



Wall-Mount, Multi-Zone Ramp and Soak Process Controllers

CN1500 Series Starts at

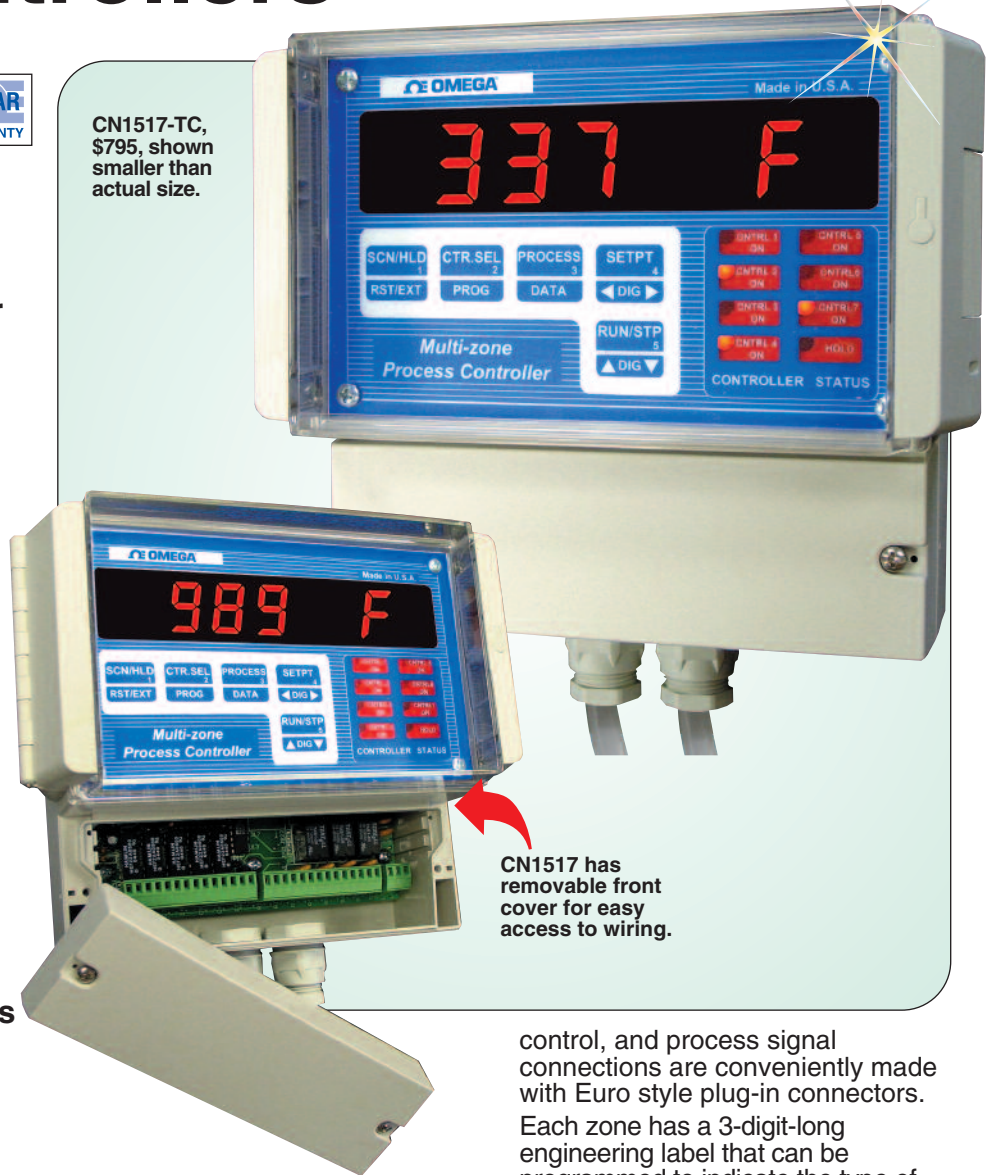
\$595



- ✓ Large, 7-Segment, 7-Digit LED Display 20 mm (0.8") High
- ✓ 4- and 7-Zone Controller
- ✓ On/Off, PID, Heat/Cool
- ✓ 7-Segment Ramp and Soak Profile
- ✓ Independent Profile for Each Zone
- ✓ Separate Control Settings for Each Zone
- ✓ Manual Setpoint Entry for Each Zone
- ✓ Indefinite Hold During Ramp
- ✓ Thermocouples, RTDs, and Thermistors
- ✓ 4 to 20 mA, 0 to 10 Vdc, Millivolts
- ✓ Scaling for Millivolts, Voltage, and Current
- ✓ Easy to View from a Distance
- ✓ Better Visibility Than Typical Panel-Mount Units
- ✓ Protection from Dust and Moisture
- ✓ Sealed Enclosure with Clear Plastic Front—DIN IP65 Protection

Housed in a wall-mount, watertight plastic enclosure, the CN1514 and CN1517 Series are versatile, multi-zone controllers. They feature multiple control modes that are ideal for a full range of applications, from simple to complex processes. Input type for each zone is selected independently. Scaling and offset allow current and voltage signals to be converted and displayed in engineering units. Temperature from thermocouples, RTDs, and thermistors can be displayed in °C/°F. In addition, each zone has its own ramp/soak profile, with up to 7 segments.

CN1517-TC, \$795, shown smaller than actual size.



CN1517 has removable front cover for easy access to wiring.

On/off, as well as PID control, is offered for optimal process stability. Processes that do not require tight control through complex tuning of PID parameters can be run under simple on/off control. Each zone has its own set of on/off and PID parameters, and each zone can be programmed for heating or cooling. Setpoint deviation, positive as well as negative, can be viewed. Additional functions include min/max reading for each zone, indefinite program hold, automatic scanning and displaying of different zones, and 3 display modes (setpoint only, process only, or both setpoint and process). Power,

control, and process signal connections are conveniently made with Euro style plug-in connectors. Each zone has a 3-digit-long engineering label that can be programmed to indicate the type of process being controlled (e.g., °C or °F for temperature, psi for pressure, etc.). Every controller's run status is indicated by LEDs. Channel display time is also programmable.



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

Specifications

Input Types:

- J, K, T, E, R, S, B, thermistor (2252 Ω @ 25°C), Pt100 RTD
- 4 to 20 mA loop current
- Voltage—0 to 5 Vdc, 0 to 10 Vdc
- Millivolt—0 to 100 mV

CJC Error: ±0.5°C (0.9°F)

[10 to 45°C (50 to 112°F)]

Open Thermocouple Indication:
"HELP" displayed

ACCURACY

Voltage: 0.05% FS

Current: 0.05% FS

Resolution:

1°C/°F for T/Cs, RTDs;

0.1°C/0.2°F for thermistors

Process: 9999, 999.9, 99.99, 9.999

A/D Conversion:

20,000 count A/D converter

Conversion Rate: 7/sec (typical)

Display: Red 7-segment, 7-digit LED display, 20 mm (0.8") high

Display Test:

8.8.8.8.8.8.8 on power-up

Scan Rate: 2 channels per second

Channel Display Time:

Programmable from 1 to 999 seconds

Power Options:

120 Vac—60 Hz (standard)

220 Vac—50/60 Hz (optional)

15 Vdc @ 900 mA (optional)

Scale: Programmable from 1 to 30,000

Offset:

0 to 20.00 (current)

0 to 100.00 (millivolt)

0 to 10.00 (voltage input)

Rate: 0 to 500 seconds

Proportional Band:

0 to 100% of span

Reset: 0 to 50 repeats per minute

On/Off Deadband (Programmable):

0 to FS

Control Output:

5 Vdc drive @ 50 mA per zone



The CN1500 Series have sturdy, clear doors that open easily!

Recommended Reference Book:
Controller Tuning, PID,
GE-2117, \$20
See Section Y
For Additional Books



Dimensions/Enclosure

Case: 192 W x 160 H x 103 mm D

(7.55 x 6.29 x 4.05")

Weight: 1.4 kg (3 lb)

Material: Polystyrene with crystal-clear polycarbonate lid

Ingress Protection:

Up to IP65 (DIN standard)

Type	Range	Accuracy
J	-200 to 1190°C (-328 to 2174°F)	±1°C ±1 count ±2°F ±1 count
K	-170 to 1365°C (-274 to 2489°F)	±1°C ±1 count ±2°F ±1 count
T	-155 to 400°C (-247 to 752°F)	±1°C ±1 count ±2°F ±1 count
E	-185 to 915°C (-300 to 1675°F)	±1°C ±1 count ±2°F ±1 count
R	0 to 1600°C (32 to 2900°F)	±3°C ±1 count ±6°F ±1 count
S	0 to 1600°C (32 to 2900°F)	±3°C ±1 count ±6°F ±1 count
B	470 to 1800°C (900 to 3300°F)	±3°C ±1 count ±6°F ±1 count
RTD-385 (2-Wire)	-200 to 800°C (-328 to 1472°F)	±1°C ±1 count ±2°F ±1 count
RTD-392 (2-Wire)	-100 to 450°C (-148 to 842°F)	±1°C ±1 count ±2°F ±1 count
Thermistor	-8 to 100°C (17 to 212°F)	±0.5°C ±1 count ±1.0°F ±1 count
Current	1 to 30,000 counts	0.05% ±1 count
Millivolt	1 to 30,000 counts	0.05% ±1 count
Voltage	1 to 30,000 counts	0.05% ±1 count

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Description
CN1514-(*)	\$595	Wall-mount 4-zone controller
CN1517-(*)	795	Wall-mount 7-zone controller

Note: Select input code from table below.

Input Code*	Programmable Inputs
TC	J, K, T, E, thermocouple, 4 to 20 mA, 0 to 10 Vdc
RTD	100 Ω RTD, 4 to 20 mA, 0 to 10 Vdc
TH	Thermistor, 4 to 20 mA, 0 to 10 Vdc
R	R thermocouple, 4 to 20 mA, 0 to 10 Vdc
S	S thermocouple, 4 to 20 mA, 0 to 10 Vdc
B	B thermocouple, 4 to 20 mA, 0 to 10 Vdc
MV	4 to 20 mA, 0 to 10 Vdc, 100 mV

*Select one.

Power Options

Ordering Suffix	Price	Description
-1	N/C	240 Vac
-2	\$25	8 to 15 Vdc

Accessories

Model No.	Price	Description
RELAY-URM-400	\$145	Universal 15 A mechanical 4-relay module
RELAY-URM-800	195	Universal 15 A mechanical 8-relay module

Comes with complete operator's manual.

Ordering Example: CN1514-TC-1, wall-mount 4-zone controller with T/C input, 240 Vac, \$595.



UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



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• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters