

PART NUMBERS

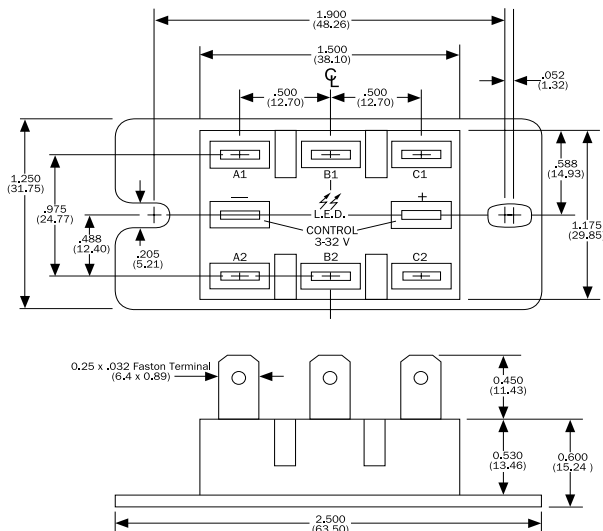
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
TRTP-SCR	1200480 600240	D-DC Input Zero Cross Switching R-DC Input Random Turn-On A-AC Input Zero Cross Switching	55	See Table Below and Page 40

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

-012 EZ Mount™
-022 24 VAC Control

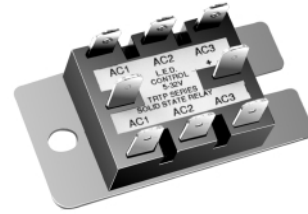
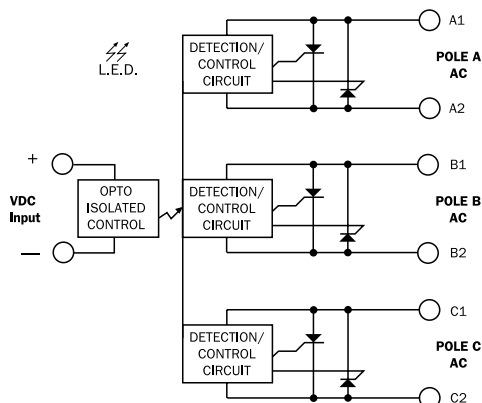
Part Number Example: TRTP1200480A55

MECHANICAL SPECIFICATION



See page 42 for mounting information.

BLOCK DIAGRAM



FEATURES/BENEFITS

- Three phase solid state relay in a single space saving package.
- 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.
- Choice of Zero Cross and Random Turn-On versions.
- Constant Current Input minimizes source current requirement (standard on D and A inputs only)
- Constructed using Teledyne's unique Powertherm™ 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 sections use 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 TRTP 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 circuit. Teledyne's advanced design featuring the Powertherm™ process offers users superior thermal management resulting in excellent performance, quality and reliability.

ELECTRICAL SPECIFICATIONS

INPUT (CONTROL) SPECIFICATIONS

Parameter	Input Type	Min	Max	Units
Control Voltage Range	D	3	32	
	R	4	26	Vdc
	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 Protection	D,R		-32	Vdc
	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	Vac
	1200480	48	530	
Frequency Range (Note 2)		47	400	Hz
Over Voltage Range	600240		600	VPeak
	1200480		1200	
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) @25 °C			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
Storage Ambient Temperature		-55	125	°C
Power Factor Range		0.5	1.0	
Weight (Typical)		2.2 oz (62.4g)		

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Min	Max	Units
Output Current Rating Per Phase (Base Temp @85 °C)	0.05	55	A
Surge Current Rating (Non-Repetitive 16.7 mS)		600	A
Thermal Resistance Junction to Case (J _c)		0.35	°C/W

Is size a problem?

The TRTP offers significant packaging benefit



Comparable Three-phase package

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