



Series EF

50-170 Amp • DIODE • SCR/DIODE Modules

- **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 9002 Certified facility for optimum product performance and reliability.

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			

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)

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For recommended applications and more information contact:

USA: (800) 8 CRYDOM • (800) 827-9366 • (619) 715-7200 • fax (619) 715-7280

Crydom Corp, 9525 Chesapeake Drive, San Diego, CA 92123 • e-mail: sales@crydom.com

WEB SITE: <http://www.crydom.com> FASTFAX Product Information: (888) 267-9191

UK: (44)1202 812300 • fax (44)1202 812340 Crydom International Ltd., 85, Condor Close, Woolsbridge Industrial Estate, Three-Legged Cross, Wimborne, Dorset, England BH21 6SU

GERMANY: (49) (0)6874 182580 • fax (49)(0)6874 182585 Crydom GmbH,

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Series EF

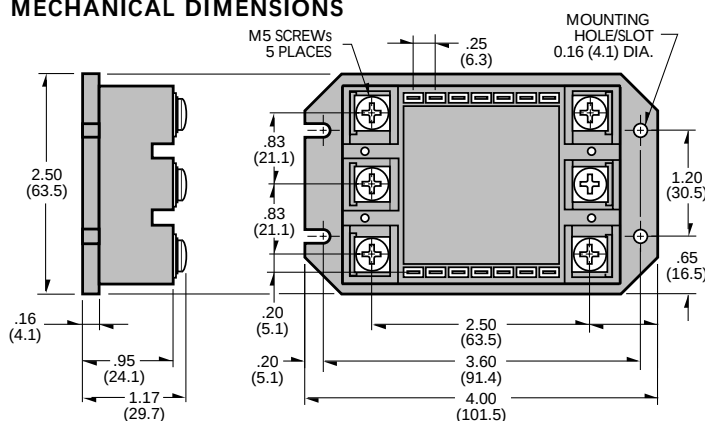
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Example: EFD02CF	D - 50 E - 75 F - 100 G - 125	3Ø 70 100 135	55 85 110 140	

MECHANICAL DIMENSIONS



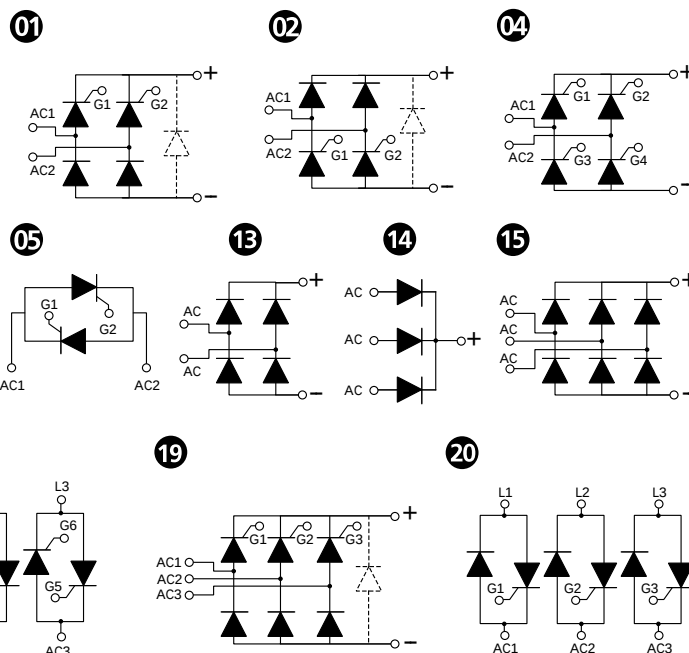
All dimensions
are in inches (millimeters)

PIN DETAIL

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

.110 x .020 THICK

SERIES EF CIRCUITS



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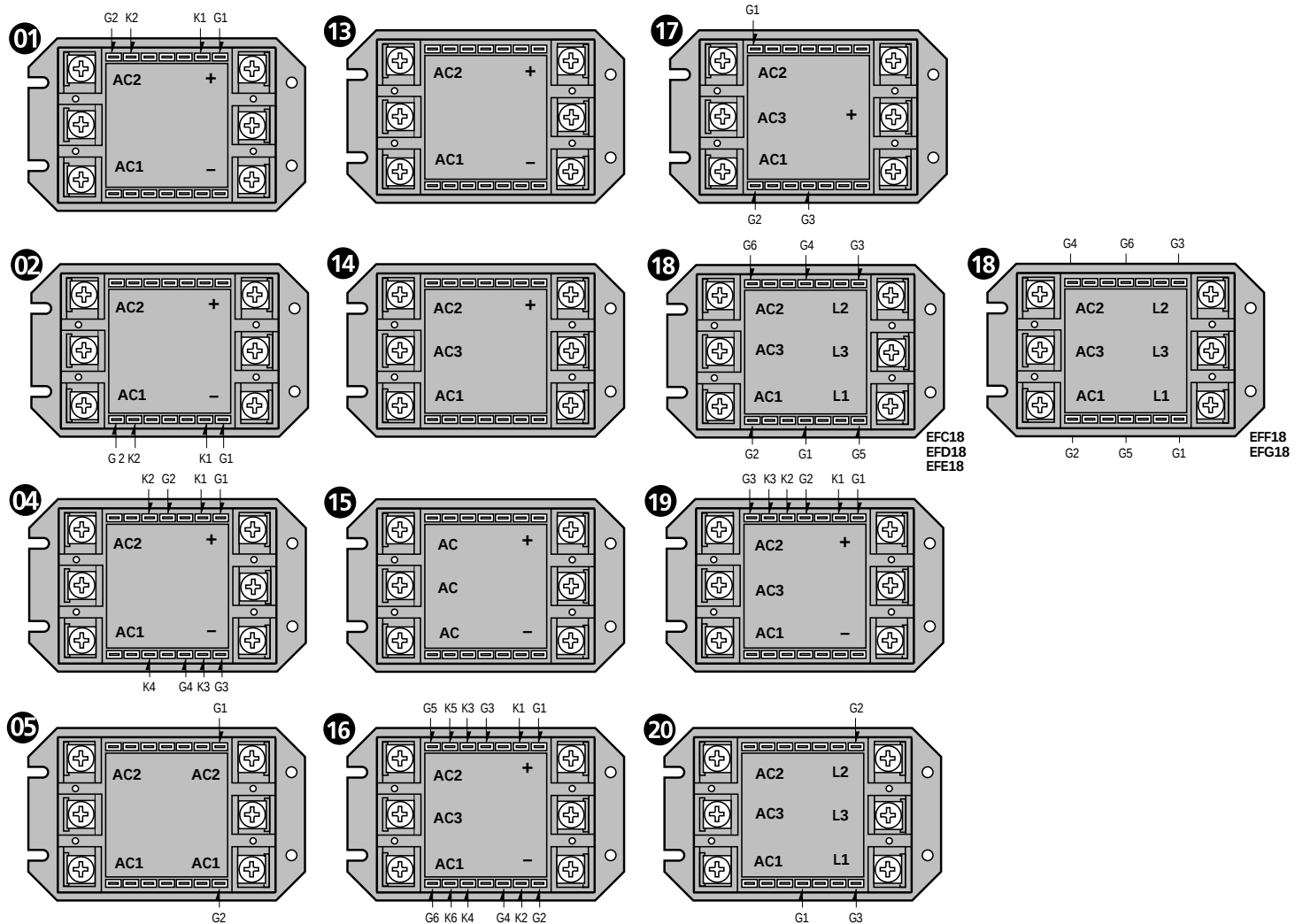
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CRYDOM

Control over power

TERMINAL ORIENTATION



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