

INTRODUCTION

The **N440** is an ON/OFF action digital temperature controller which provides maximum versatility at an economic price and can be a great substitute for the obsolete analog controllers.

It accepts thermocouples type J, K or Pt100 RTD and features one relay and one voltage pulse output.

Keypad programming is simple and intuitive and parameters setting can be selectively locked.

The **N440** is aimed at simple temperature heating or cooling processes applications that require low cost and yet demand good display accuracy with simple operation.



FEATURES

- Accepts thermocouples J or K or Pt100. Sensor type must be defined when ordering.
- One SPDT relay or pulse for control or alarm output. Option: a second SPDT relay.
- One voltage pulse output.
- Each output has independent setting for hysteresis and control action (heat, cool or alarm).
- Sensor offset correction via keypad.
- Programmable LO and HI setpoint limits.
- Selectable indication for °C or °F.
- Minimum, maximum and differential alarm functions.
- Alarm start up blocking prevents alarm action during controller power up.
- 3½ digit display with 0.1 degree resolution between -19.9 and 199.9°C (for Pt100 input only).
- 4-level keypad protection prevents unauthorized parameter changes.
- Front panel: IP65, Polycarbonate UL94 V-2.
- Back panel: IP30, ABS+PC UL94 V-0.
- Silicone rubber keypad.
- Circuitry can be removed via front panel.
- Size: 48 x 48 x 110 mm (1/16 DIN).

SPECIFICATIONS

- Temperature ranges:
 - Thermocouple J: 0 to 600°C, 1°C resolution.
 - Thermocouple K: 0 to 1370°C, 1°C resolution.
 - Pt100: -50 to 530°C; 0.1°C resolution from -19.9°C and 199.9°C.
- Thermocouples according to NBR 12771/99, Pt100 NBR 13773/97.
- Pt100 three-wire connection with automatic cable resistance compensation.
- Pt100 excitation current: 170 µA.
- Internal cold junction compensation for thermocouples.
- Accuracy:
 - ▶ Thermocouple: 3°C maximum error.
 - ▶ Pt100: 1°C maximum error.
- A/D converter resolution: 13 bits.
- Sampling rate: 5 measurements per second.
- Display: 3½ digit LED with 13 mm height.
- Indication and control time response: <2 s.
- Output 1: SPDT relay, 5A/250 Vac.
- Output 2: 5 Vdc/20 mA pulse. Optional: 3 A/250 Vac relay.
- Operating ambient: 0 to 50°C, 20 to 85% Relative Humidity, non-condensing.
- Weight: 150 g.
- Front panel ratings: IP65 (NEMA 4X), IP30 rear box.
- Electromagnetic compatibility: according to EN50081-2 and EN50082-2, CE approved.
- Dimensions: 48 x 48 x 110 mm (1.89"x1.89"x4.33").
- Panel cutout: 45.5 x 45.5 mm.
- Power: 85 to 250 Vac/Vdc. Opcional: 24 Vca/Vdc.
- Maximum consumption: 2 VA.

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Model	Input	Output	Power
N440-CPR-24V	PT100	1 pulse, 1 relay	24 Vca/cc
N440-CPR	PT100	1 pulse, 1 relay	85 a 250 Vca
N440-CRR-24V	PT100	2 relays	24 Vca/cc
N440-CRR	PT100	2 relays	85 a 250 Vca
N440-JPR-24V	Termocouple J	1 pulse, 1 relay	24 Vca/cc
N440-JPR	Termocouple J	1 pulse, 1 relay	85 a 250 Vca
N440-JRR-24V	Termocouple J	2 relays	24 Vca/cc
N440-JRR	Termocouple J	2 relays	85 a 250 Vca
N440-KPR-24V	Termocouple K	1 pulse, 1 relay	24 Vca/cc
N440-KPR	Termocouple K	1 pulse, 1 relay	85 a 250 Vca
N440-KRR-24V	Termocouple K	2 relays	24 Vca/cc
N440-KRR	Termocouple K	2 relays	85 a 250 Vca

ELECTRICAL CONNECTIONS

