

- **Over 40KW Output Capability**

The M50 Series modules utilize highly efficient thermal management of 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 (file no. E72445).

Manufactured in Crydom's ISO 9002 Certified facility for optimum product performance and reliability.

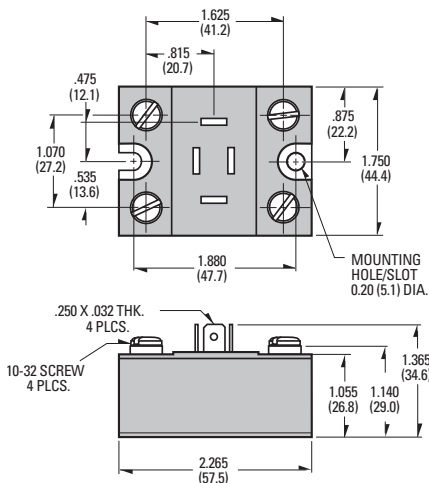
### PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options
<b>M50</b> -Case style	<b>50</b> - 50 Amps <b>100</b> - 100 Amps	<b>1 - 8</b> (see schematic diagrams)	<b>1</b> - 120 Vac <b>2</b> - 240 Vac <b>3</b> - 280 Vac <b>4</b> - 380 Vac <b>5</b> - 480 Vac	<b>F</b> - Free Wheeling Diode (Circuits 1 & 2 Only) <b>V</b> - External Suppressor (Circuits 1, 2, 3, 4, 6 & 7 Only)

Example: M505012FV

### MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



### ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	RATINGS	
		M5050	M50100
$I_D$	Maximum DC Output Current ( $T_c = 85^\circ\text{C}$ )	50A	100A
$V_F$	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 @ $T_J=125^\circ\text{C}$	100A/ $\mu\text{s}$	100A/ $\mu\text{s}$
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ $\mu\text{s}$ ]	500V/ $\mu\text{s}$	500V/ $\mu\text{s}$
$V_{RMS}$	AC Line Input Voltage (Repetitive Peak Reverse Voltage)	120 (400 V RRM) 240 (600 V RRM) 280 (800 V RRM) 380 (1000 V RRM) 480 (1200 V RRM)	
$I_{TSM}$	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz)	600A	1500A
$I^2T$	Maximum $I^2T$ for Fusing ( $t=8.3\text{ms}$ ) [ $A^2\text{sec}$ ]	1500	9350
$I_{GT}$	Maximum Required Gate Current to Trigger @ 25°C	150mA	150mA
$V_{GT}$	Maximum Required Gate Voltage to Trigger @ 25°C	3.0V	3.0V
$P_{G(AV)}$	Average Gate Power	0.5W	0.5W
$V_{GM}$	Maximum Peak Gate Voltage (Reverse)	5.0V	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 <sub>RMS</sub>	2500 V <sub>RMS</sub>

### MECHANICAL SPECIFICATIONS

Weight: (typical)

4.9 oz. ( 140g)

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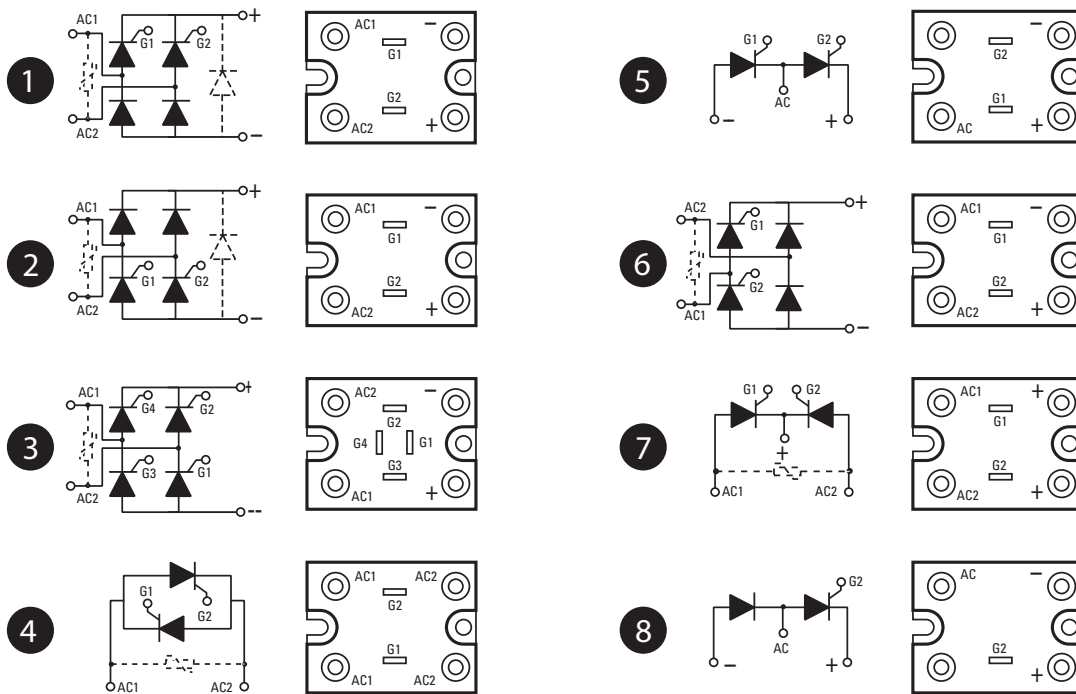
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## SERIES M50 CIRCUITS



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