

- Eight Standard Circuits
- For AC or DC Variable Voltage Output Up To 15KW

Modules come in eight standard circuits and are designed to control AC or DC variable voltage output up to 15KW. The package comes with standard .250 quick-connect terminals. All models have 2500 Vrms isolation and are UL recognized (file no. E72445). Optional isolation barriers are available.

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

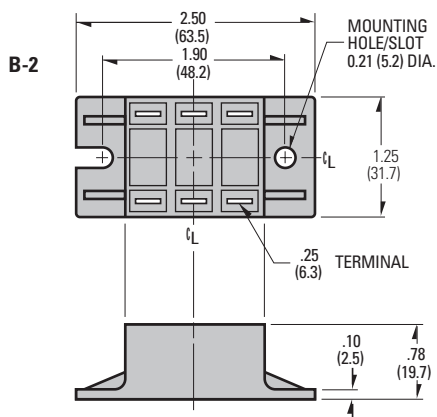
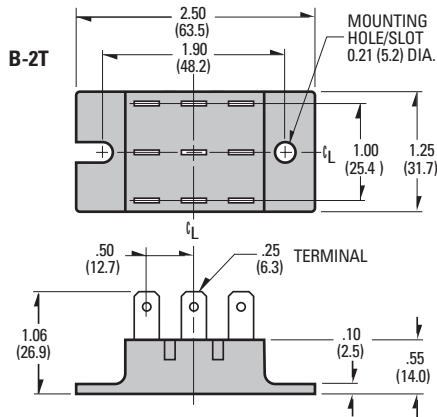
PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options	Case Style
B-Case style (Ceramic Base)	5 - 25 Amps 6 - 42.5 Amps	1 - 8 (see schematic diagrams)	1 - 120 Vac 2 - 240 Vac 3 - 280 Vac 4 - 480 Vac	F - Free Wheeling Diode (Circuits 1 & 2 Only) SE - External Suppressor (-2T Only, Circuits 1-6 Only)	-2T (Standard) -2 With Isolation Barriers

Example: B512FSE-2T

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	MODEL NO.	B5 RATINGS	B6
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)		25A	42.5A
V_F	Maximum Voltage Drop @ Amps Peak		1.65V @ 25A	1.6V @ 42.5A
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}) 480 (1200 V _{RRM})	
I_{TSM}	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz)		250A	600A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [A ² sec]		260	1500
I_{GT}	Maximum Required Gate Current to Trigger @ 25°C		60mA	80mA
V_{GT}	Maximum Required Gate Voltage to Trigger @ 25°C		2.5V	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		0.9°C/W	0.7°C/W
V_{ISOL}	Isolation Voltage		2500 V _{RMS}	2500 V _{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

1.5 oz. (42.5g)

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For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 Tech Support (877) 702-7700 FAX (619) 710-8540
Crydom Inc., 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154

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

UK: +44 (0)1202 606030 • FAX +44 (0)1202 606035 Crydom SSR Ltd., Arena Business Centre, Holyrood Close, Poole, Dorset BH17 7FJ, Email: intsales@crydom.com.

GERMANY: +49 (0)180 3000 506



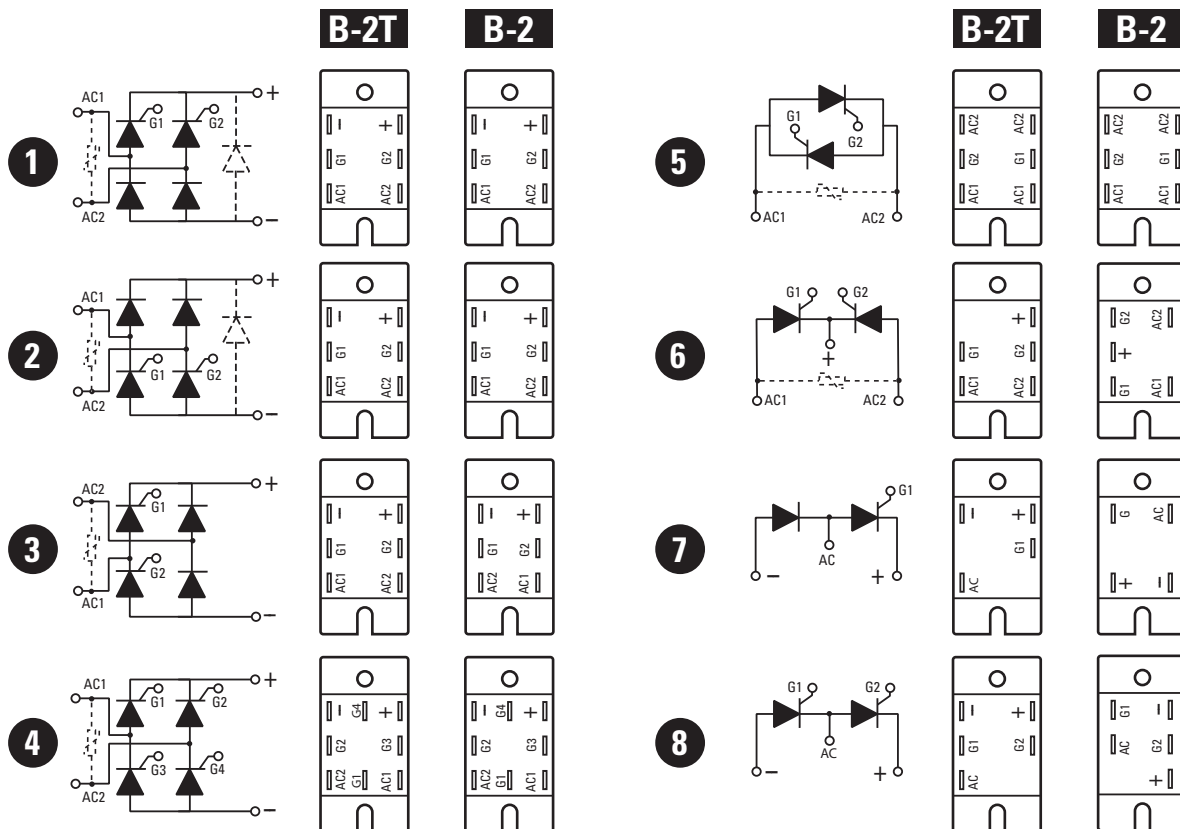
- Eight Standard Circuits
- For AC or DC Variable Voltage Output Up To 15KW

PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options	Case Style
B-Case style (Ceramic Base)	5 - 25 Amps 6 - 42.5 Amps	1 - 8 (see schematic diagrams)	1 - 120 Vac 2 - 240 Vac 3 - 280 Vac 4 - 480 Vac	F - Free Wheeling Diode (Circuits 1 & 2 Only) SE - External Suppressor (-2T Only, Circuits 1-6 Only)	-2T (Standard) -2 With Isolation Barriers

Example: B512FSE-2T

SERIES B-2T, B-2 CIRCUITS



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APPROVALS

UL E72445

**DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO**

<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</p> <ul style="list-style-type: none"> • Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. <p>Failure to follow these instructions will result in death or serious injury.</p>	<p>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</p> <ul style="list-style-type: none"> • Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. • Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo. <p>El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<p>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</p> <ul style="list-style-type: none"> • Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil • Vérifier tous connections, et remettre tous couverts en place avant de mettre sous <p>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.</p>	<p>GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION.</p> <ul style="list-style-type: none"> • Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. <p>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</p>	<p>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</p> <ul style="list-style-type: none"> • Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione <p>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</p>	<p>RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO</p> <ul style="list-style-type: none"> • Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento • Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento <p>O não cumprimento destas instruções pode levar à morte ou lesões sérias.</p>
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**WARNING / AVERTISSEMENT / WARNUNG / ADVERTENCIA / AVVERTENZA / AVISO**

<p>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</p> <ul style="list-style-type: none"> • The product's side panels may be hot, allow time for product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. <p>Failure to follow this instruction can result in serious injury, or equipment damage.</p>	<p>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</p> <ul style="list-style-type: none"> • Les panneaux latéraux du produit peuvent être chauds. Laisser le produit refroidir avant de le toucher. • Respecter les consignes de montage, et notamment les couples de serrage. • Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit. <p>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</p>	<p>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</p> <ul style="list-style-type: none"> • Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren. • Beachten Sie die Montageanweisungen, Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein. <p>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</p>
<p>RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD</p> <ul style="list-style-type: none"> • Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. <p>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</p>	<p>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</p> <ul style="list-style-type: none"> • I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. <p>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</p>	<p>RISCO DE DANO MATERIAL E DE AQUECIMENTO</p> <ul style="list-style-type: none"> • Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. • Siga devidamente as instruções de montagem. • Não permita a entrada de líquidos e de objectos estranhos no produto. <p>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</p>

ANNEX – ENVIRONMENTAL INFORMATION:

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People’s Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环境信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O



- **Single and Three Phase Circuits**
- **Up to 1600 Volt Blocking Standard**

Single- and three-phase diode circuits come in a panel mount package that provides 2500 Vrms isolation from the terminals to the ceramic base. Available in ratings up to 1600 Volts, all models are UL recognized (file no. E72445).

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

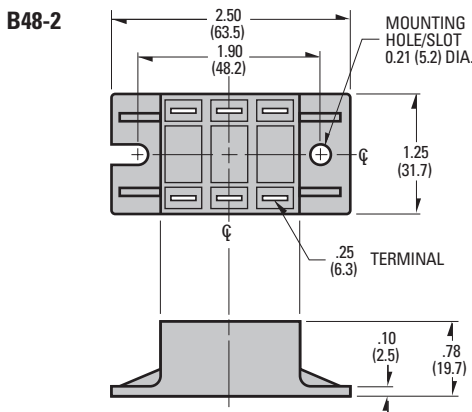
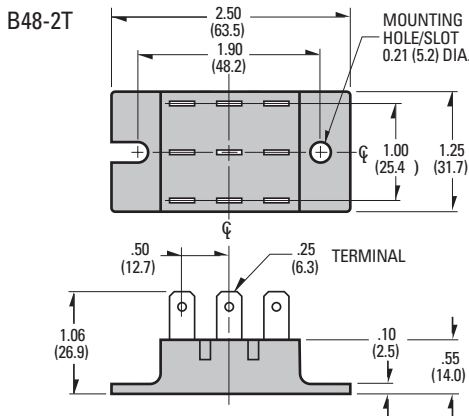
PART NUMBER IDENTIFICATION

Series Type	Circuit Type	Voltage	Case Style
B48	1 - 5 (see schematic diagrams)	B - 400 (120Vac) C - 600 (240Vac) E - 1000 (380Vac)	F - 1200 (480Vac) G - 1400 (530Vac) H - 1600 (600Vac)
			-2T (Standard) -2 With Isolation Barriers

Example: **B483C-2T**

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	RATINGS	
		SINGLE PHASE	THREE PHASE
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)	35A	50A
V_F	Maximum Voltage Drop @ Amps Peak	1.25V @ 35A	1.35V @ 50A
T_J	Operating Junction Temperature Range	-40°C to +125°C	
V_{RRM}	Repetitive Peak Reverse Voltage (Ac Line)	400 (120 Vac)	
		600 (240 Vac)	
		1000 (380 Vac)	
		1200 (480 Vac)	
		1400 (530 Vac)	
1600 (600 Vac)			
I_{TSM}	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz)	600A	600A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [$A^2\text{sec}$]	1500	1500
R_{qJC}	Maximum Thermal Resistance Junction to Ceramic Base per Chip	0.9°C/W	0.9°C/W
V_{ISOL}	Isolation Voltage	2500 V_{RMS}	2500 V_{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

1.5 oz. (42.5g)

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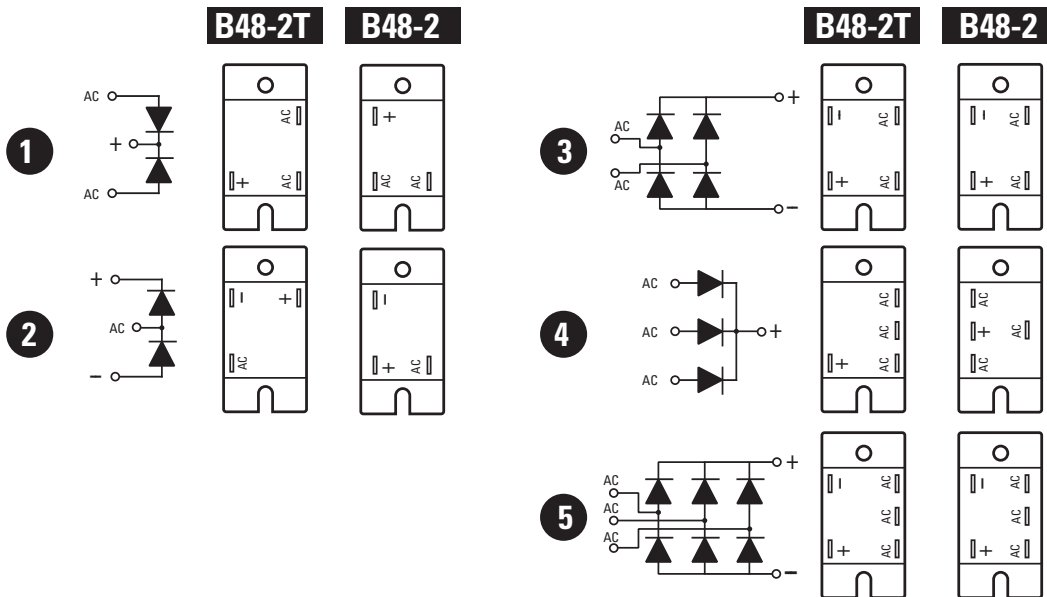
- Single and Three Phase Circuits
- Up to 1600 Volt Blocking Standard

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Series Type	Circuit Type	Voltage	Case Style
B48	1 - 5 (see schematic diagrams)	B - 400 (120Vac) C - 600 (240Vac) E - 1000 (380Vac)	F - 1200 (480Vac) G - 1400 (530Vac) H - 1600 (600Vac)
			-2T (Standard) -2 With Isolation Barriers

Example: B483C-2T

SERIES B48 CIRCUITS



APPROVALS

UL E72445

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**DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO**

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Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	○	○	○	○	○
Solder	X	○	○	○	○	○

附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	○	○	○	○	○
焊接点	X	○	○	○	○	○



- High Thermal Efficiency
- Complete Power Control Circuits in a Single Package

These circuits provide complete power control in a single package, utilizing high thermal efficiency to assure long life and reliable performance. Twelve standard models provide 2500 Vrms isolation from all terminals to ceramic base and are UL recognized (file no. E72445).

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

PART NUMBER IDENTIFICATION

Series Type EF -Case style	Current (Amps)			Circuit Type (see schematic diagrams) Example: 01	Voltage	Options F - Free Wheeling Diode (Circuits 1, 2, 16, 19 Only)
	1Ø	3Ø	AC SW.			
	D - 50	70	55		B - 120 Vac	
	E - 75	100	85		C - 240 Vac	
	F - 100	135	110		E - 380 Vac	
	G - 125	170	140		F - 480 Vac	
					G - 530 Vac	

Example: EFD02CF

ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	CURRENT CODE	D	E	F	G
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)		See Part Number Identification Above for Ratings of Single Phase, Three Phase and AC Switch Circuits			
V_F	Maximum Voltage Drop @ Amps Peak		1.7V @ 50A	1.85V @ 75A	1.4V @ 100A	1.55V @ 125A
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	100A/ μs	100A/ μs
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ μs]		500V/ μs	500V/ μs	500V/ μs	500V/ μs
V_{RRM}	Repetitive Peak Reverse Voltage (AC Line)			400 (120 Vac) 600 (240 Vac) 1000 (380 Vac) 1200 (480 Vac) 1400 (530 Vac)		
I_{TSM}	Maximum Non-Repetitive Surge Current ($1/2$ Cycle, 60Hz)		400A	600A	1500A	1950A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [A^2sec]		670	1500	9340	15800
I_{GT}	Maximum Required Gate Current to Trigger @ 25°C		60mA	80mA	150mA	150mA
V_{GT}	Maximum Required Gate Voltage to Trigger @ 25°C		2.5V	3.0V	3.0V	3.0V
$P_{G(AV)}$	Average Gate Power		0.5W	0.5W	0.5W	0.5W
V_{GM}	Maximum Peak Gate Voltage (Reverse)		5.0V	5.0V	5.0V	5.0V
$R_{\theta JC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip		0.8°C/W	0.7°C/W	0.36°C/W	0.3°C/W
V_{ISOL}	Isolation Voltage		2500 V RMS	2500 V RMS	2500 V RMS	2500 V RMS

MECHANICAL SPECIFICATIONS

Weight: (typical)

7.0 oz. (198g)

APPROVALS

UL E72445

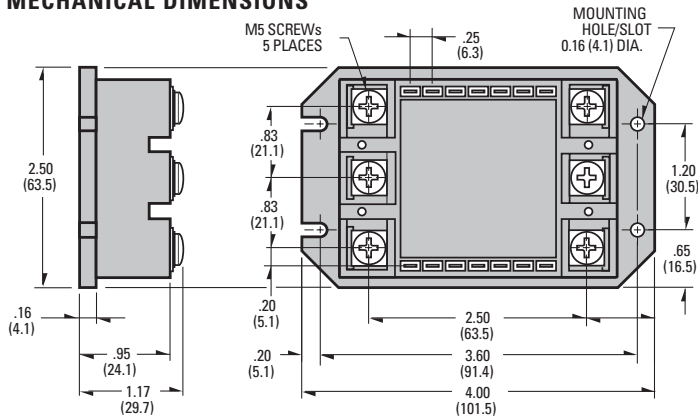
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- High Thermal Efficiency
- Complete Power Control Circuits in a Single Package

PART NUMBER IDENTIFICATION

Series Type	Current (Amps)	Circuit Type	Voltage	Options
EF - Case style	1Ø 3Ø AC SW.	(see schematic diagrams) Example: 01	B - 120 Vac C - 240 Vac E - 380 Vac F - 480 Vac G - 530 Vac	F - Free Wheeling Diode (Circuits 1, 2, 16, 19 Only)
Example: EFD02CF	D - 50 70 55 E - 75 100 85 F - 100 135 110 G - 125 170 140			

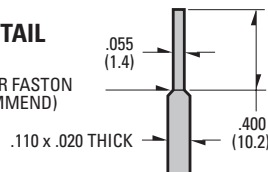
MECHANICAL DIMENSIONS



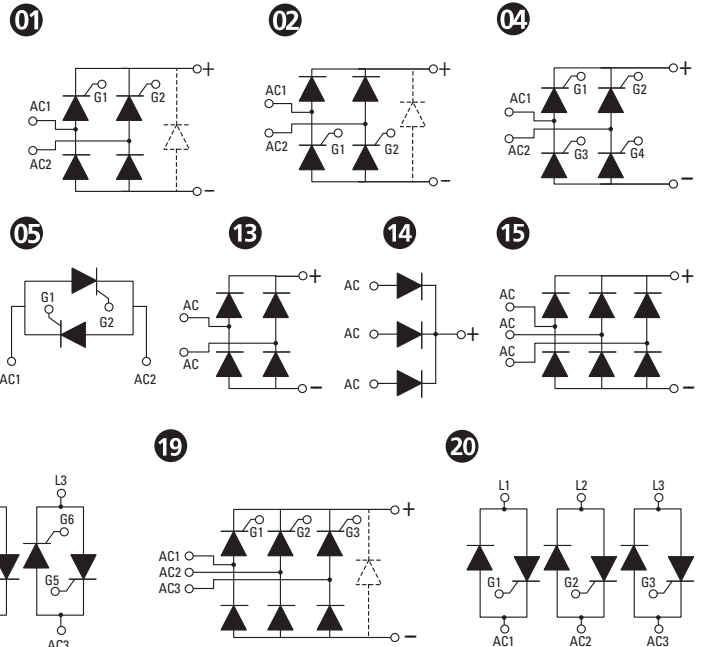
All dimensions are in inches (millimeters)

PIN DETAIL

CUT HERE FOR FASTON (AMP TYPE 61060-1 RECOMMEND)

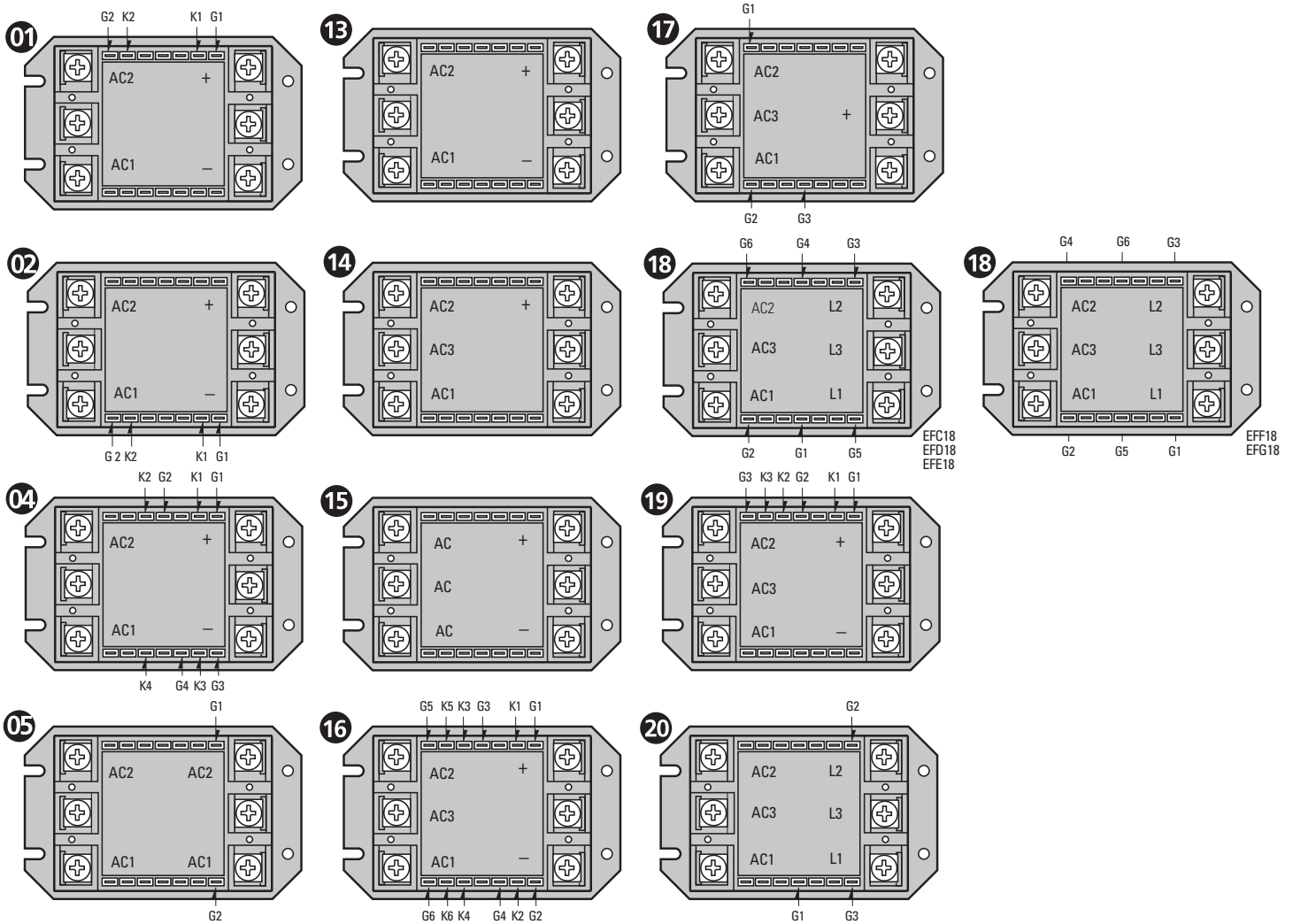


SERIES EF CIRCUITS



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TERMINAL ORIENTATION



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**DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO**

<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</p> <ul style="list-style-type: none"> • Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. <p>Failure to follow these instructions will result in death or serious injury.</p>	<p>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</p> <ul style="list-style-type: none"> • Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. • Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo. <p>El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<p>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</p> <ul style="list-style-type: none"> • Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil • Vérifier tous connections, et remettre tous couverts en place avant de mettre sous <p>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.</p>	<p>GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION.</p> <ul style="list-style-type: none"> • Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. <p>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</p>	<p>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</p> <ul style="list-style-type: none"> • Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione <p>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</p>	<p>RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO</p> <ul style="list-style-type: none"> • Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento • Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento <p>O não cumprimento destas instruções pode levar á morte ou lesões sérias.</p>
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**WARNING / AVERTISSEMENT / WARNUNG / ADVERTENCIA / AVVERTENZA / AVISO**

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<p>RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD</p> <ul style="list-style-type: none"> • Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. <p>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</p>	<p>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</p> <ul style="list-style-type: none"> • I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. <p>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</p>	<p>RISCO DE DANO MATERIAL E DE AQUECIMENTO</p> <ul style="list-style-type: none"> • Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. • Siga devidamente as instruções de montagem. • Não permita a entrada de líquidos e de objectos estranhos no produto. <p>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</p>

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Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O



- Industry Standard Package and Circuits
- Power Control Building Blocks

Modules come in an industry standard package, offering nine circuits that can be used singly or as power control building blocks. All models feature highly efficient thermal management for greatly extended cycle life and are UL recognized (file no. E72445). Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	Voltage
F18 -Case style	27 - 25 Amps	(see schematic diagrams)	400 - 120 Vac
	42 - 40 Amps	Example: SD	600 - 240 Vac
	57 - 55 Amps		1000 - 380 Vac
	92 - 90 Amps		1200 - 480 Vac
	107 - 105 Amps		1400 - 530 Vac
			1600 - 600 Vac

Example: F1892SD1200

ELECTRICAL SPECIFICATIONS ①

SYMBOL	SPECIFICATION	27	42	57	92	107 ②
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$) [A]	25	40	55	90	105
V_F	Maximum Voltage Drop	1.55V @ 75Apk	1.4V @ 120Apk	1.4V @ 165Apk	1.4V @ 270Apk	1.65V @ 300Apk
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	100	100	100	100
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ μs]	1000	1000	1000	1000	1000
V_{RRM}	Repetitive Peak Reverse Voltage (AC Line Nominal) [Vpk]	400 (120 Vac) 600 (240 Vac) 1000 (380 Vac) 1200 (480 Vac) 1400 (530 Vac) 1600 (600 Vac)				
I_{TSM}	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz) [A]	400	1000	1500	1950	2250
I^2T	Maximum I^2T for Fusing (t=8.3ms) [A ² sec]	670	4150	9350	15800	25000
I_{GT}	Maximum Required Gate Current to Trigger @ 25°C [mA]	150	150	150	150	150
V_{GT}	Maximum Required Gate Voltage to Trigger @ 25°C [V]	3.0	3.0	3.0	3.0	3.0
$P_{G(AV)}$	Average Gate Power [W]	0.5	0.5	0.5	0.5	0.5
V_{GM}	Maximum Peak Gate Voltage (Reverse) [V]	5.0	5.0	5.0	5.0	5.0
$R_{\theta JC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip [°C/W]	0.4	0.28	0.25	0.14	0.135
V_{ISOL}	Isolation Voltage [VRMS]	2500	2500	2500	2500	2500

MECHANICAL SPECIFICATION

Weight: (typical)	4.75 oz. (135g)
Torque Required	Terminal Stud Screw : 30 inch lb Mounting Screw : 20 inch lb

GENERAL NOTES

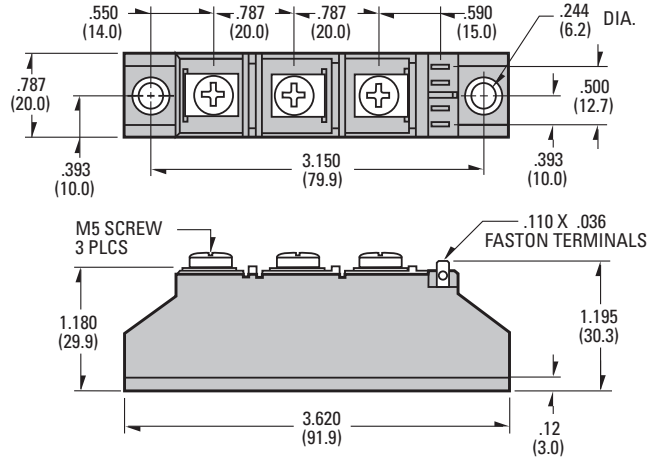
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- ① All parameters at 25°C unless otherwise specified.
② Available only in SD and SDK circuit configuration.

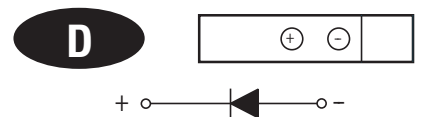
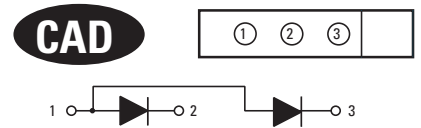
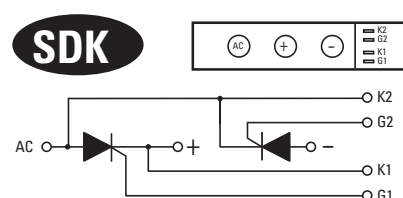
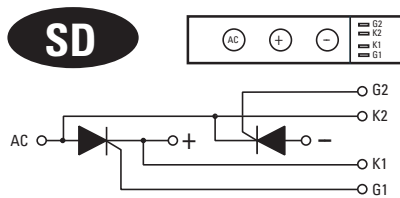
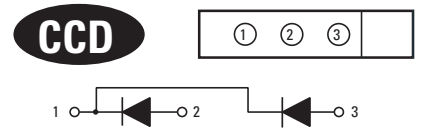
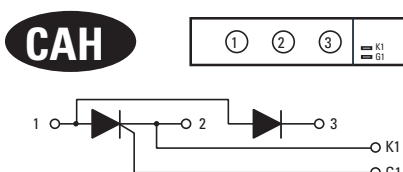
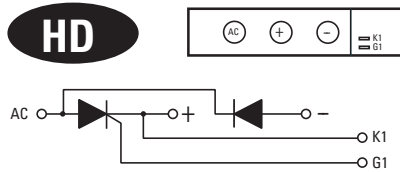
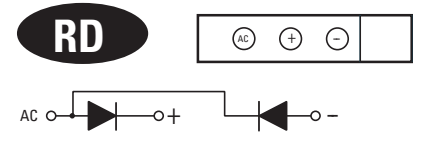
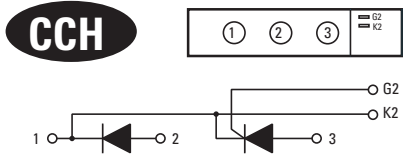
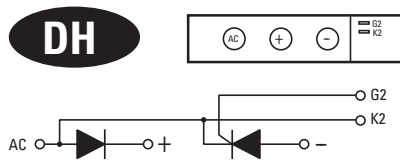
- Industry Standard Package and Circuits
- Power Control Building Blocks

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



SERIES F18 CIRCUITS



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	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O



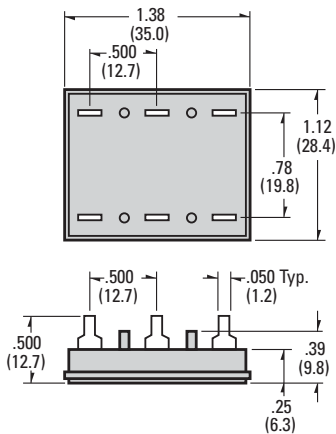
- Low Profile
- Designed for Printed Circuit Board Connections

Circuit Modules provide ratings up to 42.5 amps in a low profile package designed for printed circuit board connections. Available in three standard bridge circuits and an AC switch version, all models have 2500 Vrms isolation and are UL recognized (file no. E72445).

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability. Mounting clip available, order part number LMC-1.

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options
L-Case style	3 - 15 Amps	1 - 5	1 - 120 Vac	F - Free
(Ceramic Base)	5 - 25 Amps	(see schematic diagrams)	2 - 240 Vac	Wheeling Diode
	6 - 42.5 Amps*		3 - 280 Vac	(Circuits 1,2 only)
			4 - 480 Vac	

Example: L512F * 42.5 Amp Rating Not Available In Circuit 4

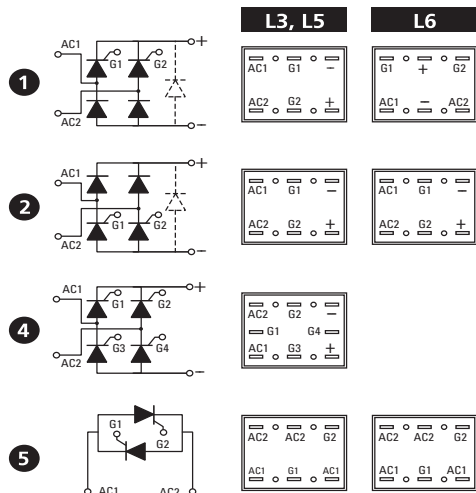
ELECTRICAL SPECIFICATIONS		MODEL NO.	L3	L5	L6
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)		15A	25A	42.5A
V_F	Maximum Voltage Drop @ Amps Peak		2.2V @ 15A	1.65V @ 25A	1.6V @ 42.5A
T_J	Operating Junction Temperature Range		-40°C to +125°C		
di/dt	Critical Rate of Rise of On-State Current @ $T_J=125^\circ\text{C}$		100A/ μs		
dv/dt	Critical Rate of Rise of Off-State Voltage		500V/ 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)
			480 (1200 V RRM)		
I_{TSM}	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz)		225A	300A	600A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [A ² sec]		210	375	1500
I_{GT}	Maximum Required Gate Current to Trigger @ 25°C		100mA	100mA	100mA
V_{GT}	Maximum Required Gate Voltage to Trigger @ 25°C		2.5V	2.5V	3.0V
$P_{G(AV)}$	Average Gate Power		0.5W	0.5W	0.5W
V_{GM}	Maximum Peak Gate Voltage (Reverse)		5.0V	5.0V	5.0V
$R_{\theta JC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip		1.25°C/W	0.9°C/W	0.7°C/W
V_{ISOL}	Isolation Voltage		2500 V _{RMS}	2500 V _{RMS}	2500 V _{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

.5 oz. (14.4 g)

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APPROVALS

UL E72445

SERIES L.
Rev. 032608
PAGE 1 OF 2

For recommended applications and more information contact:
USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 FAX (619) 710-8540
 Crydom Inc., 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154
Email: sales@crydom.com **WEB SITE:** http://www.crydom.com
UK: +44 (0)1202 606030 • **FAX** +44 (0)1202 606035 Crydom SSR Ltd., Arena Business Centre,
 Holyrood Close, Poole, Dorset BH17 7FJ, Email: intsales@crydom.com.
GERMANY: +49 (0)180 3000 506



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**WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO**

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ANNEX – ENVIRONMENTAL INFORMATION:

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People's Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O



- High Surge Current Rectifier Circuits
- Up to 1600 Volt Blocking Standard

Single- and three-phase diode circuits incorporate highly efficient thermal management to provide high surge capability, extended life, and reliable performance. Available in five circuits, all models come in an industry standard package, provide 2500 Vrms 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.

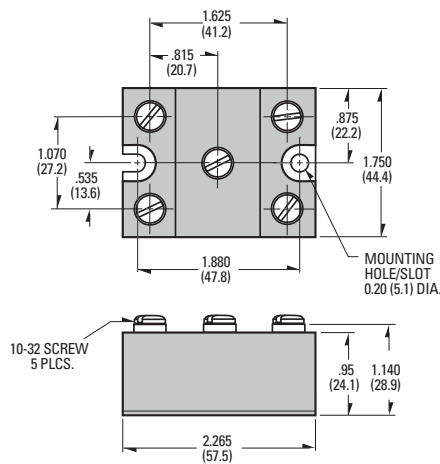
PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	Voltage	
M50	60 - 60 Amps	(see schematic diagrams)	400 (120Vac)	1200 (480Vac)
	100 - 100 Amps	Example: TB	600 (240Vac)	1400 (530Vac)
			1000 (380Vac)	1600 (600Vac)

Example: M50100TB1200

MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	RATINGS	
		M5060	M50100
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)	60A	100A
V_F	Maximum Voltage Drop @ Amps Peak	1.35V @ 60A	1.2V @ 100A
T_J	Operating Junction Temperature Range	-40°C to +125°C	
V_{RRM}	(Repetitive Peak Reverse Voltage (AC Line))	400 (120 Vac)	
		600 (240 Vac)	
		1000 (380 Vac)	
		1200 (480 Vac)	
		1400 (530 Vac)	
1600 (600 Vac)			
I_{TSM}	Maximum Non-Repetitive Surge Current (1/2 Cycle, 60Hz)	800A	1500A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [A^2sec]	2650	9350
$R_{\theta JC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip	0.45°C/W	0.3°C/W
V_{ISOL}	Isolation Voltage	2500 V _{RMS}	2500 V _{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

4.5 oz. (158g)

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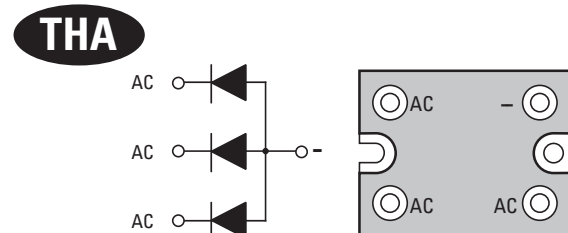
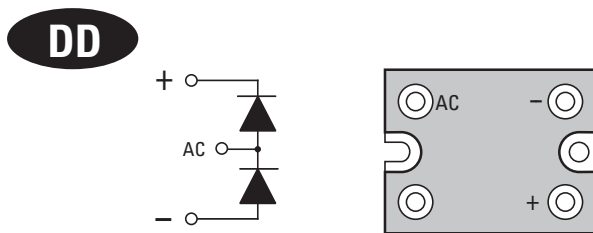
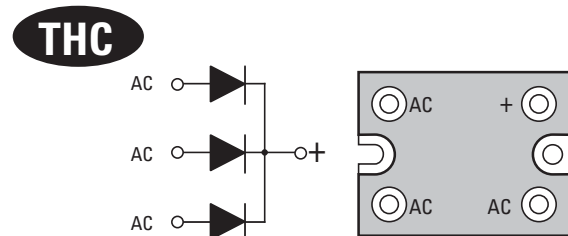
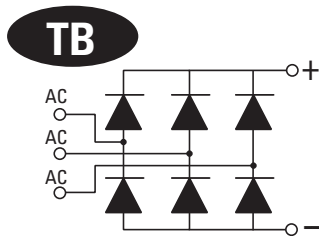
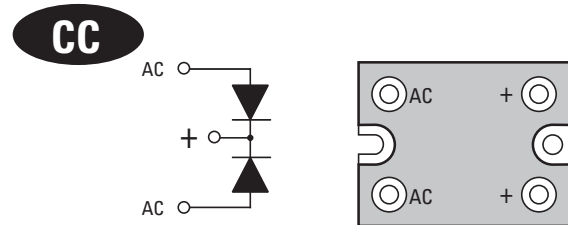
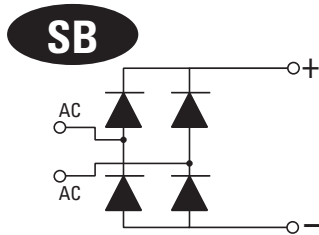
- High Surge Current Rectifier Circuits
- Up to 1600 Volt Blocking Standard

PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	Voltage	
M50	60 - 60 Amps	(see schematic diagrams)	400 (120Vac)	1200 (480Vac)
	100 - 100 Amps	Example: TB	600 (240Vac)	1400 (530Vac)
			1000 (380Vac)	1600 (600Vac)

Example: M50100TB1200

M50 DIODE CIRCUITS



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**DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO**

<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</p> <ul style="list-style-type: none"> • Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. <p>Failure to follow these instructions will result in death or serious injury.</p>	<p>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</p> <ul style="list-style-type: none"> • Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. • Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo. <p>El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<p>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</p> <ul style="list-style-type: none"> • Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil • Vérifier tous connections, et remettre tous couverts en place avant de mettre sous <p>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.</p>	<p>GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION.</p> <ul style="list-style-type: none"> • Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. <p>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</p>	<p>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</p> <ul style="list-style-type: none"> • Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione <p>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</p>	<p>RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO</p> <ul style="list-style-type: none"> • Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento • Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento <p>O não cumprimento destas instruções pode levar à morte ou lesões sérias.</p>
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**WARNING / AVERTISSEMENT / WARNUNG / ADVERTENCIA / AVVERTENZA / AVISO**

<p>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</p> <ul style="list-style-type: none"> • The product's side panels may be hot, allow time for product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. <p>Failure to follow this instruction can result in serious injury, or equipment damage.</p>	<p>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</p> <ul style="list-style-type: none"> • Les panneaux latéraux du produit peuvent être chauds. Laisser le produit refroidir avant de le toucher. • Respecter les consignes de montage, et notamment les couples de serrage. • Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit. <p>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</p>	<p>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</p> <ul style="list-style-type: none"> • Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren. • Beachten Sie die Montageanweisungen, • Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein. <p>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</p>
<p>RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD</p> <ul style="list-style-type: none"> • Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. <p>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</p>	<p>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</p> <ul style="list-style-type: none"> • I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. <p>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</p>	<p>RISCO DE DANO MATERIAL E DE AQUECIMENTO</p> <ul style="list-style-type: none"> • Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. • Siga devidamente as instruções de montagem. • Não permita a entrada de líquidos e de objectos estranhos no produto. <p>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</p>

• **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.

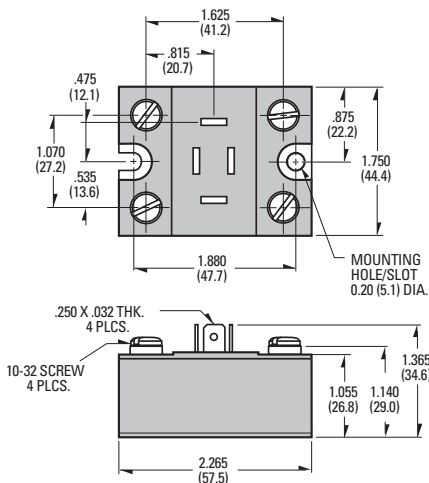
PART NUMBER IDENTIFICATION

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, 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
$R_{\theta JC}$	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)

4.9 oz. (140g)

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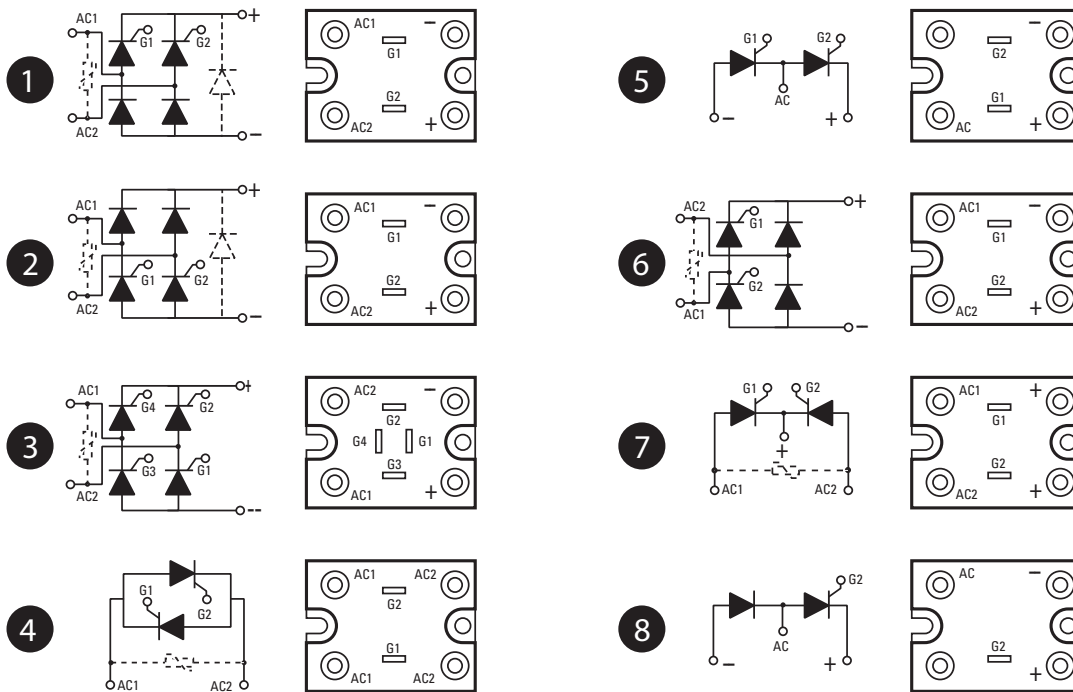
- Over 40KW Output Capability

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



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Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息:

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部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

