

**INTRODUCTION**

**N321S** is a controller for solar heating applications. It commands a water circulation pump through the temperature differential between the solar collector and the thermal reservoir or pools.

The instrument has two inlets for NTC type temperature sensor and one control outlet for activating the water circulation pump.

It also includes functions for preventing damages to the tubes during the winter and to avoid overheating, thereby preventing tube damages and thermal discomfort.

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



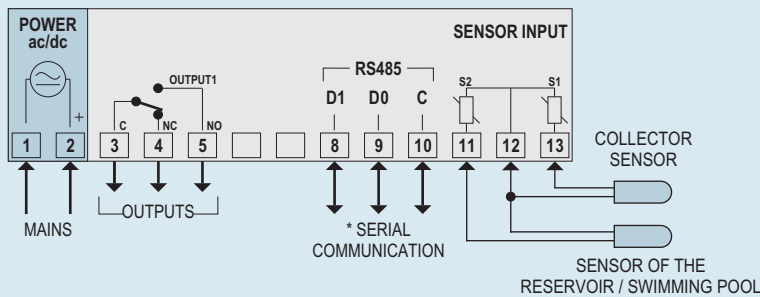
**FEATURES & SPECIFICATIONS**

- One SPDT relay outlet, 1 HP(16A resistive)/250Vac for pump control
- Temperature measuring range: NTC: -50 to 120 °C
- Differential control
- Anti-freezing setpoint
- Anti-overheating setpoint
- 3½-digit LED Display
- Sensor offset adjustment
- Adjustable hystereses
- Configurable setpoint minimum and maximum limits
- Program retention during power failures
- Configurable password equipment protection
- Silicone keys with excellent durability
- Accuracy: 0.6 °C (NTC)
- Resolution: 0.1 °C from -19.9 to 199.9 °C
- Front-panel with IP65 protection
- Sampling: 1.5 time per second
- Power supply: 100 to 240 Vac /dc ±10%
- Frequency: 50~60 Hz (standard model)
- Consumption: 5VA
- Dimensions: 75 x 33 x 75 mm
- Panel cutout: 70 x 29 mm
- Weight: 120 g
- Operational temperature: 0 to 40 °C
- Storage temperature: -20 to 60 °C

**OPTIONAL**

- RS485 interface with Modbus RTU protocol
- Power supply: 12 to 24 Vdc

**ELECTRICAL CONNECTIONS**



**HOW TO SPECIFY**

MODEL: **N321S - A - B - C**, where:

|                          |   |
|--------------------------|---|
| <b>A:</b> Sensor:        | <b>NTC</b>  |
| <b>B:</b> Communication: | <b>Blank</b> or <b>485</b> (RS485, RTU Modbus Protocol) |
| <b>C:</b> Power supply:  | <b>Blank</b> (100-240 Vac/dc) or <b>24V</b> (24 Vac/dc) |