DIN-A-MITE® B

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≂(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.

Features and Benefits

New Feature

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:

WATLOW®
Better Thermal Solutions...*Faster*

ISO 9001
Registered Company
Winona, Minnesota USA

CE

WIN-DMB-0908

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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 16.6ms, 380A peak
- Max. I^2t for fusing is 4,000A^2s
- Latching current: 200mA min.
- Holding current: 100mA min.
- Off-state leakage 1mA at 77°F (25°C) max.
- 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
- 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:
  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
- c UL us LISTED UL® 508 listed and C-UL® File E73741

Input Terminals
- Compression: will accept 0.2. to 2 mm^2 (24 to 14 AWG) wire

Line and Load Terminals
- Compression: will accept 0.8 to 8.4 mm^2 (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

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Phase
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

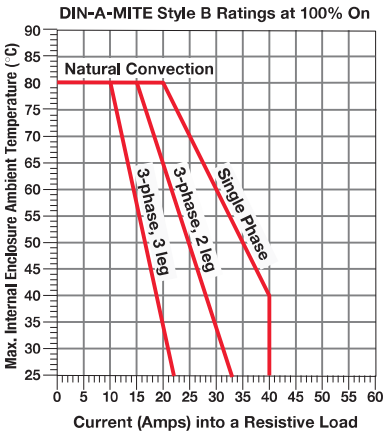
Custom Part Numbers
00 = Standard part
XX = Any letter or number, custom options, labeling, etc.

Recommended Semiconductor Fuse and Fuse Holders

	Fuse 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