

SCR Power Controller Delivers Up To 100 Amps 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 amps single-phase, at 600V~(ac) at 86°F (30°C), depending on the model selected. Combined with the input of two or three controllers and 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:



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

- Environmentally safe product

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

- Insures a rugged design

On-board semiconductor fusing

- Provides quick access with no extra mounting necessary

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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 amp 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:
89/336/EEC Electromagnetic Compatibility Directive
EN 61326: Industrial Immunity Class A Emissions
Not suitable for Class B emissions environment
73/23/EEC 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.

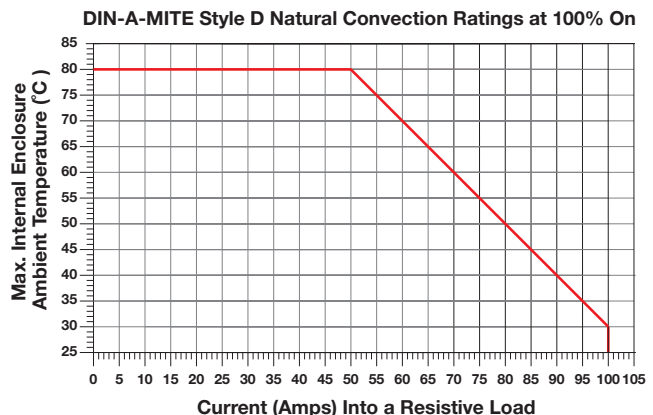
Ordering Information

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

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

Phase	DD10-
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.

To be automatically connected to the nearest North American Technical Sales Office:

1-800-WATLOW2 • www.watlow.com • info@watlow.com

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