

- 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 Cynergy3's ISO 9002 Certified facility for optimum product performance and reliability.

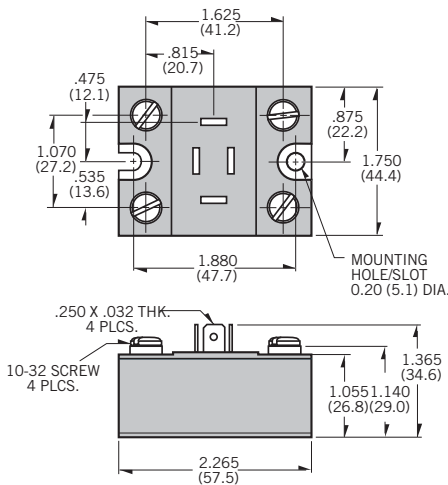
PART NUMBER IDENTIFICATION

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, 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/ 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 ($t=8.3\text{ms}$) [$A^2\text{sec}$]	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_{qJC}	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)

©2005 Cynergy3 Components. Specifications subject to change without notice.

For recommended applications and more information contact:

USA: Sales Support (866) 258-5057 Tech Support (866) 258-5057 FAX (619) 690-7432

Cynergy3 Components, 2320 Paseo de las Americas, Ste. 104, San Diego, CA 92154

Email: sales@cynergy3.com WEB SITE: <http://www.cynergy3.com>

UK: +44 (0)1202 365070 FAX +44 (0)1202 365090 Cynergy3 Components Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, Email: sales@cynergy3.com.

ASIA, Thailand: +66 (0) 2 665 2517 FAX +66 (0) 2 665 2588 Cynergy3 Asia
 18/8 Fico Place 12th Floor Soi Sukhumvit 21 (Asoke) Klongtoey Nua, Wattana Bangkok,
 Thailand 10110

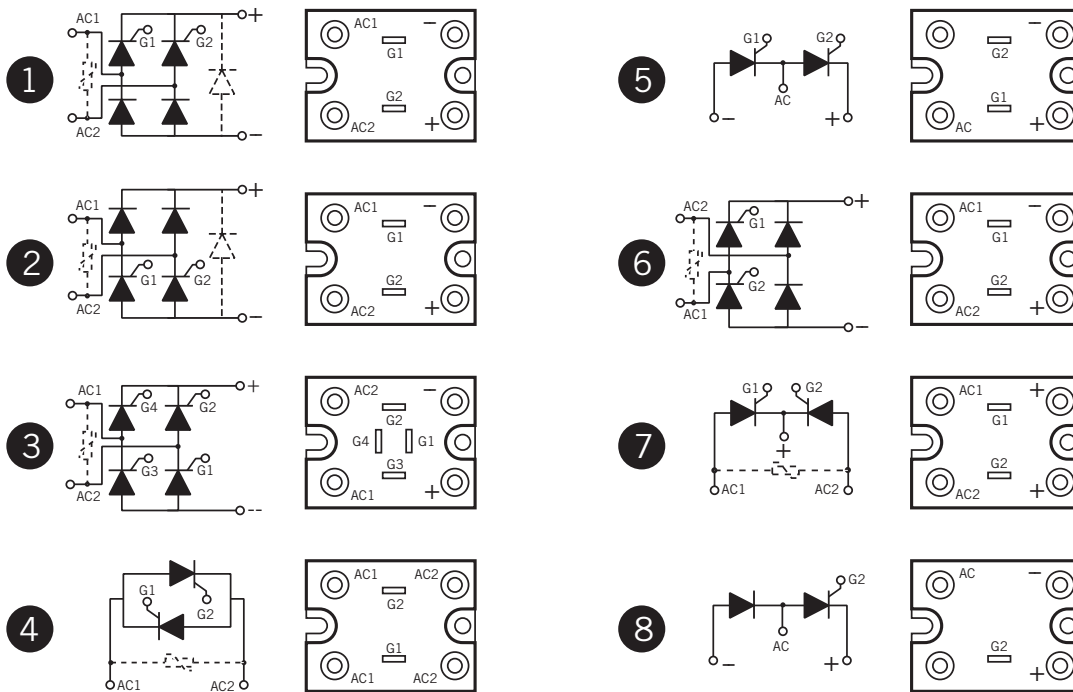
- Over 40KW Output Capability

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, 4, 6 & 7 Only)

Example: M505012FV

SERIES M50 CIRCUITS



© 2006 Cynergy3 Components. Specifications subject to change without notice.

For recommended applications and more information contact:
 USA: Sales Support (866) 258-5057 Tech Support (866) 258-5057 FAX (619) 690-7432
 Cynergy3 Components, 2320 Paseo de las Americas, Ste. 104, San Diego, CA 92154
 Email: sales@cynergy3.com WEB SITE: <http://www.cynergy3.com>
 UK: +44 (0)1202 365070 FAX +44 (0)1202 365090 Cynergy3 Components Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, Email: sales@cynergy3.com.

