DIN-A-MITE® A

The DIN-A-MITE® A power controller provides a low-cost, highly compact and versatile solid state option for controlling electric heat. This controller is designed and manufactured with the quality features expected from Watlow. DIN-rail and panel mounting is standard on every controller. There is no need to worry about mercury, the DIN-A-MITE controller is mercury free.

Features include single-phase zero cross switching up to 25 amperes at 600VAC (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 and VAC/VDC input contactor versions are available. All options are model number dependent and factory configurable. This power controller also includes 200KA short circuit current rating (SCCR) tested up to 480VAC to minimize damage in the event of a short circuit when used with required fusing.

Features and Benefits

200KA SCCR with proper fusing
- Minimizes damage in the event of a short circuit

DIN-rail and panel mounting
- Provides versatility and quick, low-cost installation

Compact size
- Reduces panel space and cost

Touch-safe terminals
- Increases safety for installer and user

Mercury free
- Assures environmental safety

Faster switching with solid state
- Saves energy and extends heater life

UL® 508 listed, C-UL®, RoHS and CE with filter
- Meets applications requiring agency approval
- Reduces end product documentation cost

Back-to-back SCR design
- Ensures a rugged design

Thermal Devices, Inc. Mount Airy, Maryland USA www.thermaldevices.com

Power Switching Devices

DIN-A-MITE A

Ordering Information

Part Number

①	②	③ Phase	④ Cooling & Current Rating	⑤ ⑥ Line & Load Voltage	⑦ ⑧ Control		⑨	⑩ User Manual	⑪ ⑫ Custom Options
D	A	1	0			-	0		

③	Phase
1 =	1-phase, 1 controlled leg

④	Cooling and Current Rating (See rating curve)
0 =	Natural convection current rating 18A @ 50°C

⑤ ⑥	Line and Load Voltage
02 =	24 to 48VAC
24 =	120 to 240VAC
60 =	277 to 600VAC

⑦ ⑧	Control
C0 =	4.5 to 32VDC input, contactor output
F0 =	4 to 20mA DC input, variable time-base output
K1 =	22 to 26VAC input, contactor output
K2 =	100 to 120VAC input, contactor output
K3 =	200 to 240VAC input, contactor output

⑩	User Manual
0 =	English
1 =	German
2 =	Spanish
3 =	French

⑪ ⑫	Custom Options
00 =	Standard part
XX =	Any letter or number, custom options

Recommended Fuses and Fuse Holders

Semiconductor Fuses and Holders

Part Number	Description
17-8025	25A fuse
17-5110	10-25A holder

DFJ Combination Fuses and Holders

Part Number	Description
0808-0325-0020	20A fuse
0808-0325-0030	30A fuse
0808-0326-1530	15-30A holder

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DIN-A-MITE B

The DIN-A-MITE B power controller provides a low-cost, highly compact and versatile solid state option for controlling electric heat. This controller is designed and manufactured with the quality features expected from Watlow. DIN-rail and panel mounting are standard on every control. There is no need to worry about mercury, the DIN-A-MITE controller is mercury free.

Features include single-phase and three-phase zero cross switching up to 40 and 22 amperes, respectively, at 600VAC (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 and VAC/VDC input contactor versions are available. A shorted output alarm option is also available. All options are model number dependent and factory configurable. This power controller includes 200KA short circuit current rating (SCCR) tested up to 480VAC to minimize damage in the event of a short circuit when used with required fusing.

Features and Benefits

200KA SCCR with proper fusing
- Minimizes damage in the event of a short circuit

DIN-rail and panel mounting
- Provides versatility and quick, low-cost installation

Compact size
- Reduces panel space and cost

Touch-safe terminals
- Increases safety for installer and user

Single- and three-phase power
- Permits use in a variety of applications

Mercury free
- Assures environmental safety

Faster switching with solid state
- Saves energy and extends heater life

UL® 508 listed, C-UL®, RoHS and CE with filter
- Meets applications requiring agency approval
- Reduces end product documentation cost

Back-to-back SCR design
- Ensures a rugged design

Shorted output alarm (optional)
- Simplifies troubleshooting and reduces downtime

Power Switching Devices

DIN-A-MITE B

Ordering Information

Part Number

①	②	③	④		⑤ ⑥	⑦ ⑧		⑨	⑩	⑪ ⑫
		Phase	Cooling & Current Rating	-	Line & Load Voltage	Control	-	Alarm	User Manual	Custom Options
D	B			-			-			

③	Phase
1 =	1-phase, 1 controlled leg
2 =	3-phase, 2 controlled legs
3 =	3-phase, 3 controlled legs
8 =	2 independent zones (control options C or K)
9 =	3 independent zones (control options C or K)

④	Cooling and Current Rating (See rating curve)
0 =	Natural convection

⑤ ⑥	Line and Load Voltage
02 =	24 to 48VAC
24 =	120 to 240VAC
60 =	277 to 600VAC

⑦ ⑧	Control
C0 =	4.5 to 32VDC input, contactor output
F0 =	4 to 20mA DC input, variable time-base output
K1 =	22 to 26VAC input, contactor output
K2 =	100 to 120VAC input, contactor output
K3 =	200 to 240VAC input, contactor output

⑨	Alarm
0 =	No alarm
S =	Shorted SCR alarm

⑩	User Manual
0 =	English
1 =	German
2 =	Spanish
3 =	French

⑪ ⑫	Custom Options
00 =	Standard part
XX =	Any letter or number, custom options

Recommended DIN-rail Mount Fuses and Fuse Holders

Semiconductor Fuses and Holders

Part Number	Description
17-8020	20A fuse
17-8025	25A fuse
17-8030	32A fuse
17-8040	40A fuse
17-8050	50A fuse
17-5110	10-25A holder
17-5114	32-50A holder

DFJ Combination Fuses and Holders

Part Number	Description
0808-0325-0020	20A fuse
0808-0325-0030	30A fuse
0808-0325-0040	40A fuse
0808-0325-0050	50A fuse
0808-0326-1530	15-30A holder
0808-0326-3560	35-60A holder

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DIN-A-MITE C

The DIN-A-MITE C silicon controlled rectifier (SCR) power controller provides a low cost, compact and versatile solid state option for controlling electric heat. This controller is designed and manufactured with the quality features expected from Watlow. DIN-rail/panel mount and through-wall mount versions are available.

Features include single-phase, three-phase/two leg, and three-phase/three leg, 24-600VAC operation. Current switching capabilities range from 30 to 80A depending on the model ordered.

Variable time-base, linear voltage and current process control or VAC/VDC input contactor versions are available. Single-phase, phase angle firing and current limiting are also available. All options are model number dependent and factory configurable. This power controller includes 200KA short circuit current rating (SCCR) tested up to 480VAC to minimize damage in the event of a short circuit when used with required fusing.

Features and Benefits

200KA SCCR with proper fusing
- Minimizes damage in the event of a short circuit

DIN-rail, panel and thru-wall mounting
- Provides versatility and quick, low-cost installation

Compact size
- Reduces panel space and cost

Touch-safe terminals
- Increases safety for installer and user

One- and three-phase power
- Can be used in a variety of applications

Open heater/shorted output alarm
- Notifies the user in case of an open heater or shorted output

Mercury free
- Assures environmental safety

Faster switching with solid state
- Saves energy and extends heater life

UL® 508 listed, C-UL®, RoHS and CE with filter
- Meets applications requiring agency approval
- Reduces end product documentation cost

System solution component
- Provides single source thermal loop

Back-to-back SCR design
- Ensures a rugged design

Power Switching Devices

DIN-A-MITE C

Ordering Information

Part Number

①	②	③	④		⑤ ⑥	⑦ ⑧		⑨	⑩	⑪ ⑫
		Phase	Cooling & Current Rating/Leg	-	Line & Load Voltage	Control	-	Alarm	User Manual	Custom Options
D	C			-			-			

③	Phase
1 =	1-phase, 1 controlled leg
2 =	3-phase, 2 controlled legs
3 =	3-phase, 3 controlled legs (use with four wire wye)
8 =	2 independent zones (control options C, K)
9 =	3 independent zones (control options C, K)

④	Cooling and Current Rating Per Leg (See chart below)
0 =	Natural convection standard DIN-rail or panel heat sink
1 =	Fan cooled 120VAC standard DIN-rail or panel heat sink
2 =	Fan cooled 240VAC standard DIN-rail or panel heat sink
3 =	Fan cooled 24VDC standard DIN-rail or panel heat sink
T =	Natural convection through-wall or cabinet heat sink (NEMA 4X)

⑤ ⑥	Line and Load Voltage
02 =	24 to 48VAC (control options C, F, K)
12 =	100 to 120VAC (control options L, P, S)
20 =	200 to 208VAC (control options L, P, S)
24 =	100 to 240VAC (control options C, F, K); 230 to 240VAC (control options L, P, S)
27 =	277VAC (control options L, P, S)
40 =	400VAC (control options L, P, S)
48 =	480VAC (control options L, P, S)
60 =	277 to 600VAC (control options C, F, K); 600VAC (control options L, P, S)

⑦ ⑧	Control
C0 =	4.5 to 32VDC input, contactor output
F0 =	4 to 20mA DC input, variable time-base output
K1 =	22 to 26VAC input, contactor output
K2 =	100 to 120VAC input, contactor output
K3 =	200 to 240VAC input, contactor output
L (0 to 5) =	Phase angle output with current limiting* (single-phase only)
P (0 to 5) =	Phase angle output* (single-phase only)
S (0 to 5) =	Single-cycle variable time-base output
	0 = 4 to 20mA input
	1 = 12 to 20mA input (option S only)
	2 = 0 to 20mA input
	3 = 0 to 5VDC input
	4 = 1 to 5VDC input
	5 = 0 to 10VDC input

*Not CE approved for conducted or radiated emissions.

⑨	Alarm
0 =	No alarm
S =	Shorted SCR alarm (not available with control options L or P)
H =	Open-heater and shorted-SCR alarm (control option S only)

⑩	User Manual
0 =	English
1 =	German
2 =	Spanish
3 =	French

⑪ ⑫	Custom Options
00 =	Standard part
1X =	1-second soft start (control options P, L)
XX =	Any letter or number, custom options, labeling, etc.

DIN-A-MITE C Current Rating Table

Phase	Cooling	Current at 122°F (50°C)
1	0	55A
1	T	60A
1	1, 2, 3	75A
2, 8	0	40A
2, 8	T	46A
2, 8	1, 2, 3	65A
3, 9	0	30A
3, 9	T	35A
3, 9	1, 2, 3	55A

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Power Switching Devices

DIN-A-MITE D

The DIN-A-MITE D silicon controlled rectifier (SCR) power controller provides an inexpensive, versatile product for controlling heat in an efficient package. This controller is designed and manufactured with the quality features expected from Watlow. The mounting footprint matches that of the industry standard mercury displacement relay (MDR), but 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 600VAC at 86°F (30°C), depending on the model selected. Combining the input of two or three controllers allows control of three-phase loads. The controller is completely touch-safe and includes on-board, front-accessible, semiconductor fuses. Options include a current transformer for load current monitoring and a shorted output alarm. The controller is UL® 508, C-UL® and CE approved making it ideal for panels and cabinets that require agency approvals.

Variable time-base, 4-20mA process control and VAC/VDC input contactor options are available. All options are model number dependent and factory configurable. This power controller also includes 200KA short circuit current rating (SCCR) tested up to 480VAC to minimize damage in the event of a short circuit when used with required fusing.

Features and Benefits

200KA SCCR with proper fusing
- Minimizes damage in the event of a short circuit

Standard panel mount
- Provides same mount as industry standard 100A MDR

Compact size
- Reduces panel space and cost

Touch-safe terminals
- Increases safety for installer and user

Mercury free
- Assures environmental safety

Faster switching with solid state
- Saves energy and extends heater life

UL® 508 listed, C-UL®, RoHS and CE with filter
- Meets applications requiring agency approval
- Reduces end product documentation

Back-to-back SCR design
- Ensures a rugged design

On-board semiconductor fusing
- Provides quick access with no extra mounting necessary

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Power Switching Devices

DIN-A-MITE D

Ordering Information

Part Number

①	②	③ Phase	④ Cooling & Current Rating		⑤ ⑥ Line & Load Voltage	⑦ ⑧ Control		⑨ Current Sensing or Alarm	⑩ User Manual	⑪ ⑫ Custom Options
D	D	1	0	-			-			

③	Phase
1 =	1-phase, 1 controlled leg

④	Cooling and Current Rating (See rating curve)
0 =	Natural convection

⑤ ⑥	Line and Load Voltage
02=	24 to 48VAC
24 =	120 to 240VAC
48 =	277 to 480VAC
60 =	277 to 600VAC

⑦ ⑧	Control
C0 =	4.5 to 32VDC input, contactor output
F0 =	4 to 20mA DC input, variable time-base output
K1 =	22 to 26VAC input, contactor output
K2 =	100 to 120VAC input, contactor output
K3 =	200 to 240VAC input, contactor output

⑨	Current Sensing or Alarm
0 =	No alarm
1 =	Load current transformer
S =	Shorted SCR alarm

⑩	User Manual
0 =	English
1 =	German
2 =	Spanish
3 =	French

⑪ ⑫	Custom Options
00 =	Standard part

Replacement Semiconductor Fuse

Watlow Part Number	Cooper Bussmann® Part Number
0808-0096-0000	170N3437

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