

INTRODUCTION

The **N321 / N322 / N323** temperature controllers present state-of-the-art technology, specially developed for matching the needs of the freezing and heating markets. They include jacks for **Pt100** and **Pt1000** type temperature sensors, **NTC** thermistors, or **J/K/T** type thermopairs. They are low-cost, easily assembled equipment, resulting in an excellent process optimization.

CE (European Union) and UL (United States and Canada) certifications compliant.



FEATURES & SPECIFICATIONS

- **N321:** One SPDT relay outlet, 1HP (16A resistive)/250 Vac
- **N322:** One SPDT relay outlet, 1HP (16A resistive)/250 Vac plus one SPST relay, 3A (5A resistive)/250 Vac
- **N323:** One SPDT relay outlet, 1HP (16A resistive)/250 Vac and two SPST relays, 3A (5A resistive)/250 Vac
- LED indicators 3 1/2 digits
- Sensor offset adjustment
- Adjustable hysteresis
- Minimum and maximum range for configurable setpoints
- Configuration is maintained even with energy failures
- Configurable password for configuration lock
- Long life silicone keys
- Front-panel with IP65 protection
- Range of Measurement Temperature:
 - NTC: -50 to 120 °C (-58 to 248 °F)
 - Pt100: -50 to 300 °C (-58 to 572 °F)
 - Pt1000: -200 to 530 °C (-328 to 986 °F)
- Keypad-selectable thermocouples:
 - J Thermocouple 0 to 600 °C (32 to 1112 °F)
 - K Thermocouple -50 to 1000 °C (-58 to 1832 °F)
 - T Thermocouple -50 to 400 °C (-58 to 752 °F)
- Accuracy: NTC: 0.6 °C (1.08 °F); Pt100 and Pt1000: 0.7 °C (1.26 °F); Thermocouple: 3 °C (5.4 °F)
- Resolution: 0.1 °C or 0.1 °F ranging from -19.9 to 199.9 °C/°F
- Sampling: 1.5 times per second
- Power supply: 100 to 240 Vac/dc ±10%
- Frequency: 50~60 Hz
- Consumption: 5 VA
- Dimensions: 75 x 33 x 75 mm. Panel cutout: 70 x 29 mm
- Weight: 120 g
- Operating temperature: 0 to 40 °C (32 to 104 °F)
- Storage temperature: -20 to 60 °C (-4 to 140 °F)

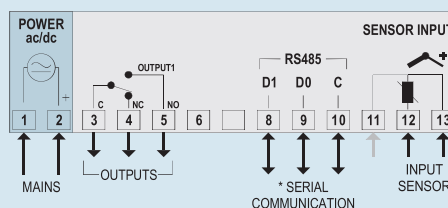
OPTIONAL

- RS485 interface with Modbus RTU protocol (Only N322 and N323)
- Power supply: 12 to 24 Vdc

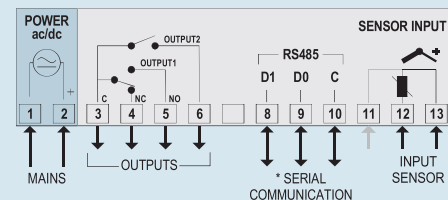
APPLICATION

- Freezers and cooling counters, multistage cooling and heating systems, etc.

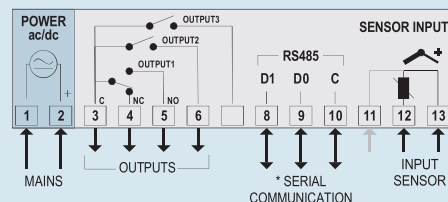
ELECTRICAL CONNECTIONS



N321



N322



N323

D

TEMPERATURE CONTROLLERS

HOW TO SPECIFY

MODEL: **N321 - A - B - C**, where:

A: Sensor:	NTC or Pt100 or Pt1000 or J/K/T (Thermocouples)
B: Communication:	Blank or 485 (RS485, RTU Modbus Protocol)
C: Power supply:	Blank (100-240 Vac/dc) or 24V (24 Vac/dc)