¼ DIN Economical 6-Zone PID Temperature Controllers

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CN616 Series

2 YEAR WARRANTY

CN616TC1 shown actual size.

- 6-Loop PID Controller
- Autotune or Manual Tuning
- Heat or Cool Control
- 20-Segment Ramp/Soak Profile Per Zone
- Password Protected
- User Programmable
- RS232 Digital Communications Standard
- Front Panel Calibration
- High, Low or High/Low Alarm, Latching or Non-Latching
- Programmable Thermocouple Types J, K, T, R, S, E, B, or C
- ¼ DIN Aluminum Case

The CN616 Series is a highly versatile 6-loop microprocessor-based controller designed for easy front panel or remote setup and operation. Each of 6 zones is sequentially scanned, and active zones are displayed. Individual zones can be locked for monitoring. Each instrument is programmable to meet operator needs for: thermocouple type, temperature units; high, low or high/low alarm configured as latching or non-latching; and autotune with manual trim or manual PID setting. The zone display scan time and ramp/soak can be set by the operator. Parameters and setpoints are retained when power is turned off. Password protection is provided to prevent accidental changes to calibration, PID setting and ramp/soak profile. If power loss occurs, the controller retains all the latest parameters and returns to "RUN" mode.

All CN616 controllers have RS232 3-wire serial communications. The RS232 program is capable of monitoring up to 10 daisy-chained units.

Line voltage is 120 Vac or 240 Vac selectable by external jumper assembly. Connections are made to the back of the instrument through easy-to-use screw terminal plugs.

The CN616 Series implements a security password to protect settings. The password can be enabled or disabled on the front panel and changed via RS232. Calibration is performed via the front panel and is separately password protected. Higher level passwords are available.

The instrument is housed in a ¼ DIN aluminum box which does not have to be removed for mounting. The unit mounts in a ¼ DIN panel cutout and is secured by slide brackets. The device is controlled via 6 DC pulse outputs (1 for each zone).

A single output relay is provided to indicate an alarm condition on any zone. The instrument shows an alarm condition by flashing the main temperature display while indicating the zone in alarm with a flashing zone number display. When set to non-latching, the alarm automatically resets when the condition changes. The alarm must be manually reset in the latching setting.

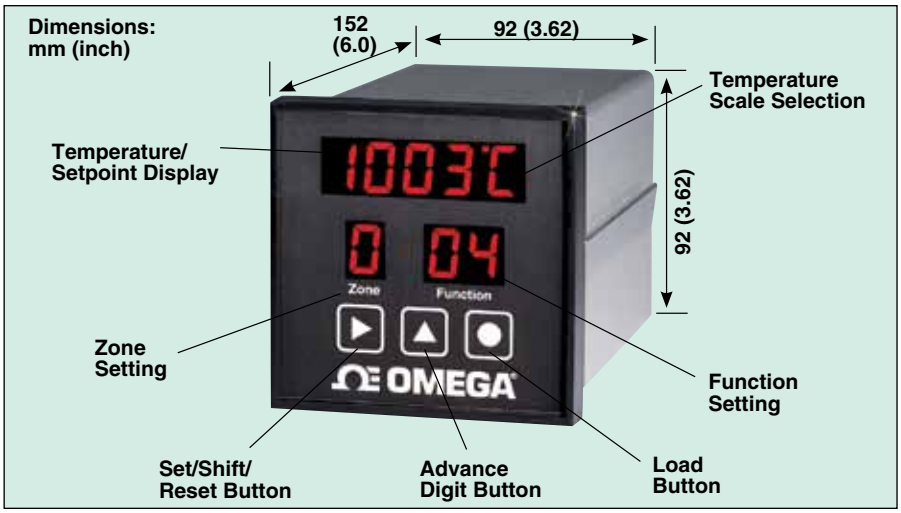
The controller functions in 2 modes— "RUN", the basic operating mode, and "FUNCTION SELECT", the password protected settings selection and control mode.

Specifications

Number of Loops: 6
Accuracy: ±0.1% range, ±1°C
Resolution: ±1°C or °F
Temperature Units: °C or °F
Thermocouple Input: Selectable J, K, E, T, S, R, B or C
PID: Autotune or manual
Password Protection: Calibration and PID changes
Profiling: Ramp/soak, 20 segments/loop
Loop Configuration: Heat or cool
Control Output: 6 DC pulse outputs (1 per zone); designed to drive 3 to 32 Vdc input solid-state relays
Control Output Voltage: 5 Vdc at 10 mA per loop
Alarms Rating: 5 A @ 120 Vac
Alarms Selectable: High, low, or high/low; latching or non-latching single relay for 6 loops
Zone in Alarm: Flashing
Latch Reset: Manual
RS232 Communications: Single-drop daisy-chain up to 10 controllers
Baud Rate: 4800
- **Data Bits:** 8
- **Parity:** N
- **Stop:** 1

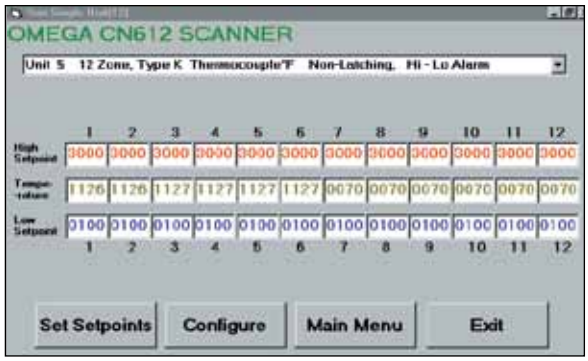
Protocols: ASCII line computer interface
Communication Software: Windows compatible, written in Visual Basic
Terminals: Headers for plug-in wiring
Enclosure: ¼ DIN aluminum, 152 mm (6") L
Power Loss: Controller retains the last setting
Display: 14 mm (0.56") LED, 4-digit
Front Bezel: 99 mm² (3.90 in²)

CN606 Series companion scanner, also available. Visit omega.com/cn606_612 for details.



OMEGA CARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.



Software Configuration Screen

Input Types and Ranges

Thermocouple Input Type	Standard Range CN616 (TC1)	Extended Range CN616 (TC2)
B Pt/30% Rh-Pt/6% Rh	0 to 1800°C 32 to 3300°F	—
C W/5% Re-W/26% Re	0 to 2300°C 32 to 4200°F	—
E CHROMEGA®–Constantan	0 to 550°C 32 to 1000°F	0 to 900°C 32 to 1652°F
J Iron–Constantan	0 to 700°C 32 to 1300°F	—
K CHROMEGA®–ALOMEGA®	0 to 1000°C 32 to 1800°F	0 to 1800°C 32 to 2282°F
R Pt/13% Rh-Pt	0 to 1750°C 32 to 3200°F	—
S Pt/10% Rh-Pt	0 to 1750°C 32 to 3200°F	—
T Copper–Constantan	0 to 400°C 32 to 750°F	—

To Order *Visit omega.com/cn616 for Pricing and Details*

Model No.	Description
CN616TC1	6-zone thermocouple input controller
CN616TC2	6-zone thermocouple input controller with extended range
CNQUENCHARC	Noise suppression RC snubber (2 leads), 110 to 230 Vac

Comes complete with software and operator's manual.

***Ordering Example: CN616TC1**, 6-loop temperature controller with 20-segment ramp and soak on each loop and RS232 communications.*

***OCW-3,** OMEGACARE℠ extends standard 2-year warranty to a total of 5 years.*

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