

SCR Power Controller Delivers Up To 100 Amperes in a Smart Package

The Watlow® DIN-A-MITE® Style D silicon controlled rectifier (SCR) power controller provides you with an inexpensive, versatile product for controlling heat in an efficient package. You also get all the quality you expect from a Watlow designed and manufactured product. The standard back panel mounting footprint is equal to that of an industry standard mercury displacement relay. There is no need to worry about mercury, the DIN-A-MITE controller is mercury free.

The DIN-A-MITE Style D is capable of zero cross switching up to 100 amperes single-phase, at 600V~(ac) at 86°F (30°C), depending on the model selected. When you combine the input of two or three controllers you can control three-phase. It is totally touch-safe and includes standard back panel mounting, on-board semiconductor fuses (accessible from the front) and a current transformer option for external load current monitoring. An optional "shorted SCR detector" feature is available on some models. This model is UL® 508 and C-UL® and CE approved. These agency approvals are ideal for those panel builders that require agency approvals on their panels and cabinets.

Variable time base, 4-20mA process control, or V~(ac/dc) input contactor options are available. All configurations are model number dependent and factory selectable. This power controller also includes 200KA short circuit current rating (SCCR) tested up to 480V~(ac) to prevent arch flash with required fusing.

The DIN-A-MITE Style D power controller is made in the United States.

Your Authorized Watlow Distributor Is:
Thermal Devices, Inc.
Mount Airy, Maryland USA
www.thermaldevices.com
sales@thermaldevices.com
Ph: 800-282-9100
Fx: 800-457-1634



Features and Benefits

200KA Short Circuit Current Rating (SCCR)

- Prevents arc flash

Standard panel mount

- Provides same mount as industry standard 100A MDR

Compact size

- Reduces panel space; less cost

Touch-safe terminals

- Increases safety for installer/user

No mercury

- Assures environmental safety

Faster switching with solid state

- Saves energy and extends heater life

UL® 508 listed, C-UL® and CE with filter

- Meets applications requiring agency approval

Back-to-back SCR design

- Ensures a rugged design

On-board semiconductor fusing

- Provides quick access with no extra mounting necessary

Watlow® and DIN-A-MITE® are registered trademarks of Watlow Electric Manufacturing Company.

UL® and C-UL® are registered trademarks of the Underwriter's Laboratories, Inc.



Specifications

Amperage

- See the Output Rating Curve chart below
- Max. surge current for 16.6ms, 1,800A peak
- Latching current: 500mA min.
- Holding current: 200mA min.
- Power dissipation is 1.4 watts per amperes switched including on-board fusing
- 200KA SCCR, Type 1 and 2 approved with the recommended fusing; see user manual

Line Voltage

- 24 to 48 V~(ac) units: 20 min. to 53V~(ac) max.
- 100 to 240 V~(ac) units: 48 min. to 265V~(ac) max.
- 277 to 480 V~(ac) units: 85 min. to 528V~(ac) max.
- 277 to 600 V~(ac) units: 85 min. to 660V~(ac) max.
- 50/60Hz independent +/-5%

Control Mode, Zero Cross

- Input control signal Type C: V=(dc) input contactor
- Input control signal Type K: V~(ac) input contactor
- To increase service life, the cycle time should be less than three seconds
- Input control signal Type F: 4 to 20mA=(dc) variable time base control

Input Command Signal

- AC contactor, 24V~(ac) ±10%, 120V~(ac) +10/-25%, 240V~(ac) +10/-25% @ 25 mA max. per controlled leg
- DC Contactor, 4.5 to 32 V=(dc): max. current @ 4.5V=(dc) is 8mA per leg
- Loop powered linear current 4 to 20mA=(dc), input Type F0 option only, no more than three DIN-A-MITE inputs connected in series

Alarm

Shorted SCR Alarm Option

- Alarm state when the input command signal off and a 15A or more load current is detected by the current transformer


Alarm Output

- Energizes on alarm, non-latching
- Triac 24 to 240V~(ac) external supply with a current rating of 300mA @ 77°F (25°C)

Current Sensing

- On-board current transformer (CT), typically 0.2 V~(ac) output signal per ampere sensed into 1,000Ω load

Agency Approvals

- CE with proper filter:
 - 204/108/EC Electromagnetic Compatibility Directive
 - EN 61326-1: Industrial Immunity Class A Emissions
 - Not suitable for Class B emissions environment
- 2006/95/EC Low Voltage Directive
 - EN 50178 Safety Requirements
-  US UL® 508-listed and C-UL® File E73741

Input Terminals

- Compression: will accept 0.13 to 3.3 mm² (26 to 12 AWG) wire

Line and Load Terminals

- Compression: will accept 13.3 to 33.6 mm² (6 to 2 AWG) wire

Operating Environment

- Operating temperature range: 32 to 185°F (0 to 85°C)
- 0 to 90% RH (relative humidity), non-condensing
- Vibration: 2 g, 10Hz to 150Hz, applied in any one of three axes
- Storage temperature: -40 to 185°F (-40 to 85°C)
- Insulation tested to 3,000 meters
- Installation Category III, pollution degree 2

Mounting

- Back panel mounting; fits the same mounting pattern as a 100A, single-phase mercury displacement relay
- On-board semiconductor fusing

Dimensions

- Height: 7.25 in. (185 mm) high x 2.5 in. (65 mm) wide x 9.4 in. (240 mm) deep
- Weight: 6.5 lb (2.95kg)

Specifications are subject to change without notice.

Ordering Information

To order, complete the model number on the right with the information below.

DIN-A-MITE Style D = Solid State Power Controller

Phase _____ **D D 1 0 -**

1 = 1-phase, 1 controlled leg

Cooling and Current Rating _____

0 = Natural convection current rating 80A @ 122°F (50°C)
(Note: see the output rating curve for the current rating at other temperatures)

Line and Load Voltage _____

02 = 24 to 48V~(ac)
24 = 100 to 240V~(ac)
48 = 277 to 480V~(ac)
60 = 277 to 600V~(ac)

Input Control Signal _____

C0 = 4.5 to 32V=(dc) contactor
F0 = 4 to 20mA=(dc) proportional
K1 = 22 to 26V~(ac) contactor
K2 = 100 to 120V~(ac) contactor
K3 = 200 to 240V~(ac) contactor

Current Sensing or Alarm _____

0 = No alarm
1 = Load current transformer
S = Shorted SCR alarm

User Manual Language _____

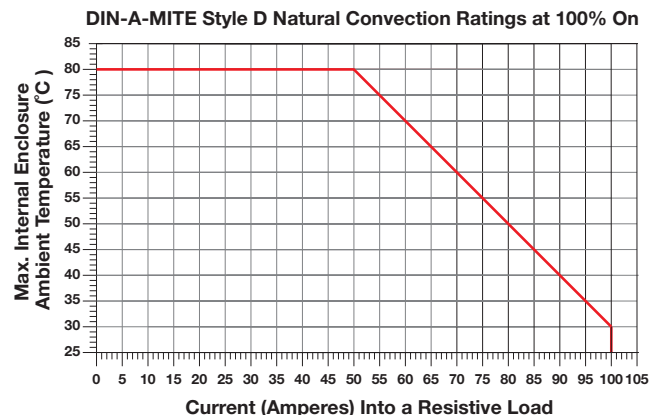
0 = English
1 = German
2 = Spanish
3 = French

Custom Options _____

00 = Standard parts

Recommended Semiconductor Fuse:
Watlow P/N: 0808-0096-0000
Cooper Bussmann® P/N: 170N3437

Output Rating Curve



Cooper Bussman® is a registered trademark of Cooper Bussman, Inc.

Thermal Devices, Inc.
Mount Airy, Maryland USA
www.thermaldevices.com
sales@thermaldevices.com
Ph: 800-282-9100
Fx: 800-457-1634