

PART NUMBERS

Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
EF RTP-SCR	1600660	D-DC Input	55	See Table
	1200480	Zero Cross	150	Below and
	600240	Switching		Page 40
		R-DC Input		
		Random		
		Turn-On		
		A-AC Input Zero		
		Cross Switching		

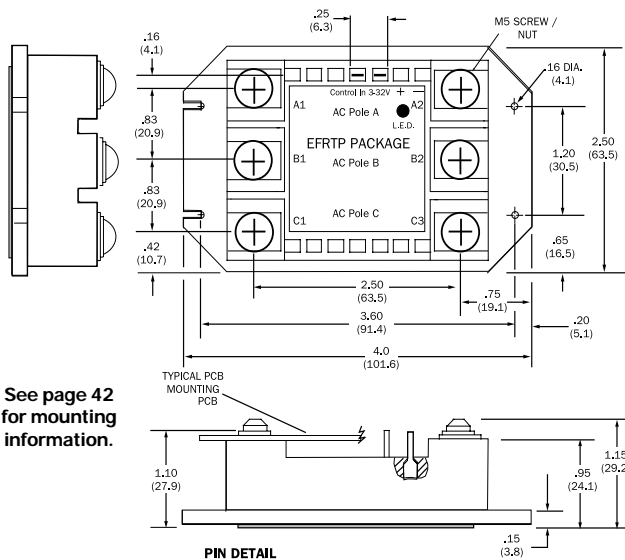


Options (Add Suffix to Part Number) - See Page 40 for full description

- 012 EZ Mount
- 022 24 VAC Control
- 040 Faston Input Terminals

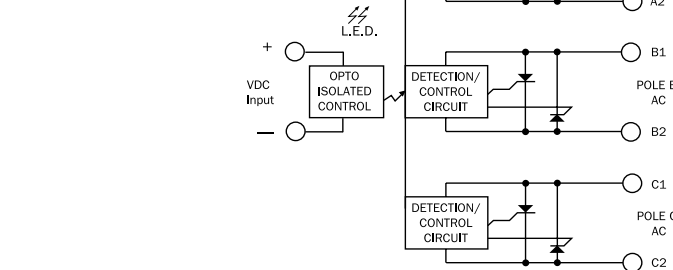
Part Number Example: EF RTP1600660D150

MECHANICAL SPECIFICATION



See page 42 for mounting information.

BLOCK DIAGRAM



FEATURES/BENEFITS

- High temperature plastic housing for mechanical ruggedness.
- Control status LED is standard.
- SCR outputs for high dv/dt, current and voltage capability.
- Choice of AC or DC inputs.
- Constant Current Input minimizes source current requirement (standard on **D** and **A** inputs only)
- Exposed ceramic baseplate for reduced thermal resistance and best thermal performance.
- Constructed using Teledyne's unique Fused Copper™ process. This process yields superior thermal impedance and power cycling capabilities through reduced thermal interconnections, allowing for cooler, more reliable operation.
- The logic drive circuitry section uses the latest in reliable surface mount technology.
- Certifications:
 - UL and ULC Recognized File #E128555
 - CE # EN60947-1

TYPICAL APPLICATIONS

- On/Off control of high power AC equipment.
- Interfacing of microprocessor controls to AC loads - lights, motors, heaters, valves, solenoids etc.
- Electromechanical line relay replacement.
- Mercury displacement relay replacement.
- Industrial and Process Controls.
- Programmable Controller interface.
- Robotics motor position and speed controls.

GENERAL DESCRIPTION

The EF RTP series three phase AC Solid State Relays are designed to provide control of high amounts of power in three phase applications. Optical isolation ensures complete protection of the relays control elements from load transients in the load circuits. Teledyne's advanced design featuring the Fused Copper™ process offers users superior thermal management resulting in excellent performance, quality and reliability.

ELECTRICAL SPECIFICATIONS

INPUT (CONTROL) SPECIFICATIONS

Parameter	Load/Voltage		Min	Max	Units
	Input Type				
Control Voltage Range	600240D		3	32	Vdc
	1200480D		3	32	
	1600660D		4.5	32	
	600240R		4	26	
	1200480R		4	26	
	1600660R		4.5	26	
Input Current	A		90	280	Vac
	D,R(@5Vdc)			45	mA
Must Turn-Off Voltage	A(@90Vac)			30	
	D,R		1		Vdc
Reverse Voltage Protection	A		10		Vac
	D,R			-32	Vdc
Turn-Off Current	A			N/A	
	D,R		0.25		mA(DC)
	A		2.5		mA(AC)

OUTPUT (LOAD) SPECIFICATION

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	600240	24	280	Vac
	1200480	48	530	
	1600660	60	660	
Frequency Range (Note 2)		47	400	Hz
Over Voltage Range	600240		600	VPeak
	1200480		1200	
	1600660		1600	
On-State Voltage Drop @ Max Rated Current		1.4		V
Turn-On Time	D,A		8.3	ms
	R		0.02	ms
Turn-Off Time			8.3	ms
Leakage Current (Off-State) @ Rated Voltage, 60 hz			0.5	mA
dV/dt (Typical)			500	V/μs
Dielectric Strength (60 hz)		2500		V
Insulation Resistance (500Vdc)		10 ⁹		Ohms
Operating Ambient Temperature		-40	100	°C

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Storage Ambient Temperature	-55	125	°C
Power Factor Range	0.5	1.0	
Weight (Typical)	7.2 oz (204g)		
Parameter	Output Current	Min	Max Units
Output Current Rating Per Phase (Base Temp @85°C)	55	0.05	55 A
	150	0.05	150
Surge Current Rating (Non-Repetitive 16.7 mS)	55		600 A
	150		1950
Thermal Resistance Junction to Case (J _c) 3 Switches On	55		0.35 °C/W
	150		0.25

NOTES:

- 1.) Where overvoltage transient spikes are present, suppression may be required. A suppressor and/or a snubber circuit across the AC terminals of the module will provide additional transient immunity.
- 2.) For 400 Hz inductive load, contact factory.
- 3.) All parameters at 25°C unless otherwise specified