

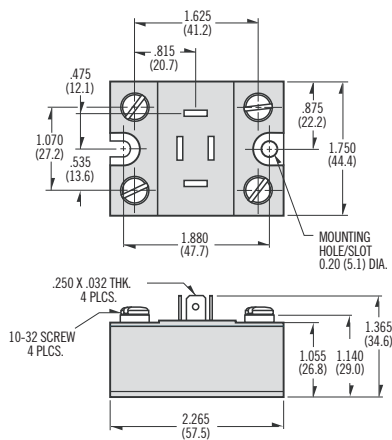


The M50 Series modules utilize highly efficient thermal management to provide high surge capability, long lifetime and reliable performance. Available in eight standard circuits, all models come in an industry standard package, provide 2500Vrms from all terminals to the baseplate and are UL recognized E72445.

■ **Over 40KW Output Capability**

Mechanical Dimensions

All dimensions are in inches (millimeters)



Electrical Specifications

Electrical Specifications		M5050	M50100
I_D	Maximum DC Output Current @ $T_c = 85^{\circ}\text{C}$ (A)	50	100
V_F	Maximum Voltage Drop @ Amps Peak	1.7V @ 50A	1.4V @ 100A
T_J	Operating Junction Temperature Range	-40°C to +125°C	
di/dt	Critical Rate of Rise of On-State Current @ $T_J=125^{\circ}\text{C}$ (A/ μs)	100	
dv/dt	Critical Rate of Rise of Off-State Voltage	500	
V_{RMS}	Repetitive Peak Reverse Voltage (AC Line Input Voltage)	400 (120Vac)	
		600 (240Vac)	
		800 (280Vac)	
		1000 (380Vac)	
		1200 (480Vac)	
I_{TSM}	Maximum Non-Repetitive Surge Current (A) [$1/2$ Cycle, 60Hz]	600	1500
I^2T	Maximum I^2T for Fusing ($A^2\text{sec}$) [$t=8.3\text{ms}$]	1500	9350
I_{GT}	Maximum Required Gate Current to Trigger @ 25°C (mA)	150	
V_{GT}	Maximum Required Gate Voltage to Trigger @ 25°C (V)	3.0	
$P_{G(AV)}$	Average Gate Power	0.5W	
V_{GM}	Maximum Peak Gate Voltage (Reverse)	5.0V	
$R_{\theta JC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip	0.7°C/W	0.36°C/W
V_{ISOL}	Isolation Voltage	2500 V_{RMS}	

Mechanical Specifications

Weight (Typical)	4.5 oz. (158g)
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ISO9001 CERTIFIED

Competitive part number cross-reference available at: www.cynergy3.com

Approvals

UL - E72445

USA

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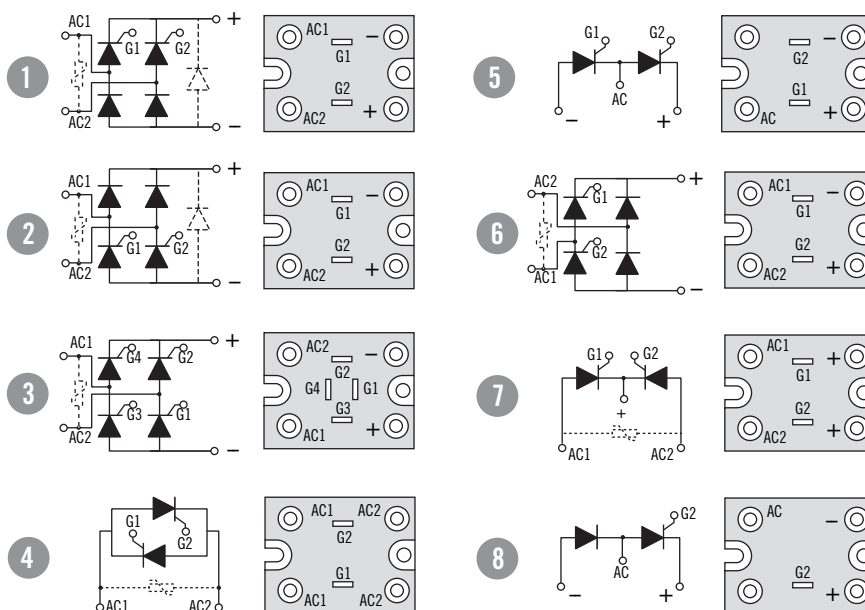
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Part Number Identification

Series	Current	Circuit Type	AC Line Voltage	Options*
M50	50 - 50 Amps 100 - 100 Amps	1 - 8 (see schematic diagrams)	1 - 120 Vac 2 - 240 Vac 3 - 280 Vac 4 - 380 Vac 5 - 480 Vac	F - Free Wheeling Diode V - External Suppressor

Example: M505012FV



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