CONTROLLERS

INTRODUCTION

N3000 Big Digit Universal Process Contoller is a real breakthrough in versatility for holding in one single instrument all the major features required in the vast majority of industrial processes.

With a sophisticated and consistent software and its advanced truly universal circuitry, the N3000 accepts configuration of both input signal and control output through the front keyboard without any internal hardware change.

Power supply for remote loop powered transmitters is standard and is a must for high-end applications.

From the very simple applications as a temperature controller to the most complex systems of distributed control with PLC's or SCADA networks, the N3000 is the right answer to your needs for industrial or laboratory automation.

FEATURES AND SPECIFICATIONS

- Double LED display: red for PV (18 mm) and green for SV (13 mm).
- Accepts thermocouples type J, K, T, N, R, S; Pt100 RTD, linear 4-20 mA, 0-50 mV, 0-5 Vdc.
- Sampling rate: 4 measurements per second.
- Measured value resolution: 12,000 levels.
- One digital input for dry contact with 5 programmable functions.
- Remote setpoint input for 4-20 mAdc signal.
- Dual SPST 3 A / 250 Vac relays and dual SPDT 5 A / 250 Vac relays can be individually programmed for control or alarm.
- Isolated 4-20 mA output with 1500-level resolution, maximum 550 ohm load for control or PV/SV retransmission. It can also be configured for digital input or output (10 Vdc / 20 mA).
- Auto tuning PID control. Auto/Manual mode, bumpless transfer.
- Programmable Soft start up to 9999 seconds.
- Ramp and Soak: 7 programs of up to 7 segments each. Can be linked to create longer programs of up to 49 segments.
- Control output update: 250 ms.
- Up to four configurable relays, two timer alarms.
- Alarm functions: LO, HI, differential, differential LO, differential HI, sensor break and event.
- Alarm initial blocking function.
- Power: 100 to 240 Vac, 50/60 Hz; optional 24 Vdc/ac.
- Maximum consumption: 3 VA.
- 24 Vdc / 30 mA supply output for remote transmitter excitation.
- RS485 comm with Modbus RTU protocol (optional).
- Front panel: IP65, Polycarbonate UL94 V-2.
- Back panel: IP30, ABS+PC UL94 V-0.
- Circuitry can be removed from the front panel.
- Operating environment: 0 to 55 ºC, 20 to 85 % RH.
- Dimensions: 96 x 96 x 92 mm.
- Panel cutout: 93 x 93 mm.

ELECTRICAL CONNECTIONS
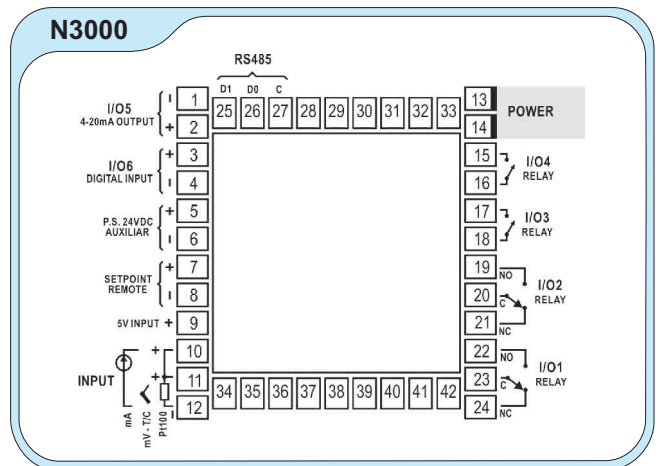
INPUT TYPES

The table shows de input types accepted.

TYPE	CHARACTERISTICS
J	Range: -50 to 760 °C (-58 to 1400 °F)
K	Range: -90 to 1370 °C (-130 to 2498 °F)
T	Range: -100 to 400 °C (-148 to 752 °F)
N	Range: -90 to 1300 °C (-130 to 2372 °F)
R	Range: 0 to 1760 °C (32 to 3200 °F)
S	Range: 0 to 1760 °C (32 to 3200 °F)
Pt100	Range: -199.9 to 530.0 °C (-199.9 to 986.0 °F)
Pt100	Range: -200 to 530 °C (-328 to 986 °F)
4-20 mA	J linearization. Programmable range: -110 to 760 °C
4-20 mA	K linearization. Programmable range: -150 to 1370 °C
4-20 mA	T linearization. Programmable range: -160 to 400 °C
4-20 mA	N linearization. Programmable range: -90 to 1370 °C
4-20 mA	R linearization. Programmable range: 0 to 1760 °C
4-20 mA	S linearization. Programmable range: 0 to 1760 °C
4-20 mA	Pt100 linearization. Programmable range: -200.0 to 530.0 °C
4-20 mA	Pt100 linearization. Programmable range: -200 to 530 °C
0 - 50 mV	Linear Programmable indication -1999 to 9999
4-20 mA	Linear Programmable indication -1999 to 9999
0 - 5Vdc	Linear Programmable indication -1999 to 9999
4-20 mA	Square Root Extraction

HOW TO ORDER

The basic unit includes one universal input, two SPST relays, two SPDT relays, 24Vdc output for powering remote transmitters, one digital input, a 4-20 mA input for remote setpoint and one 4-20 mA output which can also be used as a digital input or output .

Option 1: RS485 digital communication interface with Modbus RTU protocol.