

PART NUMBERS

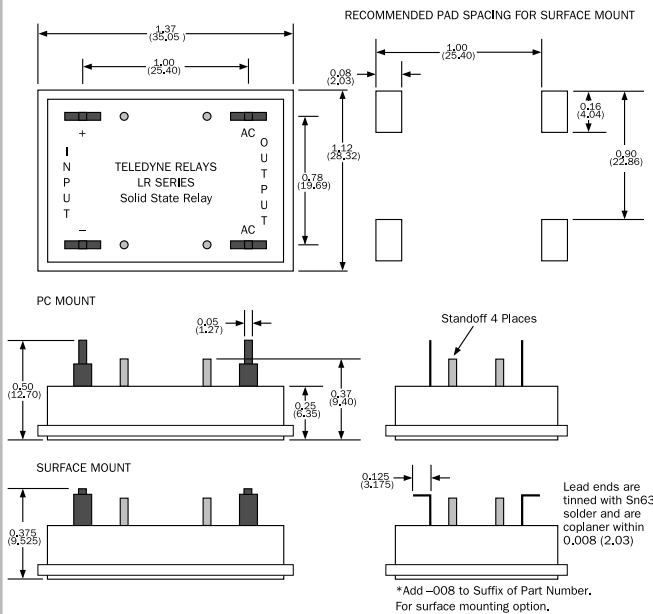
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
LRT-Triac	600240	D-DC Input, Zero Cross	10 - Triac 25 - Triac	See Table Below and
LR-SCR	1200480 600240	Switching R-DC Input, Random Turn-On	25 - SCR 40 - SCR	Page 40

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

-008	Surface Mount Terminals
-012	EZ Mount™
-021	TransAx™ (Available for SCR output only)

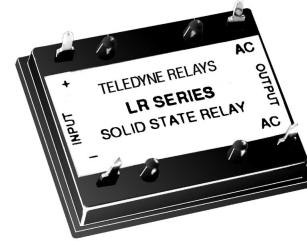
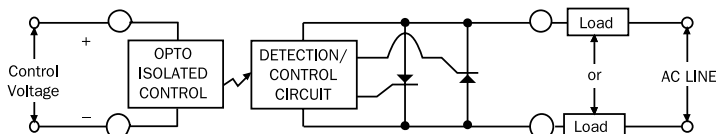
Part Number Example: **LR1200480R25**

MECHANICAL SPECIFICATION



Mounting bracket part number L101 available for panel/chassis attachment.
See page 42 for mounting information.

BLOCK DIAGRAM



FEATURES/BENEFITS

- Ultraminiature package for achieving optimum size/performance goals.
- Designed for PC Board through hole or optional Surface Mount installation.
- Triac output option for economy; Back-to-Back SCR output option for higher current and voltage ratings.
- Choice of Zero Cross and Random Turn-On versions.
- Constant Current Input minimizes source current requirement (standard on D input only)
- Exposed ceramic baseplate for reduced thermal resistance and best thermal performance.
- Constructed using Teledyne's unique Powertherm™ process which minimizes thermal interconnections, allowing for cool and reliable operation.
- The logic drive circuitry section uses the latest in reliable surface mount technology.
- Optional TransAX™ transient eliminator offers up to 2000V Protection!
- UL or ULC Recognized File #E128555
- CE # EN60947-1

TYPICAL APPLICATIONS

- On/Off controls of medium power AC equipment.
- Interfacing of microprocessor controls to AC loads - lights, motors, heaters, valves, solenoids etc.
- Electromechanical line relay replacement.
- Industrial and Process Controls.
- Uninterruptable Power Supplies.
- Robotics motor position and speed controls.
- Light dimmers.
- Transformer tap switch.

GENERAL DESCRIPTION

The LR/LRT series AC Solid State Relays are designed to control heavy loads in an ultraminiature, physically compact package. Optical isolation ensures complete protection of control elements from load transients. Teledyne's advanced design featuring the Powertherm™ process offers users superior thermal management resulting in superior performance, quality and reliability.

ELECTRICAL SPECIFICATIONS
INPUT (CONTROL) SPECIFICATIONS

Parameter	Input Type	Min	Max	Units
Control Voltage Range	D	3	32	Vdc
	R	4	26	
Input Current	D,R(@5Vdc)		15	mA
Must Turn-Off Voltage	D,R	1		Vdc
Reverse Voltage	D,R		-32	Vdc
Turn-Off Current	D,R	0.25		mA(AC)

OUTPUT (LOAD) SPECIFICATIONS

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	600240	24	280	Vac
	1200480	48	530	
Frequency Range (Note 2)	Triac	47	70	Hz
	SCR	47	400	
Over Voltage Range	600240		600	VPeak
	1200480		1200	
On-State Voltage Drop @ Max Rated Current	Triac	1.5		V
	SCR	1.4		
Turn-On Time	D		8.3	ms
	R		0.02	
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		Ω
Operating Ambient Temperature		-40	100	°C
Storage Ambient Temperature		-55	125	°C
Power Factor Range		0.5	1.0	
Weight (Typical)		0.53 oz.	(15g)	

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Output Current	Min	Max	Units
Output Current Rating (Base Temp 85°C)	10	0.05	10	A
	25	0.05	25	
	40	0.05	40	
Surge Current Rating (Non-Repetitive 16.7 mS)	10		100	A
	25		250	
	40		400	
Thermal Resistance Junction to Case (J _C)	10 Triac Output		1.1	°C/W
	25 Triac Output		1.1	
	25 SCR Output		0.5	
	40		0.4	

NOTES:

- 1.) Where overvoltage transient spikes are present, suppression may be required. A suppressor and/or a snubber 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 noted.