crydom™

Series EF

50-170Amp • 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 9001 Certified facility for optimum product performance and reliability.

PART NUMBER IDENTIFICATION

Series Type
EF-Case style

Current (Amps)

	1Ø	3Ø	AC SW.
D -	50	70	55
E -	75	100	85
F -	100	135	110
G -	125	170	140

Example: EFD02CF

Circuit Type
(see schematic diagrams)
Example: **01**

Voltage
B - 120 Vac
C - 240 Vac
E - 380 Vac
F - 480 Vac
G - 530 Vac

Options
F - Free Wheeling Diode (Circuits 1, 2, 16, 19 Only)

ELECTRICAL SPECIFICATIONS

SYMBOL	SPECIFICATION	CURRENT CODE D	E	F	G
		RATINGS			
I_D	Maximum DC Output Current (Tc = 85˚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 @ TJ=125˚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=8.3ms) [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

For recommended applications and more information contact:
USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 **FAX** (619) 710-8540
Crydom Corp, 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 365070 • **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email**: intsales@crydom.com.
GERMANY: +49 (0)180 3000 506

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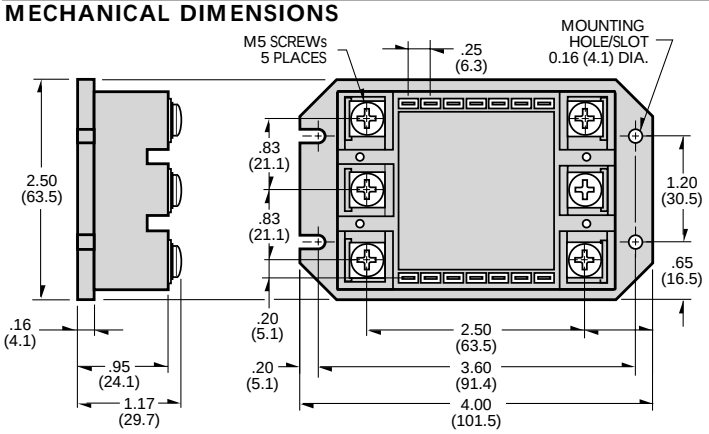
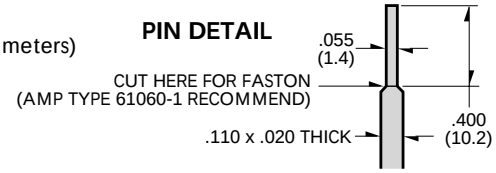
MECHANICAL DIMENSIONS

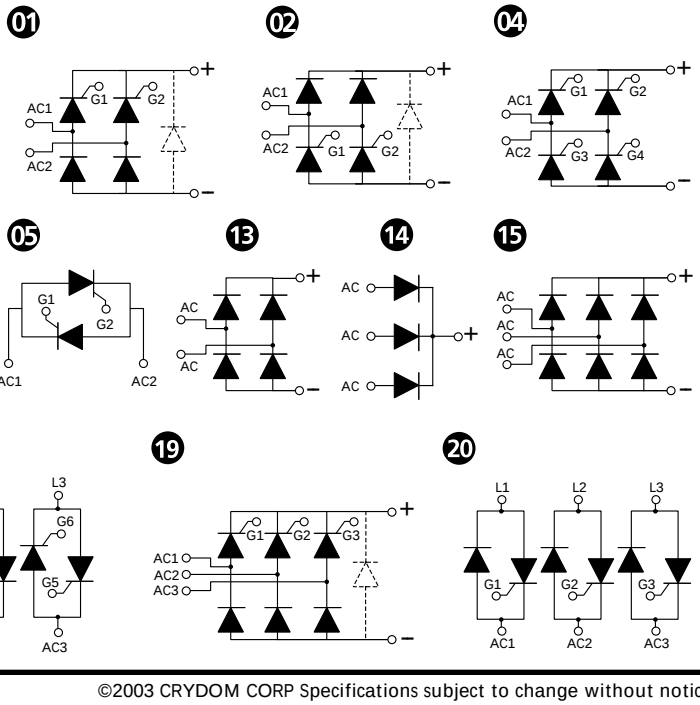


All dimensions are in inches (millimeters)

PIN DETAIL



SERIES EF CIRCUITS



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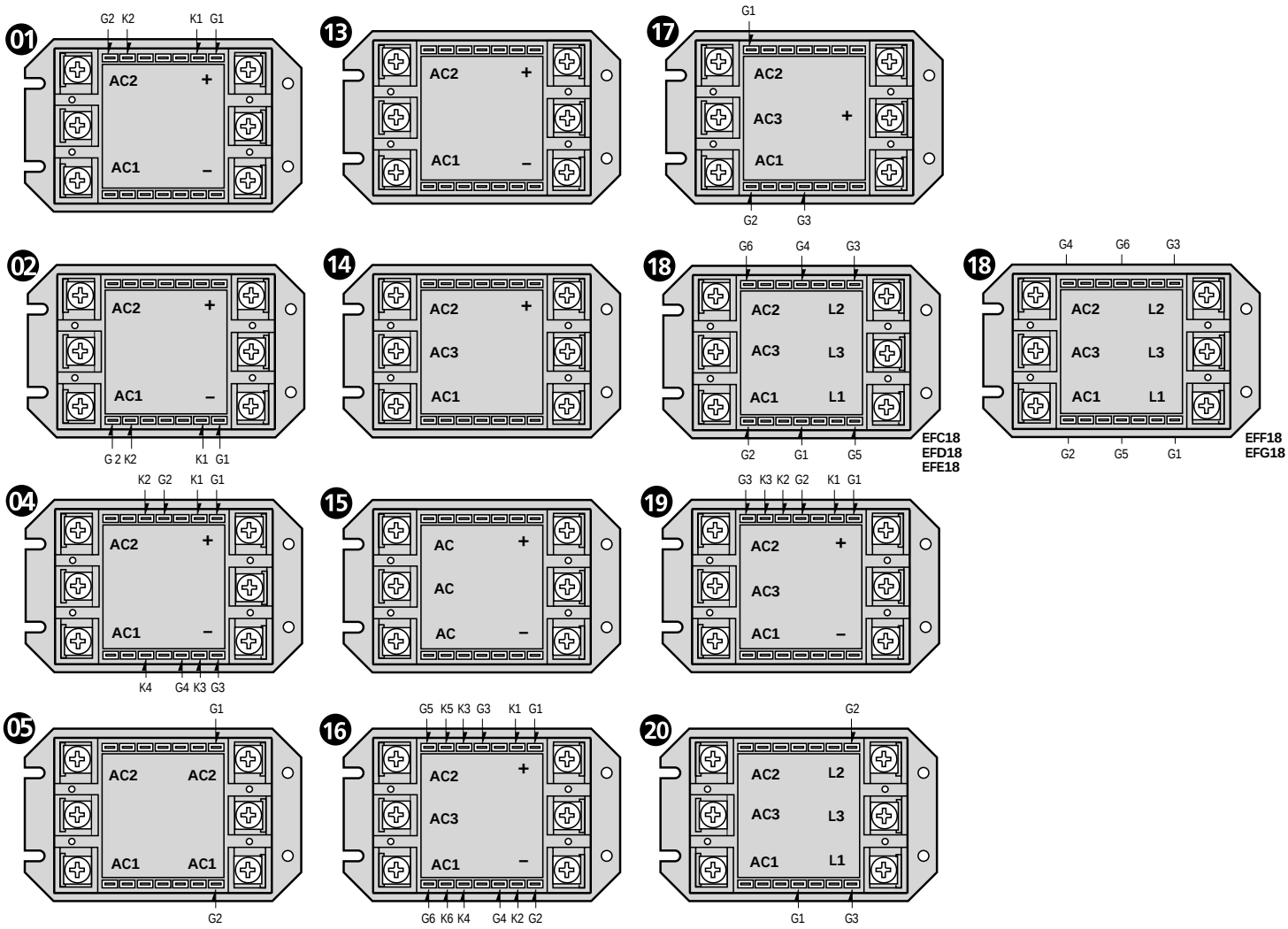
TERMINAL ORIENTATION



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