

crydom

Control Relays
Datasheet

MCPC Series

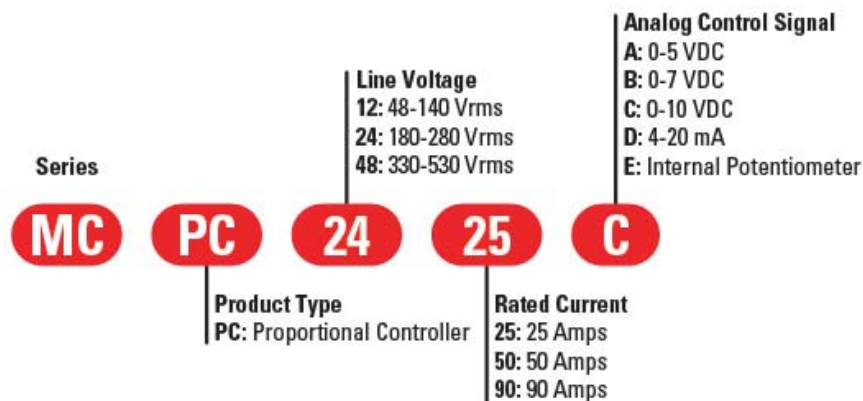


- Microprocessor based phase angle controller / SSR
- Ratings from 25A to 90A @ 48-530 VAC
- Low-voltage, current, or potentiometer control
- Output status indicator
- Separate output enable / disable control
- 0-100% Control Range
- For use with resistive loads only

PRODUCT SELECTION

Description	25 A	50 A	90 A
40-140 VAC	MCPC1225	MCPC1250	MCPC1290
180-280 VAC	MCPC2425	MCPC2450	MCPC2490
330-530 VAC	MCPC4825	MCPC4850	MCPC4890

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (voltage)

Description	120 VAC	240 VAC	480 VAC
Operating Voltage (47-63Hz) [Vrms]	48-140	180-280	300-530
Transient Overvoltage [Vpk]	400	600	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	5	7	12
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	200	200	200
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

OUTPUT SPECIFICATIONS (current)

Description	25A	50A	90A
Maximum Load Current (3) [Arms]	25	50	90
Minimum Load Current [mArms]	150	150	150
Maximum Surge Current (16.6ms) [Apk]	250	625	1200
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.02	0.63	0.28
Maximum I²t for Fusing (8.3 msec) [A²sec]	260	1620	6000

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INPUT SPECIFICATIONS (1)

Description	DC Control
Control Voltage Range (VDC)	8-32
Input Current Range [mA] [P1]	28-30
Nominal Input Impedance [Ohms] [P3]	30K
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
PLVI Range Option A [VDC][P4] (2)	0.8-5
PLVI Range Option B [VDC][P4] (2)	1-7
PLVI Range Option C [VDC][P4] (2)	2-10
PLVI Range Option D [VDC][P4] (2)	4-20
Nominal Input Impedance Option A,B,C[ohms][P4]	20K
Nominal Input Impedance Option D [ohms][P4]	220

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

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-20 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	3.0 oz (86.5g)
Encapsulation	Thermally conductive Epoxy
Terminals-Power	Screws and Saddle Clamps Furnished, Unmounted
Terminals-Control	Barrier Strip Screw Terminals
Recommended Terminal Screw Torque Range:	8-32 Screws -20 in. lbs.(Screws dry without grase)

GENERAL NOTES

- 1) Voltages are reference to GND (Ground = 0 VDC) P2
- 2) PLVI voltage can go up to max. supply voltage without damage

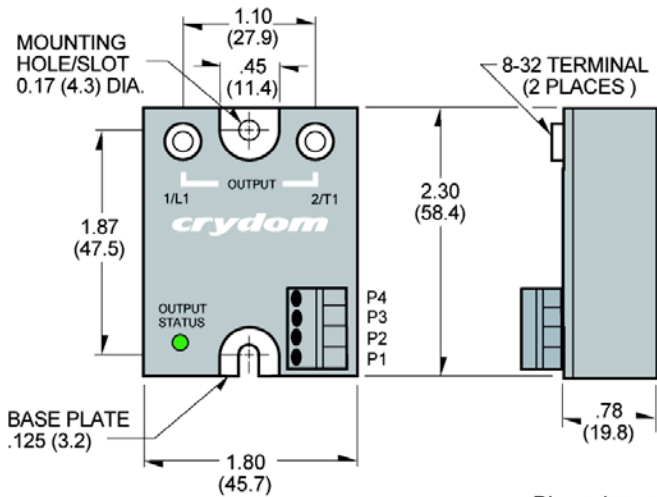


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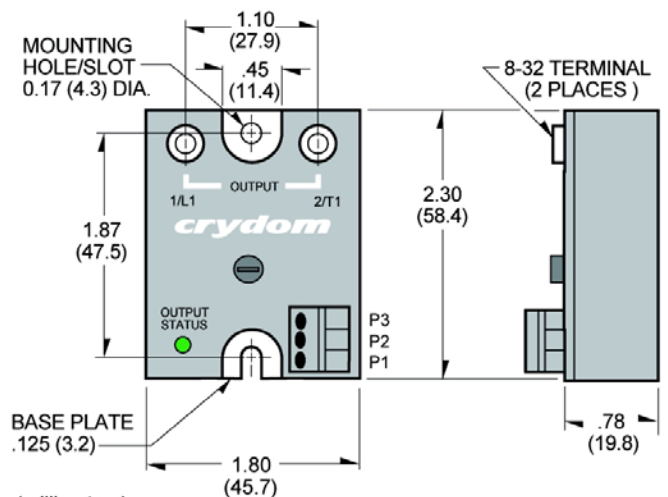
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MECHANICAL SPECIFICATIONS

Analog Input OPTIONS: A,B,C,D

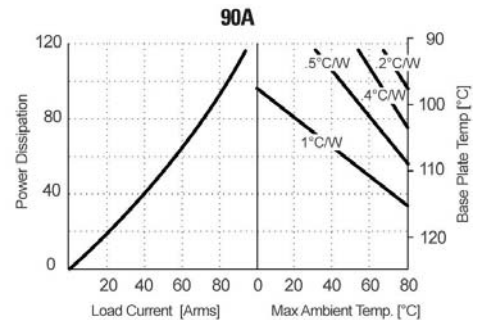
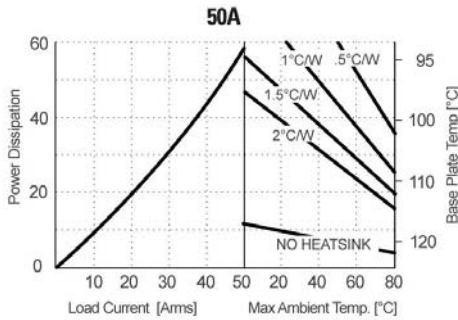
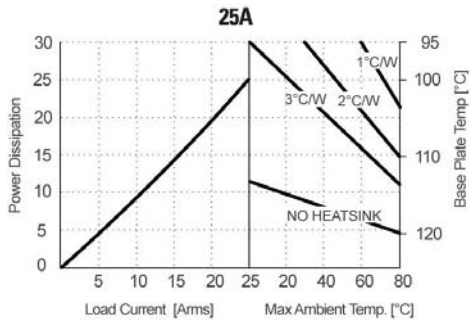


Analog Input Option: E (Internal Potentiometer)



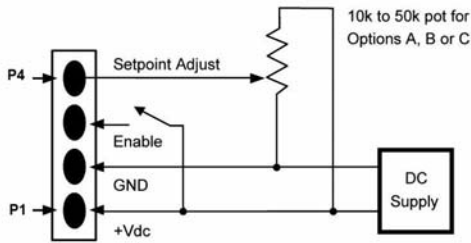
Dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION

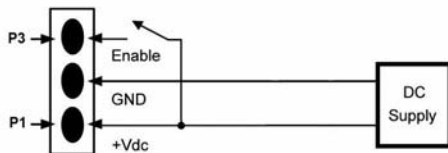


WIRING DIAGRAM

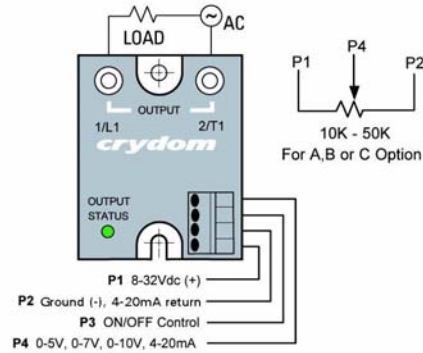
(for Options A, B or C using an external potentiometer)



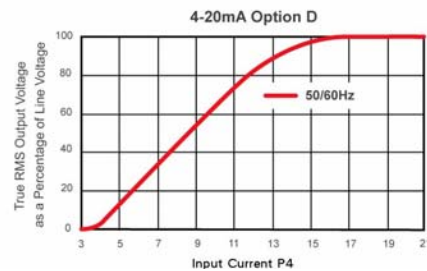
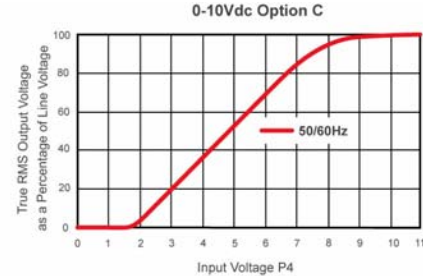
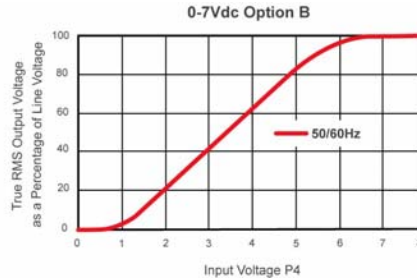
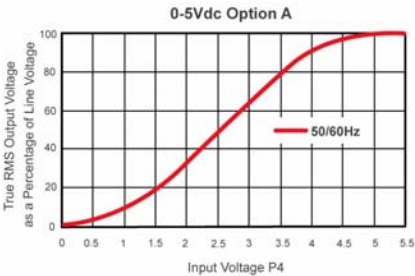
Wiring for Option E



Electrical Connections



OUTPUT VS ANALOG INPUT SIGNAL CURVES



AGENCY APPROVALS



Rev. 112311