



# M50 SERIES

POWER MODULES



### Features

- Over 40KW output Capability
- 8 Different Circuits to Choose from
- 50 and 100 A outputs
- UL Recognized E72445

## ORDERING OPTIONS

**M50** - **50** - **1** - **2** - **F** - **V**

Series	<b>M50</b>
Load Current	<b>50</b> : 50 Amps <b>100</b> : 100 Amps
Circuit Type	<b>1 2 3 4 5 6 7 8</b> (See schematic diagrams)
AC Line Voltage	<b>1</b> : 120 VAC <b>2</b> : 240 VAC <b>3</b> : 280 VAC <b>2</b> : 380 VAC <b>3</b> : 480 VAC
Free Wheeling Diode	<b>Blank</b> : Not Included <b>F</b> : Included (Circuits 1 & 2 only)
External Suppressor	<b>Blank</b> : Not included <b>V</b> : Include (Circuits 1, 2, 3, 4, 6 & 7 only)

Required for valid part number  
 For options only and not required for valid part number

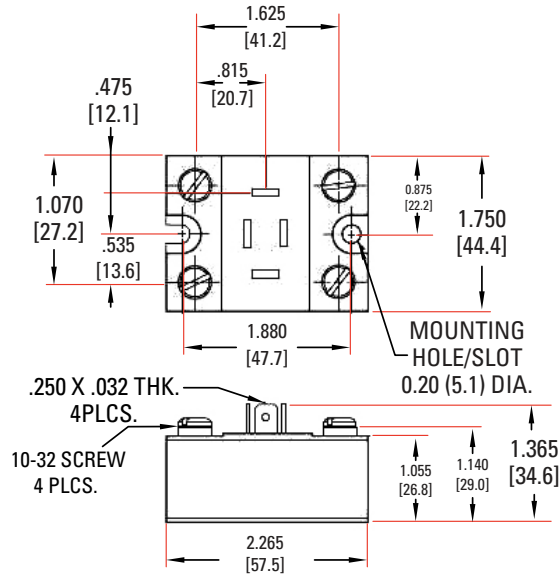
**NOTE: Not all Combinations available**

# ELECTRICAL SPECIFICATIONS

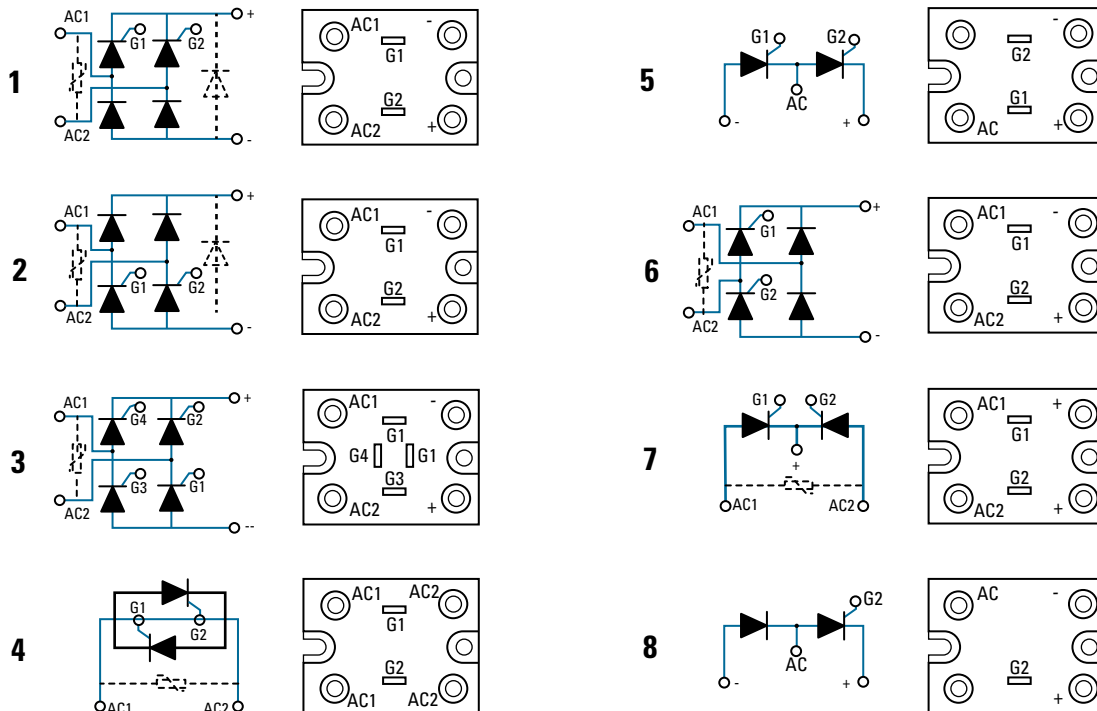
Description	Symbol	M5060	M50100
Maximum DC Output Current (Tc= 85°C)	I <sub>D</sub>	60 A	100 A
Maximum Voltage Drop @ Amps Peak	V <sub>F</sub>	1.35V @ 50A	1.2V @ 100 A
Operating Junction Temperature Range	T <sub>J</sub>	-40 - 125°C	-40 - 125°C
Repetitive Peak Reverse Voltage (AC Line Nominal) [Vpk]	V <sub>RRMS</sub>	400 (120 VAC)	
		600 (240 VAC)	
		800 (280 VAC)	
		1200 (480 VAC)	
		1400 (530 VAC)	
		1600 (600 VAC)	
Maximum Non-Repetitive Surge Current (1/2 Cycle, 60 Hz) [A]	I <sub>TSM</sub>	800	1500
Maximum I <sup>2</sup> t for Fusing (t=8.3ms)[A <sup>2</sup> sec]	I <sup>2</sup> T	2650	9350
Maximum Thermal Resistance, Junction to Ceramic Base per Chip [°C/W]	R <sub>Jc</sub>	0.45°C/W	0.3°C/W
Insulation Voltage [Vrms]	V <sub>ISOL</sub>	2500	
Weight (typical)		4.5 oz (158g)	

# MECHANICAL SPECIFICATIONS

Tolerances: ±0.02 in / 0.5 mm  
All dimensions are in: inches [millimeters]



# CIRCUIT DIAGRAMS





 WARNINGS



**RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE**

- The product's side panels may be hot, allow the product to cool before touching
  - Follow proper mounting instructions including torque values
  - Do not allow liquids or foreign objects to enter this product
- Failure to follow these instructions can result in serious injury, or equipment damage.**



**HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

- Disconnect all power before installing or working with this equipment
  - Verify all connections and replace all covers before turning on power
- Failure to follow these instructions will result in death or serious injury**

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