

PART NUMBERS

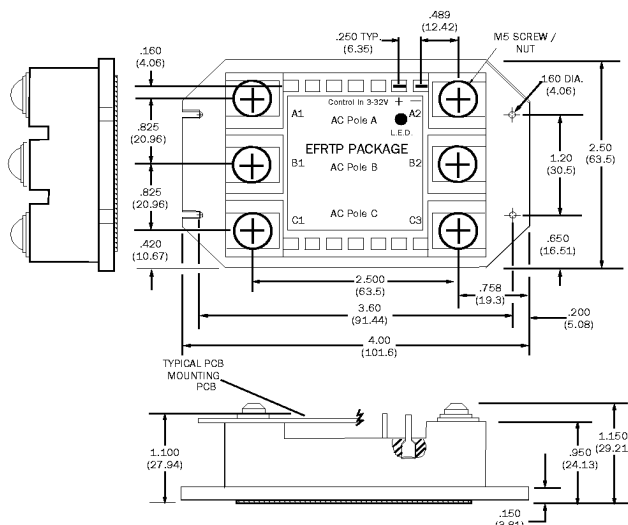
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
EF RTP-SCR	1600660	D-DC Input	55	See Table
	1200480	Zero Cross	150	Below and
	600240	Switching		Page 58
		R-DC Input		
		Random		
		Turn-On		
		A-AC Input Zero		
		Cross Switching		

Options (Add Suffix to Part Number) - See Page 58 for full description

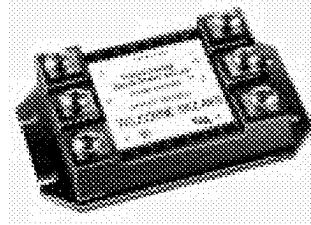
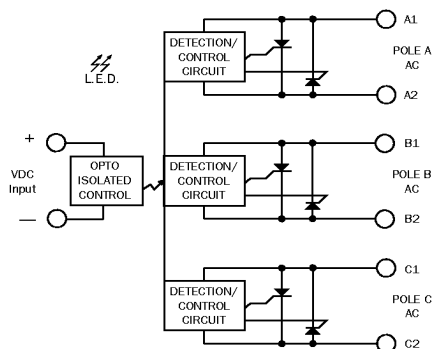
- 022 24 VAC Control
- 026 Non-Floating Output Terminals

Part Number Example: EF RTP1600660D150

MECHANICAL SPECIFICATION



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 circuit 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	
	1200480D		3	32	
	1600660D		4.5	32	
	600240R		4	26	Vdc
	1200480R		4	26	
	1600660R		4.5	26	
	A		90	280	Vac
Input Current	D,R(@5Vdc)		30		mA
	A(@90Vac)		30		
Must Turn-Off Voltage	D,R		1		Vdc
	A		10		Vac
Reverse Voltage	D,R			-32	Vdc
Protection	A			N/A	
Turn-Off Current	D,R		0.25		mA(DC)
	A		2.5		mA(AC)

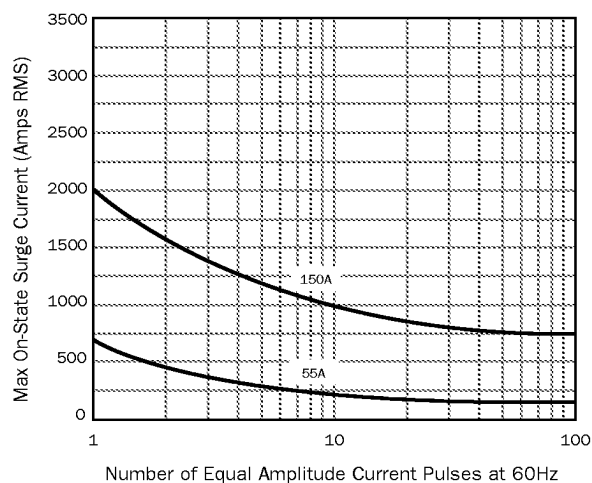
OUTPUT (LOAD) SPECIFICATION

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	600240	24	280	
	1200480	48	530	Vac
	1600660	60	660	
Frequency Range (Note 2)		47	400	Hz
Over Voltage Range	600240		600	
	1200480		1200	VPeak
	1600660		1600	
On-State Voltage Drop @ Max Rated Current		1.7		V
Turn-On Time	D,A		8.3	ms
	R		0.02	ms
Turn-Off Time			8.3	ms
Leakage Current (Off-State) @25 °C			0.5	mA
dV/dt (Typical)			500	V/μs
Isolation (All Terminals To Heatsink) = VRMS For 1 Min With Unit Mounted Properly				
			4000	V
Operating Temperature		-40	125	°C
Power Factor Range		0.5	1.0	

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Output Current	Min	Max	Units
Output Current Rating Per Phase (Load Current @85°C)	55	0.05	55	A
	150	0.05	150	
Surge Current Rating	55		600	A
See Fig 1 (Non- Repetitive 16.7 mS)	150		1950	
Thermal Resistance Junction to Case (J _C)	55		0.35	°C/W
	150		0.25	

FIGURE 1 Max Non-Repetitive Surge Current



NOTES:

- 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.
- For 400 Hz inductive load, contact factory.