

# Compact Design Provides Versatile Solid State Option

The new Series CZR solid state contactor from Watlow provides a low-cost, highly compact and versatile solid state option for controlling electric heat. With DIN rail and back panel mounting standard on every control, the CZR allows for simple and quick installation.

The extensive capabilities of the Series CZR include single-phase, 24 to 50 amp zero-cross and random switching up to 600V~ (see output rating curve). The unique integrated design removes the guesswork associated with selecting a proper heat sink and precise terminations for the application.

This controller holds many agency approvals and is ideal for applications that require UL®, CSA and CE approvals. Series CZR contactors are available in V~(ac/dc) input contactor versions. All configurations are model number dependent and factory selectable.

The Series CZR is reliably backed by a two-year warranty from Watlow Controls.

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## Features and Benefits

### DIN rail or standard panel mount

- Versatile, quick and low-cost installation

### Compact size

- Reduces panel space; less cost

### Touch-safe terminals

- Increases safety for installer and operator

### Mercury Free

- Environmentally safe

### Faster switching with solid state

- Saves energy and extends heater life

### UL®508 recognized, CSA LR700195 certified and CE 60950, VDE 0805 applied for

- Applications requiring agency approval

### Back-to-back SCR design

- Rugged design



WIN-CZR-59

Watlow Controls

A subsidiary of Watlow, Designer and Manufacturer of Industrial Heaters, Sensors and Controls

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ISO 9001



Registered Company  
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## Specifications — 1562

### Control Mode

- Zero-cross or random fired contactor output

### Operator Interface

- Command signal input
- Input signal indication LED

### Input Command Signal

- Input Type DC1
  - Turn on voltage 4V<sub>dc</sub> max., turn off voltage 1V<sub>dc</sub> min.
  - Input current: dc typically 10mA @ 4V<sub>dc</sub>, 13mA @ 32V<sub>dc</sub>
- Input Type AC1
- 90 to 140Vrms, must turn on at 90V<sub>~</sub>, must turn off at 10V<sub>~</sub>
  - Input current: 15mA @ 120V<sub>~</sub>
- Input Type AC2
  - 18 to 36V<sub>~</sub> input, must turn on at 18V<sub>~</sub>, must turn off at 10V<sub>~</sub>
  - Input current: 10mA @ 24V<sub>~</sub>

### Output Voltage

- 24; 24V<sub>~</sub> min. to 280V<sub>~</sub> max.
- 480; 48V<sub>~</sub> min. to 530V<sub>~</sub> max.
- 600; 48V<sub>~</sub> min. to 660V<sub>~</sub> max.
- Off state leakage
  - 1mA at 25°C (77°F) max. for 600V<sub>~</sub> models; 10mA at 25°C (77°F) max. for 24 through 480V<sub>~</sub> models
- Holding current: 250mA max.

### Output Amperage

- See output rating curve on graph. Ratings are into a resistive heater load.

### Output Amperage Rating

Model	24	34	42	50
Maximum Surge Current 16.6MS	250	625	1,000	1,200
Maximum I <sup>2</sup> t for fusing	260	1,620	4,150	6,000

### Agency Approvals

- Class II construction
- UL®508 recognition, File #E177629 and CSA LR700195
- 73/23/EEC CE Low Voltage Directive
- VDE 0805, License applied for

### Terminals

- Compression type
- Input signal terminal wire size 10 AWG
- Torque to 8-10 in lbs
- Output terminal wire size 6 AWG
- Torque to 13-15 in lbs

### Operating Environment

- Up to 80°C (76°F). See output rating curves for your application.
- 0 to 90% RH, non-condensing
- Insulation tested to 3,000 meters
- Units are suitable for "Pollution degree 2"
- Cycle time should be less than 3 seconds

### Mounting

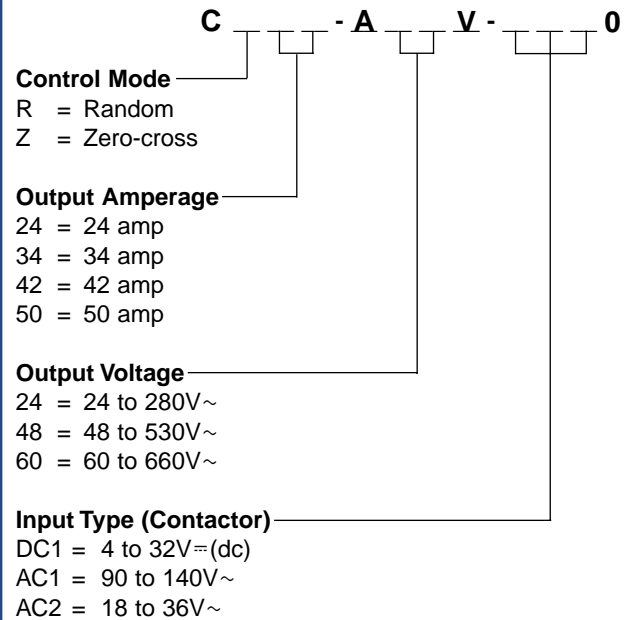
- Options include DIN rail or standard back panel mounting.
- The DIN rail specification: DIN EN 50022, 35 mm x 7.5 mm
- Minimum clipping distance: 1.37 in (34.8 mm)
- Maximum clipping distance: 1.39 in (35.3 mm)
- Mount cooling fins vertical

### Weight/Dimensions

- 9.2 oz (260 g)
- 3.95 in (100 mm) high x 1.75 in (45 mm) wide x 4.3 in (109 mm) deep

## Ordering Information — 1561

Series CZR



## Output Rating Curves

