

# Dual Input Temperature Controllers

## With Timer, Ramp/Soak and Idle/ Run Functions

Shown smaller  
than actual size



GKQSS-14U-12  
thermocouple  
probe, \$33,  
sold separately.  
See page A-54.



- ✓ ¼ DIN Size
- ✓ Dual Loop Control
- ✓ PID, Proportional or On/Off Control
- ✓ Field Selectable Relay or dc Pulse Outputs
- ✓ Timer, 2 Segment Ramp/ Soak and Idle/ Run Functions
- ✓ Autotuning Standard
- ✓ Optional RS-232, RS-422, RS-485 Communications
- ✓ 102 mm (4") Mounting Depth
- ✓ Aluminum Housing

### Applications

- ✓ Platens and Presses
- ✓ Furnaces and Ovens
- ✓ Temperature Control Panels
- ✓ Extruders
- ✓ Food Processing

### Model CN3240

# \$625

### Basic Unit

The OMEGA® CN3240 Series temperature controllers pack the sophistication and flexibility of two microprocessor-based controllers into one compact ¼ DIN package.

### Two Flexible Loops

Each of the two independent control loops can be field programmed:

#### Loop #1

PID Temp. Control  
PID Temp. Control  
Alarm/Overtemp

#### Loop #2

PID Temp. Control  
Overtemp. Control  
Alarm/Overtemp

Two sensor inputs (one per loop) can be field programmed as J or K thermocouple or RTD. The control outputs are 8 amp relays, field changeable to dc pulse. The relay output can be used to directly drive small heater loads. In addition, a third 10 Amp relay can be used for alarm control.

### Timer and Event Input Features

Incorporated into the CN3240's programmed control features is a basic timer, configurable in hour/minute increments. The CN3240 timer can be used to enable the process at a preset time, or disable the process after a specified amount of time, avoiding the additional expense, space requirements and installation costs of a separate timer. Most importantly, the CN3240 timer assures you of total compatibility with the CN3240 process controller functions, requiring only initial setup and minimal operator attention.

### Specifications

**Control Modes:** On/Off, Proportional, and PID-proportional with automatic reset (integral) and/or rate (derivative)

**Control Adjustments:** All parameters independently adjustable for each loop



CN3240 shown with open door

**Dual Set Points:** Instrument sensor range, °F or °C, with Ramp/Soak and timer capabilities

**Set Point Limits:** Instrument sensor range

**Deadband:** 1 to 99°F/1 to 55°C

**Proportional Band:** 0.1 to 999.9%

**Automatic Reset:** 0.00 to 99.99 repeats/minute

**Rate:** 0 to 500 seconds

**Output Cycle Time:** 0.1 to 60.0 seconds

**Output Limit:** 0 to 100 %

**Control Outputs:** One individual output per channel

**Relay:** N.O. contact rated 8 A at 120/250 Vac or 5 A at 30 Vdc

**dc Pulse:** Transistor output of 20 Vdc at 40 mA, jumper selectable

**Auxiliary Alarm Output:**

Non-Latching, normally-energized or normally de-energized, power-up inhibit feature

**Setpoint:** Sensor span

**Modes:** High or Low Alarm

**Input Sensor:** Channel #1 sensor, channel #2 sensor or both.

**Relay:** N.O. contact rated 10 A at 120/250 Vac or 10 A at 30 Vdc

**Auxiliary Event Input:** One digital input accepts momentary or sustained contact closure, requiring minimum 100 millisecond closure/opening

**Timers:** 00.00 to 99.99 hours, minutes with a "continuous" setting for soak intervals

000.0 to 999.9 Hrs., 0000 to 9999 Hrs.

**Input Update Rate:** 600 msec/update

**Readout Stability:** ±1.0°F maximum for every ±10°F change ambient

**Open Sensor and Out-of-Range Conditions:** Control output adjustable from 0 to 100%

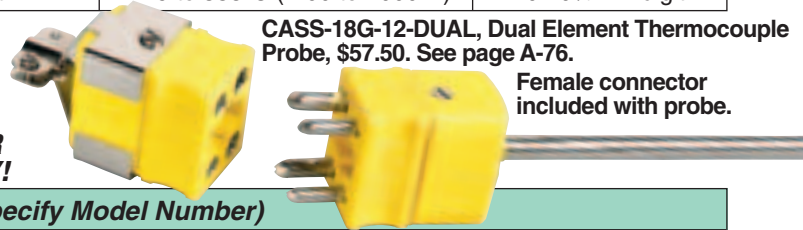
**Digital Communications Option**

RS-232-C: Single-drop, Isolated

RS-422, RS-485: Multi-drop, Isolated

## Input Types and Ranges

Input Type	Range	Accuracy
J Iron-Constantan	-73 to 650°C (-100 to 1400°F)	±0.14% + 1 digit
K CHROMEGA®-ALOMEGA®	-73 to 1149°C (-100 to 2100°F)	±0.14% + 1 digit
RTD 100Ω Pt	-129 to 538°C (-200 to 1000°F)	±0.10% + 1 digit



**AVAILABLE FOR FAST DELIVERY!**

**To Order (Specify Model Number)**

Model Number	Price	Description
CN3240	\$625	Dual loop, dual field selectable relay/dc pulse outputs, one auxiliary relay output #3

OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor, and equivalent loaners. Comes with complete operator's manual.

**Ordering Example:** CN3240-4, dual loop temperature controller with digital communications, \$625 + 105 = \$730. OCW-3 OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 4 years (\$182), \$730 + 182 = \$912.

**Options (not field installable)**

Ordering Suffix	Price	Description
-4	\$105	Isolated RS-232/422/485 digital communications

## Accessories

Model Number	Price	Description
CN3200-FRONT	\$80	Dust tight and splashproof cover (IP54 rated)
CN3200-SOFT	320	Software for communications option, DOS version
CNQUENCHARC	8	Noise suppression kit, 110 to 230 Vac

**Instrument Power:** 120/230 Vac, 50/60 Hz, nominal power consumption 10 VA power failure detection circuitry, watchdog timers

**Operating environment:** 0 to 55°C (30 to 130°F) ambient temperature with relative humidity less than 95%, non-condensing

## Dimensions:

**Overall:** 96 x 96 x 121 mm (3.78 x 3.78 x 4.75")

**Depth Behind Panel:** 102 mm (4.0")

**Front Panel Projection:** 19 mm (0.75")

**Panel Cutout:** 92 x 92 mm (3.6 x 3.6")

**Weight:** 1.1 kg (2.5 lb)

**Influence of Line Voltage Variation:** ±1°F maximum change in readout for ±10% nominal line voltage

## Noise Rejection

**Common Mode:** Less than ±1°C (2°F) with 230 Vac, 60 Hz applied from sensor input to instrument case (with digital filter enabled)

**Series Mode:** Less than ±1°C (2°F) with 100 mV peak to peak. 60 Hz series mode noise

**Radio-Frequency Interference (RFI):** Typically less than 0.5% of sensor span at 1 m (3.1') from a transmitter (4 W at 464 MHz)



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