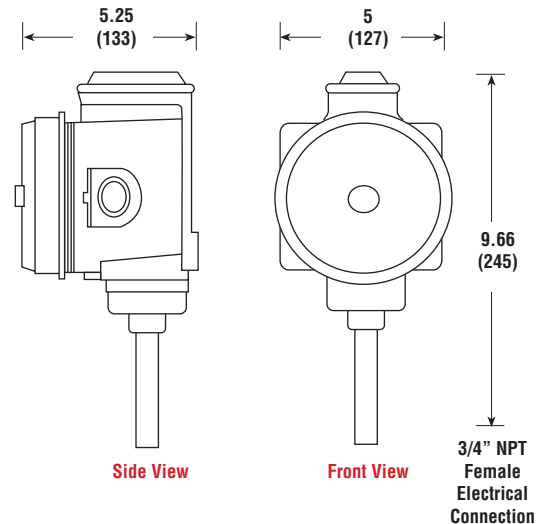


All Dimensions in Inches (mm)

**E121/122 Heat Trace, NEMA 7 and 9  
Line and Pipe Sensing**



**B121 Freeze Protection, NEMA 7 and 9  
Ambient Sensing**



**Ordering Information**

Thermostat Type	Model	Switch Output	Enclosure NEMA	Stock	PCN
Heat Trace, Remote Bulb and Capillary 25 - 325°F (-5 to +163°C)	E100	Single Output	4X	S	305322
	E121	Single Output	4X,7,9	S	384112
	E122	Dual Output, Dual Setpoint	4X,7,9	NS	305349
	E122P	Dual Output, Common Setpoint	4X,7,9	NS	305357
Freeze Protection Direct Mount 15 - 140°F (-10 to +60°C)	B100	Single Output	4X	S	305365
	B121	Single Output	4X,7,9	S	384104