

- > **Burst Fire Controller / SSR in One Package**
- > **Low Voltage, Current, or Potentiometer Control**
- > **Output Status Indicator (Load Open, No Voltage)**
- > **0-100% Control Range**
- > **2 Time Base Periods Available**
- > **Separate Output Enable / Disable Control**
- > **SCR Based Output Load Switching**
- > **Internal Snubber Network Included**



### GENERAL SPECIFICATIONS

Dielectric Strength 50/60Hz, Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	10 pF
Ambient Operating Temperature Range	-20 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

### MECHANICAL SPECIFICATIONS

Weight: (typical)	3.0 oz. (86.5g)
Encapsulation	Thermally Conductive Epoxy
Terminals - Power Control	Screws and Saddle Clamps Furnished, Unmounted Barrier Strip Screw Terminals

### OUTPUT SPECIFICATIONS

	Voltage Suffix		
	12	24	48
Operating Voltage (47-63 Hz) [Vrms]	48-140	180-280	300-530
Transient Overvoltage [Vpk]	400	600	1200
Max. Off-State Leakage Current @ Rated Voltage [mA]	5	7	12
Power Factor (Min.) with Max. Load	0.5	0.5	0.5
Maximum Voltage Drop (100% On) [Vpk]	1.6	1.6	1.6
Minimum Off-State dv/dt [V/μsec]	200	200	200
	Current Suffix		
	25 Amp	50 Amp	90 Amp
Max. Load Current [Arms]	25	50	90
Min. Load Current (mArms)	150	150	150
Max. Surge Current (16.6ms) [A <sub>pk</sub> ]	250	625	1200
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	1.02	0.63	0.28
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> s]	260	1620	6000

### INPUT SPECIFICATIONS\*

	Minimum	Typical	Maximum
DC Voltage Supply Range [Vdc] [P1]	8	12 or 24	32
Input Current [mA]	28		30
Control Must Operate Voltage "On" [Vdc][P3]	5		32
Control Must Release Voltage "Off" [Vdc][P3]	0		4
Control Input Current [mA] [P3]	0		1.25
Control Nominal Input Impedance		30K	
PLVI Range Option A [Vdc][P4]**	0.8		5
PLVI Range Option B [Vdc][P4]**	1		7
PLVI Range Option C [Vdc][P4]**	2		10
PLVI Range Option D [mA][P4]	4		20
Nominal Input Impedance Option A,B,C [Ohms][P4]		20K	
Nominal Input Impedance Option D [Ohms][P4]		220	

\*Voltages are reference to GND (Ground = 0Vdc) P2.

\*\*PLVI voltage can go up to max. supply voltage without damage.

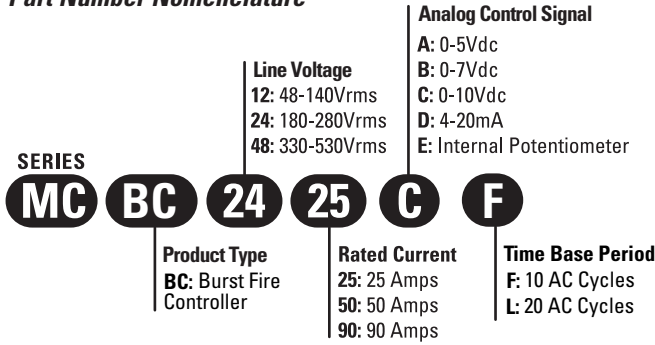
The Crydom MCBC series of Burst fire Controllers, incorporate a complete burst Fire logic system and Solid State Relay in one small industry standard package. The MCBC uses micropocessor controlled logic, accepts a wide range input logic power supply, provides an output load status indicator, and five modes of analog input control along with an Enable / Disable control.

With 2 time base periods available, (10 and 20 AC cycles), the MCBC provides a smooth proportional control that minimizes electrical noise by utilizing zero-cross detection and switching, firing only complete AC cycles.

The MCBC does not require any calibration adjustment, is optically isolated up to 4000 Vrms, and is available in load rating up to 90 A and 530 Vac. In addition, specialized AC Phase Detection Circuitry allows the MCBC to be connected to only one side of the load, minimizing installation wiring.

The MCBC series is particularly suited to electrical heating applications where the electrical noise generated by typical phase angle controllers can not be tolerated.

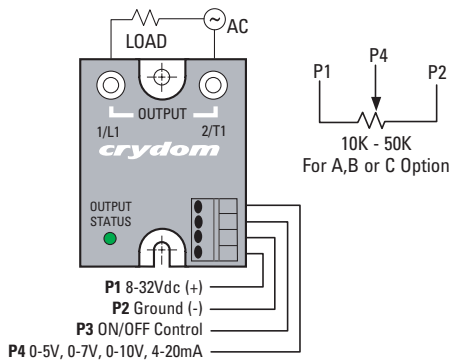
### Part Number Nomenclature



### Output Status Functions

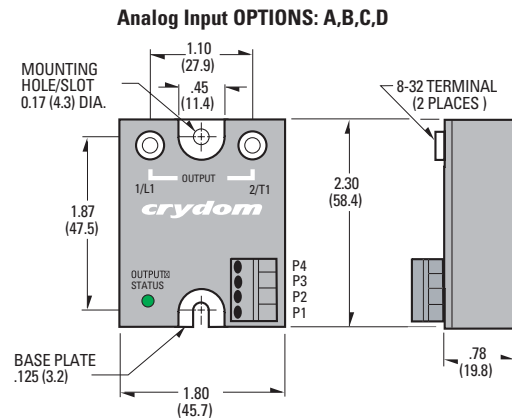
CONDITIONS	LED
Initial Logic Supply On	Flash Once
Load Voltage Missing / Load Open (w/control disabled)	Flash Once Intermittently
Load Voltage Missing / Load Open (w/control enabled)	Flash Twice Intermittently
Analog Input < Threshold	Off
Analog Input > Threshold < max	Varying Brightness
Analog Input > max	On, Bright

### Electrical Connections



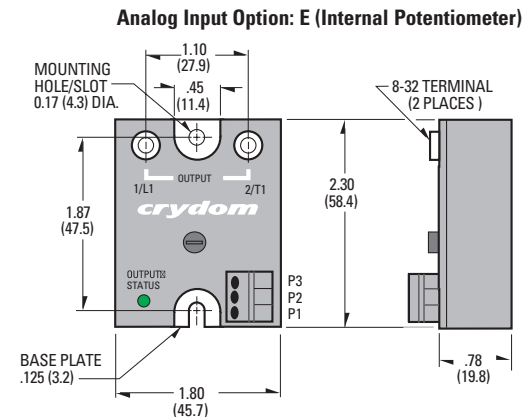
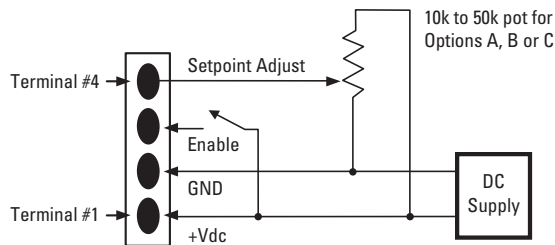
### Mechanical

Dimensions are in inches (millimeters)



### Wiring Example

(for Options A, B or C using an external potentiometer)

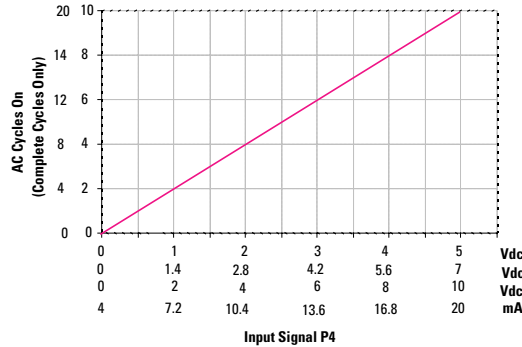


### Screw Torque Requirements:

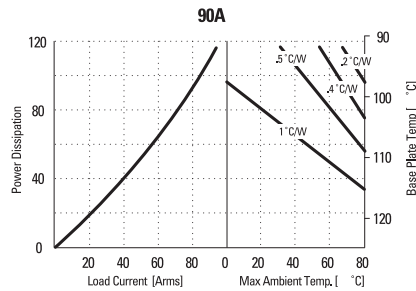
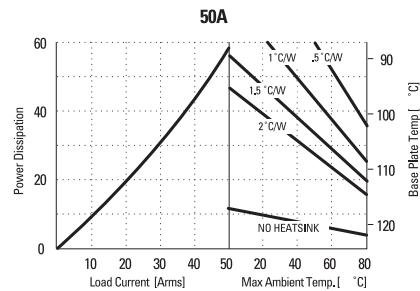
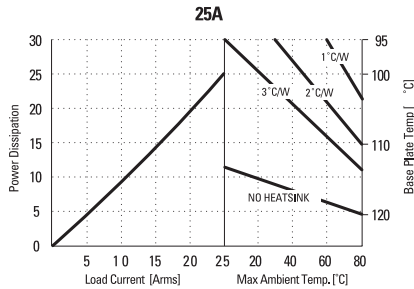
8-32 Screws - 20in. lbs. (Screws dry without grease.)  
 Input Connections via Screw Type Barrier Strip

### Output vs. Analog Input Signal Curves

Duty Cycle vs Input Signal P4



### Current Derating Curves



ISO9001 Certified

### Approvals

UL - Pending

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