

**INTRODUCTION**

The microprocessor based N1040 was conceived for low cost applications and yet achieving high degree of accuracy. It features a short depth enclosure of only 70 mm thus reducing panel space considerably.

Another important innovation is the exclusive removable wiring connection block which translates into ease of use during installation process.

It accepts Pt100 RTDs and thermocouples types J, K and T and features two outputs for control and alarm, universal power supply and automatic tuning of the PID parameters.

The N1040 is set to be the lowest cost temperature controller in the market while keeping high performance standards.



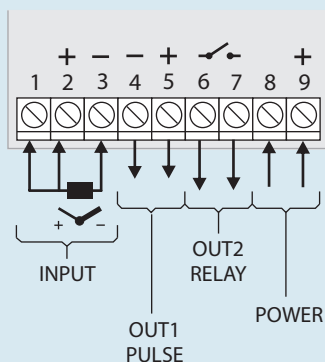
**FEATURES**

- Accepts thermocouples J, K, T and Pt100 RTD without any hardware change or recalibration
- Auto tuning PID
- Outputs: logic pulse (ideal for driving solid state relays) and 1 SPST relay
- The outputs are programmable for main control or alarm.
- Alarm functions: low, high, differential, low differential, high differential, sensor break
- Two alarm functions can be directed to one single output
- A very efficient universal switching power supply provides high accuracy conditions even during mains voltage fluctuations
- Safe output function allows the user to set control output conditions in case of sensor break or failure
- LBD (Loop Break Detection) function detects failures in the control loop
- Simplified programming menu makes operator programming very easy
- Indelible electronic serial number with 8 digits can be accessed from the display
- Keypad protection prevents unauthorized programming changes
- Silicone rubber frontal keypad
- Front panel protection: IP65

**SPECIFICATIONS**

- Accepts thermocouples type J range -50 °C to 760 °C, type K range -90 °C to 1370 °C, type T range -100 °C to 400 °C, with cold junction compensation
- Accepts Pt100 RTDs (2 or 3 wires), range from -200 °C to 530 °C, with cable resistance compensation
- Excitation current for Pt100: 170 µA
- Internal resolution: 15000 levels
- Dual 4-digit LED display
- Sampling rate: 10 measurements per second
- Control output: 5 Vdc/20 mA logic pulse or 1.5 A / 250 Vac SPST relay
- Power: 100 to 240 Vac ± 10%, 50/60 Hz and 24 to 250 Vdc ± 10 %
- Consumption: 5 VA maximum
- Operating environment: 0 to 60 °C, 0 at 80 % RH
- Panel cutout: 45,5 x 45,5 mm
- Protection rate: IP65 front panel, IP30 back enclosure
- Enclosure/front panel material: PC (UL94 V-2)
- Approximate weight: 75 g
- CE approved
- Dimensions: 48 x 48 x 80 mm

**ELECTRICAL CONNECTIONS**



**HOW TO SPECIFY**

**Model**

N1040

**Description**

Basic version with 1 pulse output, 1 SPST relay output, Power: 100-240 Vac/ 24-250 Vdc

**SENSORS AND MAXIMUM RANGES**

TYPE	CHARACTERISTICS
J	Range: -110 to 950 °C (-166 to 1742 °F)
K	Range: -150 to 1370 °C (-238 to 2498 °F)
T	Range: -160 to 400 °C (-256 to 752 °F)
Pt100	Range: -200 to 850 °C (-328 to 1562 °F)