INTRODUCTION

The **N321R** and **N323R** temperature controllers are cooling equipment with automatic defrosting function by compressor stop (N321R), or by heating resistances, or by hot gas, and defrosting is completed by temperature in the evaporator (N323R). Both include programmable interval and duration, as well as a manual defrost key. It keeps its indications during the defrosting cycle and has a programmable post-startup delay.

The **N323R** model has inlets for 2 NTC sensors and three relay outlets, one for the compressor, one for defrosting, and one for the fan.

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

FEATURES & SPECIFICATIONS

- **N321R**: One SPDT relay outlet, 1HP (16A resistive)/250 Vac
- **N323R**: One SPDT relay outlet, 1HP(16A resistive)/250 Vac and two SPST relays, 3A (5A resistive)/250 Vac
- LED indicators 3 ½ 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 IP56 protecton
- Range of Measurement Temperature:
  - N321R:
    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)
  - N323R:
    NTC: -50 to 120 °C (2 sensors)
- Accuracy:
  - NTC: 0.6 °C (1.08 °F)
  - Pt100 and Pt1000: 0.7 °C (1.26 °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 2.95 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)

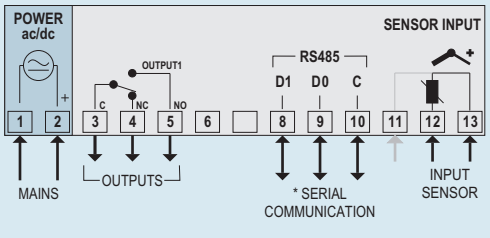
OPTIONAL

- RS485 interface with Modbus RTU protocol (Only N323R)
- Power supply: 12 to 24 Vcc

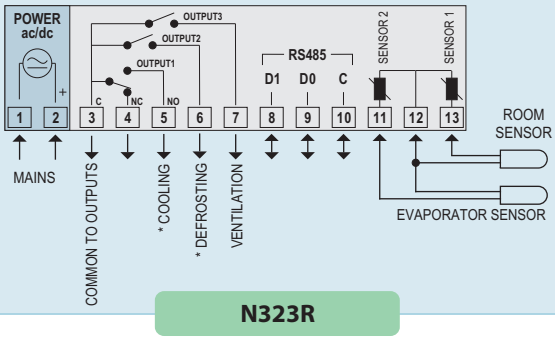
APPLICATION

- Freezers and cooling counters, air conditioning systems

ELECTRICAL CONNECTIONS



N321R



N323R

HOW TO SPECIFY

MODEL: **N321R - 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)