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WARRANTY



User's Guide

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CN3261 Limit Controller

Rev. 9-04



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One Omega Drive, P.O. Box 4047
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Czech Republic:

Rudé armády 1868, 733 01 Karviná 8
TEL: +420 (0)69 6311899 FAX: +420 (0)69 6311114
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France:

11, rue Jacques Cartier, 78280 Guyancourt, France
TEL: +33 (0)1 61 37 29 00 FAX: +33 (0)1 30 57 54 27
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Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
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The information contained in this document is believed to be correct, but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, patient-connected applications.

CN 3261 Temperature Limit Controller

Introduction

Description

The CN3261 protects expensive heaters and sensitive materials from damaging over temperature conditions. It is designed for industrial and commercial applications that require high temperature protection.

The CN3261 features a Form C latching, manually resettable relay output that de-energizes whenever the sensed temperature exceeds the set point temperature.

The DIN Rail mounting feature allows quick installation without drilling or extra hardware. Slots are also provided for direct panel mounting.

Two methods are provided to reset an alarm condition. (1) The CN3261 alarm has a reset pushbutton on the unit and (2) reset terminals are provided for resetting the alarm from a remote pushbutton.

Features

- Protects processes and equipment from excessive temperatures
- DIN Rail and sub-panel mounting
- J, K thermocouple or RTD input
- Terminals provided for remote pushbutton reset
- Latching, normally energized, 3 amp relay output

Specifications

Power Input: 120VAC or 24VAC $\pm 15\%$, 50/60Hz, 3VA max. standard

Control Output: SPDT Relay rated 3.8 Amps Res. and 1.5 Amps Pilot Duty 120 VAC. 100,000 cycles.

Control Mode: Latching with Manual Reset or power off.

Reset Function: Integral reset switch standard; terminals available for optional remote reset switch.

Set Point Adjustment: Local SP dial adjustment.

Compensation (TC only): Automatic cold junction compensation.

Control Stability: Typically less than $\pm 5\mu V/^{\circ}F$ ambient and 0.1% of SPAN/% rated line voltage.

Set Point Accuracy: $\pm 3\%$ of FS maximum at 25°C and rated line voltage.

Sensor Break Protection: Contacts 4 and 5 open for thermocouple or RTD break.

Ambient Operating Temperature: 0 - 60°C (32 - 140°F).

Noise Rejection:

Common Mode Rejection: 60dB, Series Mode Rejection: 120dB

Approvals: UL Registered, Canadian UL Registered, Factory Mutual

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Specifications (cont'd.)

Mechanical

Enclosure Material: Noryl, Black color.

Field Terminations: Screw Terminals with wire clamping plates and touch safe shield.

Mounting: 35mm DIN rail or surface mounting.

Sensor Inputs

Sensor	Range
J T/C	0-1400°F, 0-750°C
K T/C	0-2300°F
RTD	0-850°F (2 wire input)

Installation and Wiring

Mounting

The CN3261 can be surface mounted or DIN rail mounted. It can be mounted to any suitable flat surface using two #6 screws (not supplied). To install simply position the top set of rear clips over the top of the DIN rail. Then swing the bottom of the controller toward the rail applying pressure until the lower clips snap on to the bottom of the DIN rail. To remove apply pressure to the top of the controller's base and move the bottom of the controller toward you. Then lift the top of the controller off the upper DIN rail. The housing rating is NEMA 1.

Caution

This controller must be mounted in an enclosure suitable for protection against normally expected operation environments and to minimize unauthorized tampering with the limit settings.

Wiring

Carefully follow the terminal diagram pictured on the controller's housing and as shown on facing page. The power and load wiring should be 18 AWG or larger size. Be sure to observe that the ratings for voltage and current are not exceeded. All local and national electrical codes must be followed.

Use only the sensor type as indicated on the control and maintain correct polarity. THE RED THERMOCOUPLE LEAD ALWAYS CONNECTS TO THE NEGATIVE (-) TERMINAL. To reduce electrical noise, the thermocouple wire must be isolated from any power or heater wiring. Shielded thermocouple wire may be necessary in high noise environments or when lead lengths exceed 10 feet. Thermocouples are tip sensitive and must be in good mechanical contact with the load.

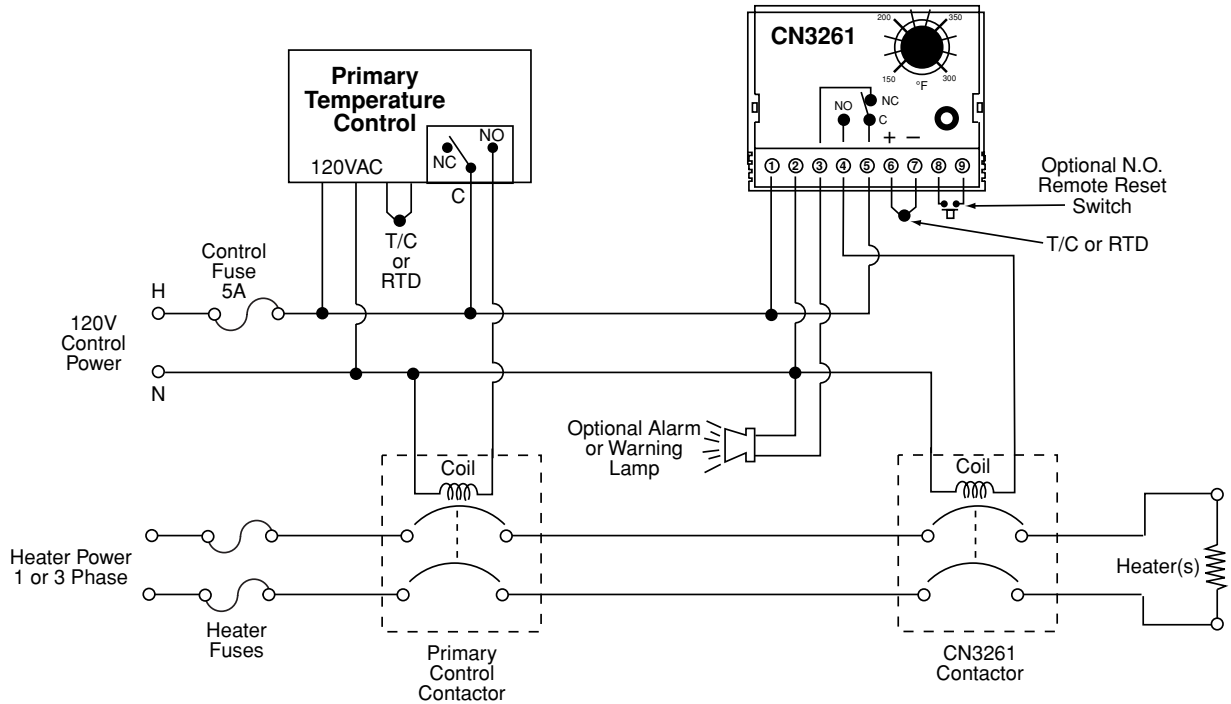
The remote reset terminals allow for a remote pushbutton (on the panel door) to reset the CN3261 alarm. If multiple units are mounted in a panel, the remote reset terminals cannot be wired in parallel. The remote pushbutton needs a separate contact block for each CN3261. A single contact input cannot be used to reset multiple CN3261s.

Caution

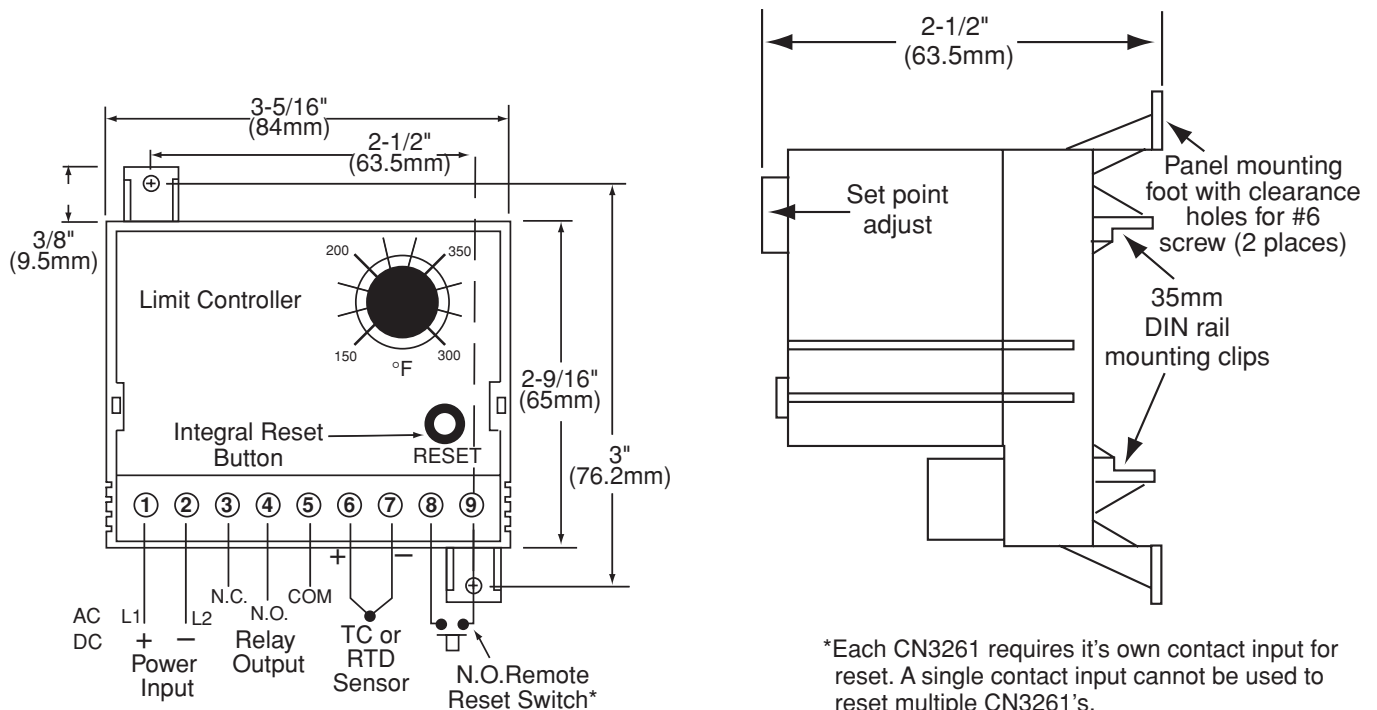
ELECTRIC SHOCK HAZARD. Any installation involving controls must be performed by a qualified person and must be effectively grounded in accordance with the National Electrical Code to eliminate shock hazard.

CN 3261 Temperature Limit Controller

Typical Wiring Diagram



Dimension Drawings



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Operation and Maintenance

Operation

The set point temperature is adjustable by turning the integral dial. If the set point is exceeded, contacts 4 and 5 will open. It will remain in this state until the temperature drops below the set point and the controller is manually reset. Manual reset can be accomplished by one of the following means: a) Press the “reset button”. b) A momentary switch closure between terminals 8 and 9. c) Interrupt power to the control.

Maintenance

No specific maintenance is required. However, it is recommended that all wiring be checked periodically for loose connections and damaged wires. Disconnect power to the panel before any maintenance is performed. Check wires and tighten connections.

Troubleshooting

Experience has proven that many control problems are not caused by a defective instrument. Some of the common causes of failure are broken sensors, open fuses and poor wire connections. If these points have been checked and the control still does not function, it is suggested that the instrument be returned for inspection. Use adequate packing materials to prevent damage in shipment.

Ordering Information

Model	Temperature Range	Input Type	Input Power
CN3261-JF	0-1400°F	J T/C	120 Vac
CN3261-KF	0-2300°F	K T/C	120 Vac
CN3261-RTDF	0-850°F	RTD	120 Vac
CN3261-JC	0-750°C	J T/C	120 Vac
CN3261-JF-L	0-1400°F	J T/C	24 Vac



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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