

PART NUMBERS

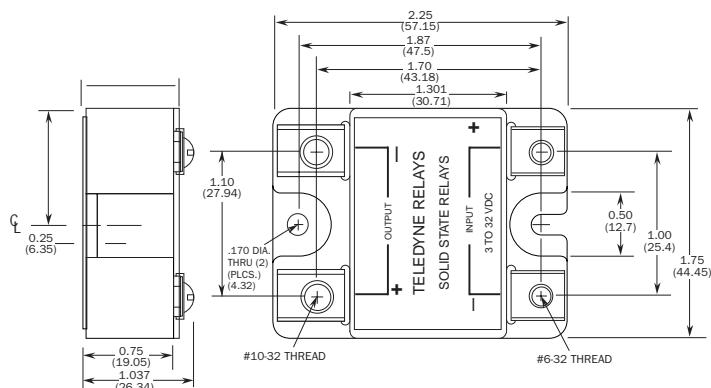
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type (Note 2)	Output Current Amps	Options
IGTD-IGBT	1200480	R~L or R~H	25	See Table
	600240	-DC Input, Random Turn-On	50 75 100	Below and Page 58
		A~L or A~H -AC Input Random Turn-On		

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

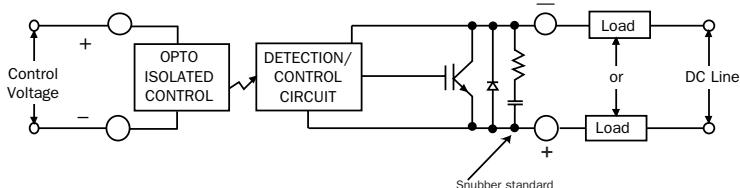
- 006** Faston Terminals
- 007** -65 °C Operation
- 010** #8-32 Load Terminal Hardware
- 012** EZ Mount™
- 014** Plastic Cover
- 016** MOV
- 026** Non-Floating Output Terminals

Part Number Example: **IGTD1200480R25-L-012**

MECHANICAL SPECIFICATION



BLOCK DIAGRAM



FEATURES/BENEFITS

- Industry Standard Package
- High temperature plastic housing for exceptional mechanical ruggedness.
- IGBT output.
- Choice of AC or DC input versions.
- Constant Current Input minimizes source current requirement.
- Exposed ceramic baseplate for reduced thermal resistance and best thermal performance.
- Constructed using Teledyne's unique Powertherm™ or Fused Copper™ (for higher current models) processes. These processes yield 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

TYPICAL APPLICATIONS

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

GENERAL DESCRIPTION

The IGTD series DC Solid State Relays are designed to control high power loads in the industry standard package. Optical isolation ensures complete protection of control elements from load transients. Teledyne's advanced design featuring the Powertherm™ or Fused Copper™ processes offers users superior thermal management resulting in superior performance, quality and reliability.

ELECTRICAL SPECIFICATIONS
INPUT (CONTROL) SPECIFICATIONS

Parameter	Load Voltage/			
	Input Code	Min	Max	Units
Control Voltage Range (Note 2)	600240R~L	3.5	15	
	1200480R~L	3.5	15	
	600240R~H	15	32	Vdc
	1200480R~H	15	32	
	600240A~L	90	140	
	1200480A~L	90	140	
	600240A~H	140	280	Vac
Input Current	R~L (@5Vdc)	30		
	R~H (@15Vdc)	30		mA
	A~L(@140Vac)	30		
	A~H(@280Vac)	30		
Must Turn-Off Voltage	R	2		Vdc
	A	10		Vac
Reverse Voltage	R	-32		Vdc
Protection	A		N/A	
Turn-Off Current	R	1		mA(DC)
	A	1		mA(AC)

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Output Current	Min	Max	Units
Output Current Rating (Load Current @85°C)	25		25	
	50		50	A
	75		75	
	100		100	
Pulsed Current Rating	25		190	
	50		240	A
	75		480	
	100		480	
Thermal Resistance	25		0.5	
Junction to Case (J_c)	50		0.33	°C/W
	75		0.2	
	100		0.2	
Power Dissipation ($T_c = 85^\circ\text{C}$)	25		110	
	50		175	W
	75		500	
	100		500	

OUTPUT (LOAD) SPECIFICATION

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	600240	24	400	Vdc
	1200480	48	800	
Frequency Range		75		Hz
Over Voltage Range	600240	600		VPeak
	1200480	1200		
On-State Voltage Drop @ Max Rated Current		2.5		V
Turn-On Time		4.8		ms
Turn-Off Time		0.16		ms
Leakage Current (Off-State) @25°C		1		mA
dV/dt (Typical)		500		V/ μs
Isolation (All Terminals To Heatsink) = VRMS For 1 Min With Unit				
Mounted Properly		2500		V
Operating Temperature	-40	125		°C
Power Factor Range	0.5	1.0		

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.
- Indicate High or Low Control Voltage Range by adding -L or -H to part number before options. See part number example on previous page.