Universal Process Controller

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, 0-10 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: IP20, ABS+PC UL94 V-0.
- Circuitry can be removed from the front panel.
- Operating environment: 0 to 55 °C, 20 to 85 % RH.
- Dimensions: 96 x 96 x 92 mm.
- Panel cutout: 93 x 93 mm.
- Weight: 330 g.

Input types

TIPO	CARACTERÍSTICAS
J	Range: -50 to 760 °C (-58 to 1400 ºF)
K	Range: -90 to 1370 °C (-130 to 2498 ºF)
T	Range: -100 to 400 °C (-148 to 752 ºF)
N	Range: -90 a 1300 °C (-130 a 2372 °F)
R	Range: 0 a 1760 °C (32 a 3200 °F)
S	Range: 0 a 1760 °C (32 a 3200 °F)
Pt100	Range: -199.9 a 530.0 °C (-199.9 a 986.0 °F)
Pt100	Range: -200 a 530 °C (-328 a 986 °F)
4-20 mA	J linearization. Programmable range: -110 to 760 °C
4-20 mA	K linearization. Programmable range: -150 to 1370 °C

TIPO	CARACTERÍSTICAS
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 - 5 Vdc	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.

20210713 - FL. N3000 - EN