

PART NUMBERS

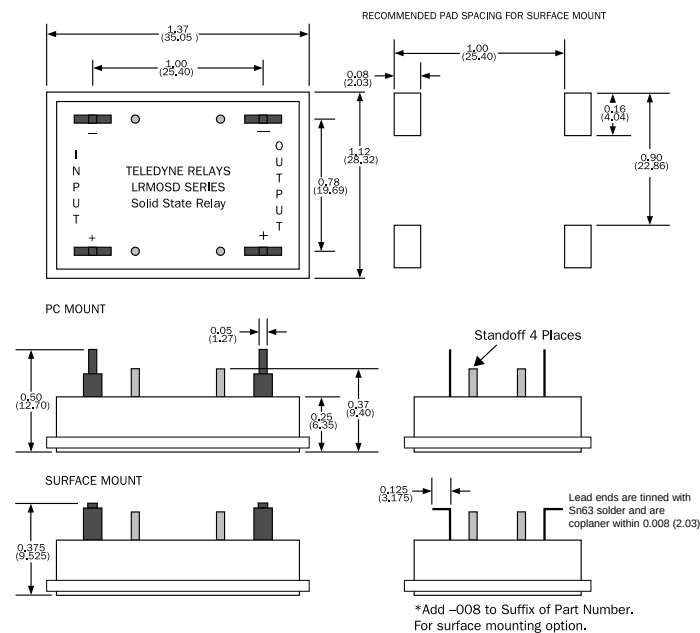
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Input Range (Note 2)	Options
LRMOSD	5050	R-DC Input	25	-L	See Table
-MOSFET	100100			-H	Below and Page 40

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

- 008 Surface Mount Terminals
- 012 EZ Mount™

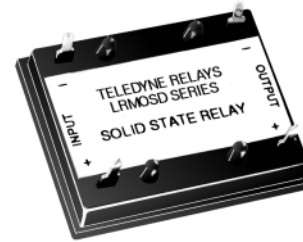
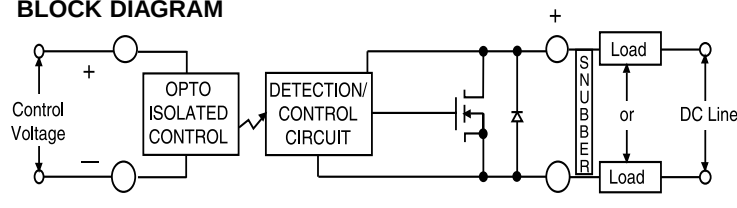
Part Number Example: LRMOSD50-50R25-H

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.
- MOSFET output.
- Constant Current Input minimizes source current requirement.
- 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.
- Certifications:
 - UL and ULC Recognized File #E128555

TYPICAL APPLICATIONS

- Electromechanical line relay replacement.
- Industrial and Process Controls.
- Programmable Controller interface.
- Robotics motor position and speed controls.

GENERAL DESCRIPTION

The LRMOS series DC Solid State Relays are designed to control medium power 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 (Note 2)	R~L	3.5	15	Vdc
	R~H	15	32	
Input Current	R~L (@5Vdc)		30	mA
	R~H (@15Vdc)		30	
Must Turn-Off Voltage		2		Vdc
Reverse Voltage Protection			-32	Vdc
Turn-Off Current		1		mA(DC)

OUTPUT (LOAD) SPECIFICATION

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	5050		50	Vdc
	100100		100	
Frequency Range			75	Hz
Over Voltage Rating	5050		50	VPeak
	100100		100	
On-State Resistance @ Max Rated Current	5050		30	mOhms
	100100		60	
Turn-On Time			4.8	ms
Turn-Off Time			0.16	ms
Leakage Current (Off-State) @ Rated Voltage, 60 hz			1	mA
dV/dt (Typical)			500	V/μs
Dielectric Strength (60 hz)		1500		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)		.53 oz	(15g)	

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Output Current	Min	Max	Units
Output Current Rating (Base temp @85 °C)	25	0.05	25	A
Pulsed Current Rating (Non-repetitive 10ms max, T _j = 125°C max)	25(50 Vdc)		230	A
	25 (100Vdc)		160	
Thermal Resistance Junction to Case (J _c)	25		0.5	°C/W
Power Dissipation (T _c = 85°C)			50	W

NOTES:

- 1.) Where overvoltage transient spikes are present, suppression may be required.
- 2.) Indicate High or Low "R" Control Voltage Range by adding -L or -H to part number before options. See part number example on previous page.
- 3.) All parameters at 25°C unless otherwise specified