

# series EF

50-170Amp • Diode, SCR/Diode Modules

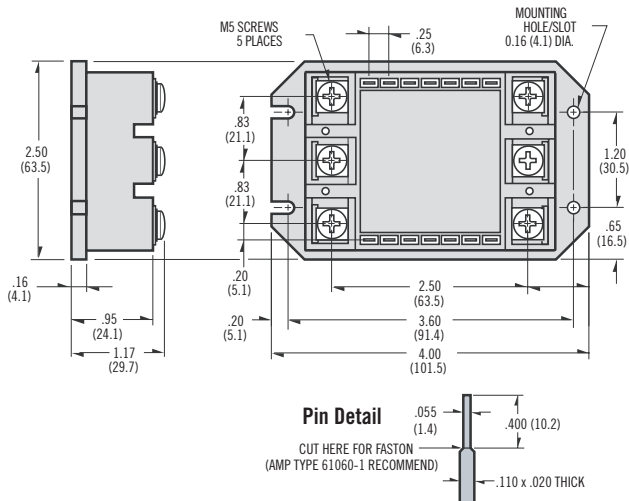


These circuits provide complete power control in a single package, utilizing high thermal efficiency to assure long life and reliable performance. Twelve standard models provide 2500 Vrms isolation from all terminals to ceramic base and are UL recognized E72445.

■ **High Thermal Efficiency**

## Mechanical Dimensions

All dimensions are in inches (millimeters)



## Electrical Specifications

D E F G

(See Part Number Identification for Ratings of Single-Phase, Three-Phase and AC Switch Circuits)

$I_D$	Maximum DC Output Current @ $T_c = 85^\circ\text{C}$ (A)				
$V_F$	Maximum Voltage Drop @ Amps Peak	1.7V @ 50A	1.85@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 @ $T_J=125^\circ\text{C}$ (A/ $\mu\text{s}$ )	100			
dv/dt	Critical Rate of Rise of Off-State Voltage	500			
$V_{RMS}$	Repetitive Peak Reverse Voltage (AC Line Input Voltage)	400 (120Vac)			
		600 (240Vac)			
		800 (280Vac)			
		1000 (380Vac)			
		1200 (480Vac)			
		1400 (530Vac)			
$I_{TSM}$	Maximum Non-Repetitive Surge Current (A) [ $1/2$ Cycle, 60Hz]	400	600	1500	1960
$I^2T$	Maximum $I^2T$ for Fusing ( $A^2\text{-sec}$ ) [ $t=8.3\text{ms}$ ]	670	1500	9350	15800
$I_{GT}$	Maximum Required Gate Current to Trigger @ 25°C (mA)	60	80	150	150
$V_{GT}$	Maximum Required Gate Voltage to Trigger @ 25°C (V)	2.5	3.0	3.0	3.0
$P_{G(AV)}$	Average Gate Power	0.5W			
$V_{GM}$	Maximum Peak Gate Voltage (Reverse)	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 $V_{RMS}$			

## Mechanical Specifications

Weight (Typical) 7.0 oz. (198g)

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## Part Number Identification

Series	Current (Amps)	Circuit Type	Voltage	Options
EF	1Ø 3Ø AC SW			
	D - 50 70 55	(see	B - 400 (120Vac)	F - Free Wheeling
	E - 75 100 85	schematic	C - 500 (240Vac)	Diode (Circuits 1,
	F - 100 135 110	diagrams)	E - 1000 (380Vac)	2, 16 and 19)
G - 125 170 140	Example: 01		F - 1200 (480Vac)	
	Example: EFD02CF		G - 1400 (530Vac)	

