

Series M50 SCR/Diode

50-100 Amp • SCR/DIODE Modules

CRYDOM

Control over power

• 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.

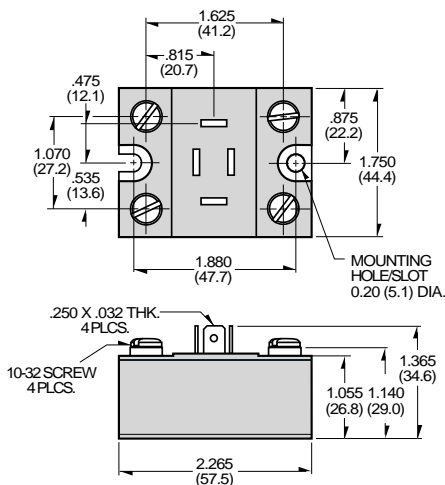
PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options
M50 -Case style	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 (Circuits 1 & 2 Only) V - External Suppressor (Circuits 1, 2, 3, 6 & 7 Only)

Example: M5050 12FV

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



ELECTRICAL SPECIFICATIONS

SYMBOL SPECIFICATION

RATINGS

M5050 M50100

SYMBOL	SPECIFICATION	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/μs	100A/μs
dv/dt	Critical Rate of Rise of Off-State Voltage [V/μs]	500V/μs	500V/μs
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 ($t=8.3\text{ms}$) [$\text{A}^2\text{-sec}$]	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_{RMS}	2500 V_{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

3.75 oz. (106g)

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For recommended applications and more information contact:

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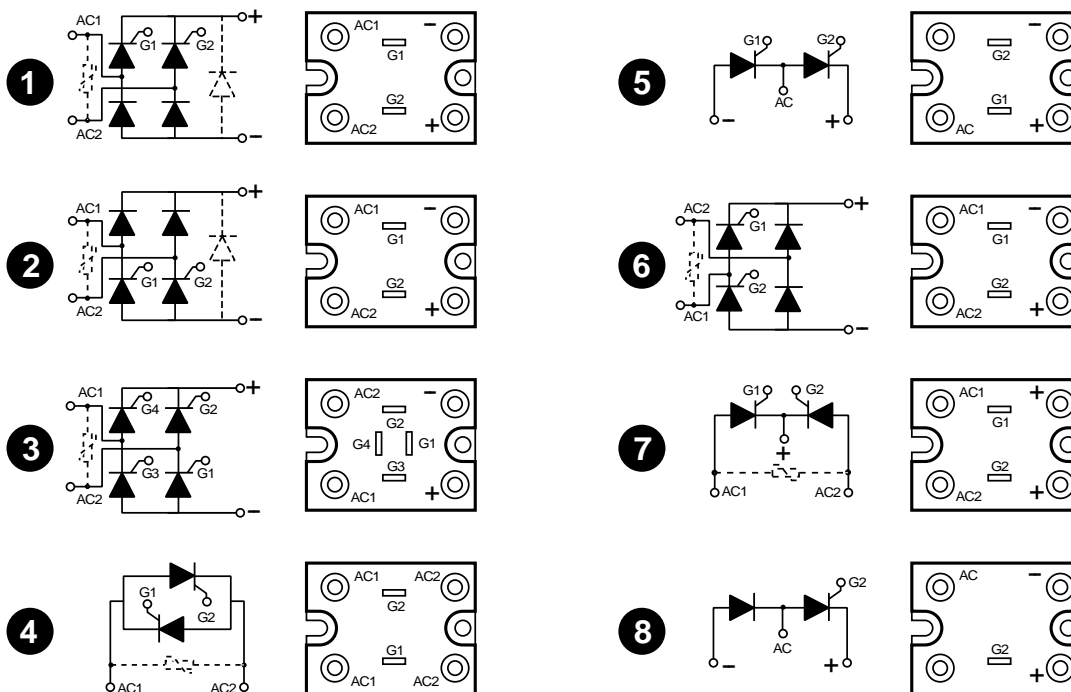
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SERIES M50 CIRCUITS



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