

## Single- and Three-Phase Power in a Compact and Safe Package

The Watlow® DIN-A-MITE® Style B power controller provides a low-cost, highly compact and versatile solid state option for controlling electric heat. You also get all the quality you expect from a Watlow designed and manufactured product. DIN-rail and back panel mounting are standard on every control. There is no need to worry about mercury, the DIN-A-MITE controller is mercury free.

Capabilities include single-phase and three-phase zero cross switching up to 40 and 22 amperes, respectively, at 600V~(ac) (see rating curve). A unique, integrated design removes the guesswork associated with selecting a proper heat sink and adequate terminations for the application.

Variable time base, 4-20mA process control or  $V_{\approx}(ac/dc)$  input contactor versions are available. A shorted silicon controlled rectifier (SCR) alarm option is also 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 power controller is made in the United States.

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### Features and Benefits

#### 200KA Short Circuit Current Rating (SCCR)

- Prevents arc flash

#### DIN-rail or standard panel mount

- Provides versatility, quickness and low-cost installation

#### Compact size

- Reduces panel space; less cost

#### Touch-safe terminals

- Increases safety for installer/user

#### Single- and three-phase power

- Permits use in a variety of applications

#### 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

#### Shorted output alarm (optional)

- Notifies you in case of a shorted SCR



**ISO 9001**



Registered Company  
Winona, Minnesota USA



WIN-DMB-0309

## Specifications

### Operator Interface

- Command signal input and indication light
- Alarm output and indication light

### Amperage Rating

- See the output rating curve
- Max. surge current for 16.6ms, 380A peak
- Max. I<sup>2</sup>t for fusing is 4,000A<sup>2</sup>s
- Latching current: 200mA min.
- Holding current: 100mA min.
- Off-state leakage 1mA at 77°F (25°C) max.
- Power dissipation = 1.2 watts per amperes per leg switched
- 200KA SCCR, Type 1 and 2 approved with the recommended fusing; see user manual.

### Line Voltage

- 20 to 660V~(ac) model number dependent; see ordering information

### 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 on contactor input models the cycle time should be less than three seconds
- Input Control Signal Type F: 4 to 20mA~(dc) proportional variable time base control

### Input Command Signal

- AC contactor
  - 24V~(ac) ±10%, 120V~(ac) +10/-25%, 240V~(ac) +10/-25% @ 25mA max. per controlled leg
- DC Contactor
  - 4.5 to 32V~(dc): max. current @ 4.5V~(dc) is 6mA per leg. Add 2mA per LED used to the total current
- Loop powered linear current
  - 4 to 20mA~(dc): loop-powered, input Type F0 option only (requires current source with 6.2V~(dc) available, no more than three DIN-A-MITE inputs connected in series); 3 cycles on, 3 cycles off at 50% power

### Alarm

#### Shorted SCR Alarm Option

- Alarm state when the input command signal off and a 10A or more load current is detected by the current transformer (two turns required for 5A and three turns for 2.5A)


#### Alarm Output

- Energizes on alarm, non-latching
- Triac 24 to 240V~(ac), external supply with a current rating of 300mA @ 77°F (25°C), 200mA @ 122°F (50°C), 100mA @ 176°F (80°C) and a holding current of 200 µA with a latching current of 5mA typical

### Agency Approvals

- CE with proper filter:
  - 204/108/EC Electromagnetic Compatibility Directive
  - EN 61326-1: Industrial Immunity Class A Emissions
- 2006/95/EC Low Voltage Directive
- EN 50178 Safety Requirements

Installation category III, pollution degree 2

-  UL® 508 listed and C-UL® File E73741

### Input Terminals

- Compression: will accept 0.2. to 2 mm<sup>2</sup> (24 to 14 AWG) wire

### Line and Load Terminals

- Compression: will accept 0.8 to 8.4 mm<sup>2</sup> (18 to 8 AWG) wire

### Operating Environment

- See the output rating curve
- 0 to 90% RH (relative humidity), non-condensing
- Storage temperature: -40 to 185°F (-40 to +85°C)
- Insulation only tested to 3,000 meters

### DIN-rail Mount

- DIN EN 50022, 35 mm by 7.5 mm

### Back Panel Mount

- Four mounting holes M3 to M4 (No. 6 to No. 8) fastener

### Dimensions

- Height: 3.7 in. (95 mm) high x 3.1 in. (80 mm) wide x 4.9 in. (124 mm) deep
- Weight: 1.5 lb (0.68kg)

Specifications are subject to change without notice.

## Ordering Information

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

**DIN-A-MITE Style B** = Solid State Power Controller

<b>Phase</b>	<b>D B</b>
1 = 1-phase, 1 controlled leg	
2 = 3-phase, 2 controlled legs	
3 = 3-phase, 3 controlled legs	
8 = 2 independent zones (input control C or K)	
9 = 3 independent zones (input control C or K)	
<b>Cooling and Current Rating Per Pole</b>	
0 = Natural convection standard DIN-rail or panel mount heat sink	
<b>Line and Load Voltage</b>	
02 = 24 to 48V~(ac)	
24 = 120 to 240V~(ac)	
60 = 277 to 600V~(ac)	
<b>Input Control Signal</b>	
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	
<b>Alarm</b>	
0 = No alarm	
S = Shorted SCR alarm	
<b>User Manual</b>	
0 = English	
1 = German	
2 = Spanish	
3 = French	
<b>Custom Part Numbers</b>	
00 = Standard part	
XX = Any letter or number, custom options, labeling, etc.	

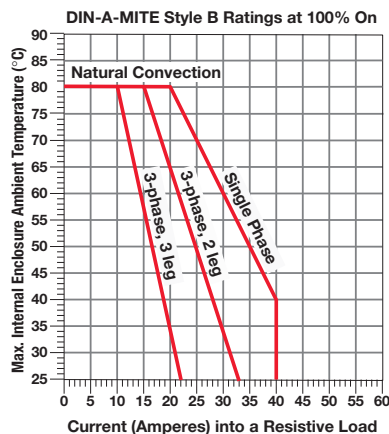
## Recommended Semiconductor Fuse and Fuse Holders

Fuse Part Number			
Fuse Rating	Watlow	Cooper Bussmann®	Ferraz Shawmut
20A	17-8020	FWC20A10F	K330013
25A	17-8025	FWC25A10F	L330014
40A	17-8040	FWC40A14F	A093909
50A	17-8050	FWC50A14F	B093910

Fuse Holder Part Number			
Fuse Rating	Watlow	Cooper Bussmann®	Ferraz Shawmut
20A	17-5110	CHM1G	G81219
25A	17-5110	CHM1G	G81219
40A	17-5114	CH141G	J081221
50A	17-5114	CH141G	J081221

## Output Rating Curve



## Current Rating Table

Phase	Cooling	Current at 122°F (50°C)
1	0	35A
2, 8	0	25A
3, 9	0	17A