Dual Input Temperature Controllers
With Timer, Ramp/Soak and Idle/Run Functions

- 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:

<table>
<thead>
<tr>
<th>Loop #1</th>
<th>Loop #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>PID Temp. Control</td>
<td>PID Temp. Control</td>
</tr>
<tr>
<td>PID Temp. Control</td>
<td>Overtemp. Control</td>
</tr>
<tr>
<td>Alarm/Overtemp</td>
<td>Alarm/Overtemp</td>
</tr>
</tbody>
</table>

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

GKOSS-14U-12 thermocouple probe, $33, sold separately. See page A-54.
### 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 99.9%
- 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

### 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)
- Typical less than 0.5% of sensor span at 1 m (3.1’) from a transmitter (4 W at 464 MHz)

### Input Types and Ranges

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>-73 to 650°C</td>
<td>±0.14% + 1 digit</td>
</tr>
<tr>
<td>K</td>
<td>-73 to 1149°C</td>
<td>±0.14% + 1 digit</td>
</tr>
<tr>
<td>RTD 100Ω</td>
<td>-129 to 538°C</td>
<td>±0.10% + 1 digit</td>
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</tbody>
</table>

### CASS-18G-12-DUAL
- Dual Element Thermocouple Probe, $57.50. See page A-76.

Female connector included with probe.
Temperature

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

Data Acquisition

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

More than 100,000 Products Available!