

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 amps, 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.

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

- Versatile, quick 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

- 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

Shorted output alarm (optional)

- Notifies you in case of a shorted SCR



Your Authorized Watlow Distributor Is:



WIN-DMB-0208

ISO 9001



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

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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 16.6 milliseconds, 380A peak
- Max. I²t for fusing is 4,000A²s
- Latching current: 200mA minimum
- Holding current: 100mA minimum
- Off-state leakage 1mA at 25°C (77°F) maximum
- Power dissipation = 1.2 watts per amp per leg switched
- 200KA SCCR, Type 1 and 2 approved with the recommended fusing; see user manual.

Line Voltage

- 20V~(ac) 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 percent, 120V~(ac) +10/-25 percent, 240V~(ac) +10/-25 percent @ 25mA maximum per controlled leg
- DC Contactor
 - 4.5V= to 32V=(dc): maximum current @ 4.5V=(dc) is 6mA per leg. Add 2mA per LED used to the total current
- Loop powered linear current
 - 4mA= 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)

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 @ 25°C (77°F), 200mA @ 50°C (122°F), 100mA @ 80°C (176°F) and a holding current of 200 µA with a latching current of 5mA typical

Agency Approvals

- CE with proper filter:
 - 89/336/EEC Electromagnetic Compatibility Directive
 - EN 61326: Industrial Immunity Class A emissions
- 73/23/EEC 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 mm² (24 to 14 AWG) wire

Line and Load Terminals

- Compression: will accept 0.8 to 8.4 mm² (18 to 8 AWG) wire

Operating Environment

- See the output rating curve
- 0 to 90% RH (relative humidity), non-condensing
- Storage temperature: -40 to +85°C (-40 to 185°F)
- 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: 95 mm (3.7 in.) high x 80 mm (3.1 in.) wide x 124 mm (4.9 in.) deep
- Weight: 0.68kg (1.5 lb)

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

Phase	D 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)					
Cooling and Current Rating Per Pole					
0 = Natural convection standard DIN-rail or panel mount heat sink					
Line and Load Voltage					
02 = 24 to 48V~(ac)					
24 = 120 to 240V~(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					
Alarm					
0 = No alarm					
S = Shorted SCR alarm					
User Manual					
0 = English					
1 = German					
2 = Spanish					
3 = French					

Custom Part Numbers

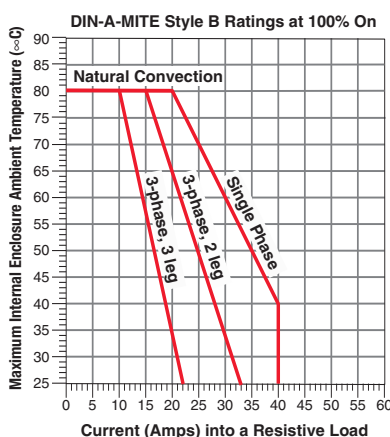
- 00 = Standard part
- XX = Any letter or number, custom options, labeling, etc.

Recommended Semiconductor Fuse and Fuse Holders

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