

PART NUMBERS

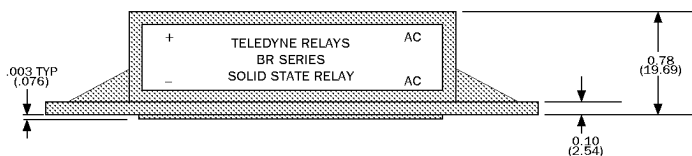
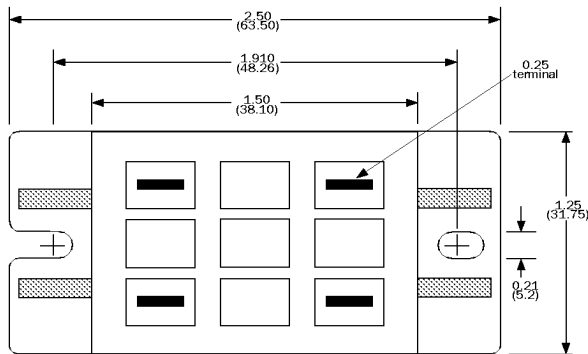
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
BR-SCR	1200480 600240	D-DC Input,	25 - SCR	See Table Below and Page 58
		Zero Cross Switching	40 - SCR	
		R-DC Input,	55 - SCR	
BRT-Triac	600240	Random Turn-On	10 - Triac	
		A-AC Input, Zero Cross Switching	25 - Triac	

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

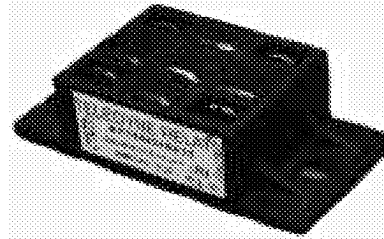
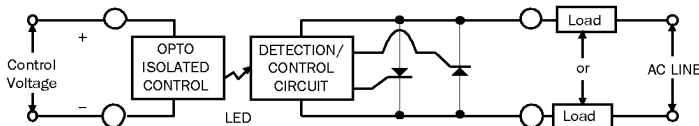
-012	EZ Mount™
-016	MOV
-021	TransAx™ (Available for D or R input SCR output only)
-022	24 VAC Control

Part Number Example: **BR600240R25**

MECHANICAL SPECIFICATION



BLOCK DIAGRAM



FEATURES/BENEFITS

- 25% smaller mounting footprint than industry standard SSR package.
- Faston connections for faster, simpler 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 and A inputs 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 6000V Protection! (Available for BR series 600V line voltage rated relays only).
- Certifications:
 - UL and 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.
- Uninterruptable Power Supplies.
- Light dimmers. Transformer tap switch.

GENERAL DESCRIPTION

The BR/BRT series AC Solid State Relays are designed to control heavy loads in a 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	
	A	90	280	
Input Current	D,R(@5Vdc)	15		mA
	A(@90Vac)	15		
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		

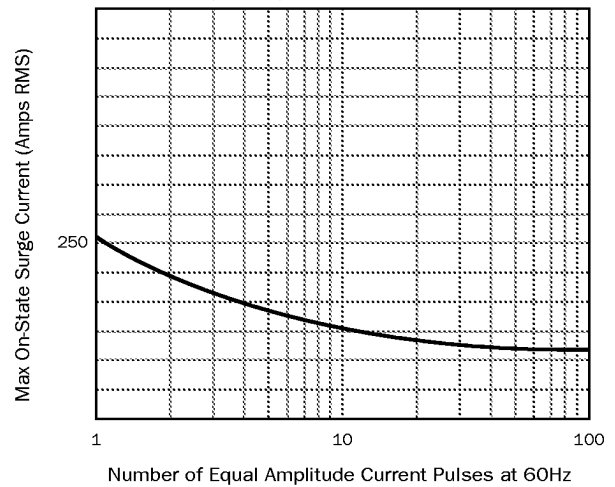
OUTPUT (LOAD) SPECIFICATION

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	Triac Output	1.5	V	
	SCR Output	1.7	V	
Turn-On Time	D,A		8.3	ms
	R		0.02	
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 (Load Current @85°C)	10	0.05	10	A
	25	0.05	25	
	40	0.05	40	
	55	0.05	55	
Surge Current Rating See Fig 1 (Non-Repetitive 16.7 ms)	10		100	A
	25		250	
	40		400	
	55		600	
Thermal Resistance Junction to Case (J _c)	10 Triac Output	0.6		°C/W
	25 Triac Output	0.6		
	25 SCR Output	0.5		
	40 SCR Output	0.35		
	55 SCR Output	0.35		

FIGURE 1 Max Non-Repetitive Surge Current
(Note 3)



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.) Curve for 25 amp SCR output shown. Contact factory for other outputs.