

A421 SERIES STANDARD ELECTRONIC TEMPERATURE CONTROL

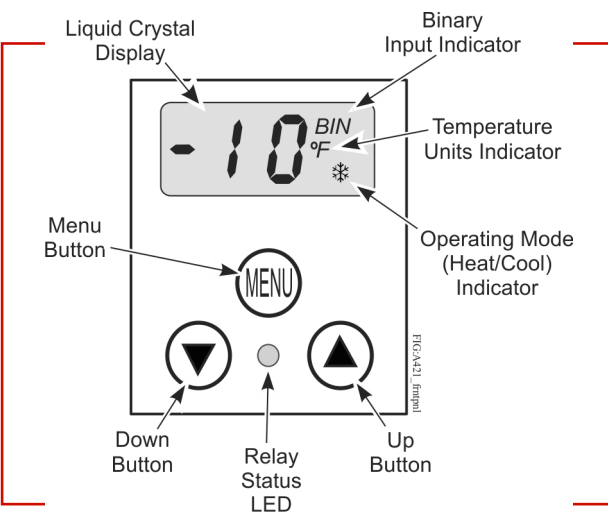
The A421 Series Electronic Temperature Controls are single-stage, electronic temperature controls with a single-pole, double-throw (SPDT) output relay.

A421 Controls feature a backlit LCD with adjustable brightness and three-button touch-pad interface that you can set up to restrict user adjustments. An LED indicates the output relay's on and off status.

A421 Controls have simple on and off temperature settings for heating or cooling, an adjustable

anti-short cycle delay, temperature setback, and sensor offset capability. The temperature control range is -40°F to 212°F or -40°C to 100°C.

The A421 Controls are available either in Type 1 (NEMA), IP20 (CE), high-impact plastic enclosures suitable for surface or DIN rail mounting or in Type 4X (NEMA), IP66 (CE) watertight, corrosion resistant surface mount enclosures.



The A421 Series Control has a backlit LCD screen (Figure 5). You can adjust the LCD brightness.

During normal operation, the LCD displays the Main screen, which provides the following information:

- Temperature sensed at the A99 sensor
- Selected temperature units (°F or °C)
- Mode of operation (Flame = Heating mode, Snowflake = Cooling mode)
- Binary Input status (BIN) when a user-supplied binary input (switch) is connected and closed to enable the temperature setback feature.

During setup and adjustment, the LCD displays the parameter code screens and the parameter value screens.

This Class (B) digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

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Specifications

Power consumption	1.8 VA maximum
Supply power	Low-Voltage models: 24 VAC (20 to 30 VAC) , 50/60 Hz, Class 2 or Safety extra-low voltage Line-voltage models: 110/ 120 or 208/ 230/240 VAC, 50/60 Hz
Ambient conditions	Operating: Type 1 models: -40°F to 150°F (-40°C to 66°C), 0% to 95% RH noncondensing Type 4X models : -40°F to 140°F (-40°C to 60°C), 0% to 95% RH noncondensing Shipping and storage: All models: -40°F to 185°F (-40°C to 85°C), 0% to 95% RH noncondensing
Temperature control range	-40°F to 212°F or -40°C to 100°C
Input signal	1,035 ohm at 77°F (25°C) for A99 PTC Temperature Sensors
Accuracy	Combined accuracy of A421 Control and A99 sensor : $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$) between 5°F and 167°F (-15°C and 75°C); diverging to $\pm 3^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$) at -40°F (-40°C) and $\pm 3^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$) at 212°F (100°C)
Sensor offset range	$\pm 5^{\circ}\text{F}$ or $\pm 3^{\circ}\text{C}$
Enclosure material	Type 1, IP20 high-impact thermoplastic or Type 4X , IP66 watertight, corrosion-resistant, high-impact thermoplastic
Compliance	North America: cULus Listed; UL 60730, File E27734, Vol. 1; FCC Compliant to CFR47, Part 15, Subpart B, Class B Industry Canada (IC) Compliant to Canadian ICES-003, Class B limits Europe: CE Mark – Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive; Low Voltage Directive. Australia and New Zealand: RCM, Australia/NZ Emissions Compliant



Important: Use this A421 Series Electronic Temperature Control only as an operating control. Where failure or malfunction of the A421 Control could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the A421 Control.