

Power Switching Devices

SERIES CZR

The SERIES CZR solid state relay 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 controller, the CZR allows for simple and quick installation.

The extensive capabilities of the SERIES CZR include single-phase, 18 to 42 ampere zero-cross switching up to 600VAC (see output rating curve). Its unique integrated design removes the guesswork associated with selecting a proper heat sink and precise terminations for the application.

This controller holds many agency certifications and is ideal for applications that require UL®, CSA and CE approvals. The SERIES CZR is available in VAC/VDC input contactor versions and all configurations are model number dependent and factory selectable.

The SERIES CZR is protected by a two-year warranty.

Features and Benefits

DIN-rail or standard panel mount

- Versatile, quick and low-cost installation

Compact size

- Reduces panel space and cost

Touch-safe terminals

- Increases installer and operator safety

Mercury free

- Environmentally safe

Faster switching with solid state

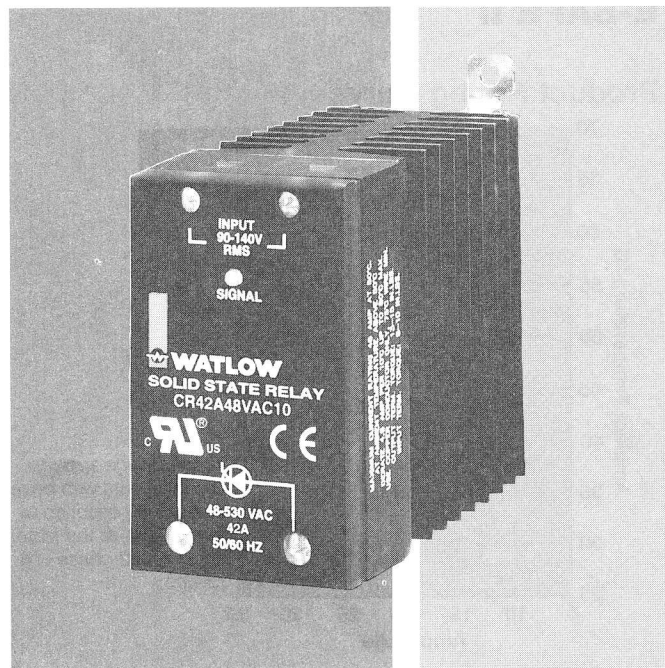
- Saves energy and extends heater life

UL® 508 recognized, CSA LR700195 certified, CE 60950 and RoHS

- Applications requiring agency approval

Back-to-back SCR design

- Offers rugged design for different application environments



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Specifications

Control Mode

- Zero-cross fired contactor output

Operator Interface

- Command signal input
- Input signal indication LED

Input Command Signal

- Input Type DC1
 - Turn on voltage 4VDC max., turn off voltage 1VDC min.
 - Input current: dc typically 10mA @ 4VDC, 13mA @ 32VDC
- Input Type AC1
 - 90 to 140Vrms, must turn on at 90VAC, must turn off at 10VAC
 - Input current: 15mA typical @ 120VAC

Output Voltage

- 24V; 24VAC min. to 280VAC max.
- 48V; 48VAC min. to 530VAC max.
- Off state leakage: 10mA at 77°F (25°C) max. for 24 through 480VAC models
- Holding current: 250mA max.

Output Amperage

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

Output Amperage Rating

| Model | 18 | 24 | 34 | 42 |
|------------------------------|------|-----|------|------|
| Max. Surge Current 16.6 mSec | 625 | 250 | 625 | 1000 |
| Max. I ² t Fusing | 1620 | 260 | 1620 | 4150 |

Agency Approvals

- Class II construction
- UL® 508 recognition, File #E73741 and CSA File LR 700195
- CE per 2006/95/EC Low Voltage Directive
- 2011/65/EU RoHS

Output Terminals

- Compression type
- For 18A models:
 - Max. wire size 3.0 mm (10 AWG), torque to 0.6Nm (5.3 in. lbs)
- For 24 to 42A models:
 - Max. wire size 16.0 mm (6 AWG stranded) torque to 1.5-1.7Nm (13-15 in. lbs)

Operating Environment

- Up to 176°F (80°C). See output rating curves for applications
- 0 to 90% RH (relative humidity), 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, 1.38 in. x 0.30 in. (35 mm x 7.5 mm)
- Min. clipping distance: 1.37 in. (34.8 mm)
- Max. clipping distance: 1.39 in. (35.3 mm)
- Mount cooling fins vertical

Weight/Dimensions

- 9.2 oz (260g)
- 24 to 42A models: 3.95 in. (100 mm) high x 1.75 in. (45 mm) wide x 4.3 in. (109 mm) deep
- 18A models: 3.95 in. (100 mm) high x 0.89 in. (22.6 mm) wide x 3.9 in. (99 mm) deep

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Ordering Information

Part Number

| ① | ② | ③ ④ | ⑤ | ⑥ ⑦ | ⑧ | ⑨ ⑩ ⑪ | ⑫ |
|---|-------------------|-----------------|---|-----|---------------------|-------|-----------------------------|
| C | Control Mode Z | Output Amperage | - | A | Output Voltage V | - | Input Type (Contactor) 0 |

| ② | Control Mode |
|-----|--------------|
| Z = | Zero cross |

| ③ ④ | Output Amperage |
|------|-----------------|
| 18 = | 18A |
| 24 = | 24A |
| 34 = | 34A |
| 42 = | 42A |

| ⑥ ⑦ | Output Voltage |
|------|----------------|
| 24 = | 24 to 280VAC |
| 48 = | 48 to 530VAC |

| ⑨ ⑩ ⑪ | Input Type (Contactor) |
|-------|------------------------|
| DC1 = | 4 to 32VDC |
| AC1 = | 90 to 140VAC |

Note: Do not use the AC1 input type with temperature controller outputs that include an AC snubber filter. This could cause the SERIES CZR to stay full on.

Output Rating Curve

