

Teledyne Relays *T²R*[®] Program

Teledyne Relays' *T²R*[®] program was developed to provide the JAN relay user an alternate means of specifying and procuring established reliability relays. The form, fit and function of a *T²R*[®] relay is the same as that of its JAN counterpart. *T²R*[®] program requirements differ in certain regimens/tests found in both MIL-PRF-28776 and MIL-PRF-39016 that add cost but no value to the relay.

This program parallels the military specifications but not completely. The components that make up such a program are intricate and varied. It is very difficult to detail on a one-to-one basis how the two programs differ. The following page presents a table that compares the 100% screening performed on JAN relays and *T²R*[®] relays prior to shipment.

Other significant highlights of the *T²R*[®] program include:

- Two unique screening levels
- The ability to define lead finish
- Spacer pad options not allowed by the military specifications
- Ground pin options not allowed by the military specifications
- Reduced lead time
- Reduced cost

The program is fully defined for both general product requirements and detailed product requirements in the following Teledyne Relays specifications:

**TR-R-1
TR-STD-1
TR-STD-2
TR-ERL-1
TR-R-1/XXX
TR Supplement**

Copies of these documents are available from Teledyne Relays. We suggest that users check with Teledyne Relays from time to time to assure that they have the latest issue.

Screening Levels

INSPECTION	Applicable To			
	T ² R [®] A Level 1.5%/10K Cycles	T ² R [®] B Level .75%/10K Cycles	JAN L Level 3%/10K Cycles	JAN M Level 1%/10K Cycles
Subgroup 1				
Screening, Internal Moisture AQL	✓	✓	✓	✓
Vibration (Sinusoidal) AQL			✓	
Vibration (Sinusoidal) 100%		✓		✓
Screening, Burn-In (Hybrids only)		✓	✓	✓
Screening, Run-In (Room Temperature)	✓			
Screening, Run-In (+125°C and -65°C)		✓	✓	✓
Subgroup 2				
Coil Resistance or Coil Current	✓	✓	✓	✓
Insulation Resistance	✓	✓	✓	✓
Dielectric Withstanding Voltage	✓	✓	✓	✓
Static Contact Resistance	✓	✓	✓	✓
Pickup and Dropout or Set and Reset Voltage	✓	✓	✓	✓
Operate and Release or Set and Reset Time	✓	✓	✓	✓
Hold Voltage			✓	✓
Turn-On and Turn-Off Time (Hybrids only)	✓	✓	✓	✓
Contact Bounce Time	✓		✓	
Contact Stabilization Time		✓		✓
Turn-On Current (T Hybrids only)	✓	✓	✓	✓
Turn-On voltage (C Hybrids only)	✓	✓	✓	✓
Turn-Off Voltage (Hybrids only)	✓	✓	✓	✓
Coil Transient Suppression (D, DD and Hybrids only)	✓	✓	✓	✓
Diode Blocking Integrity (DD only)	✓	✓	✓	✓
Zener Voltage (C Hybrid only)	✓	✓	✓	✓
Neutral Screen (Latching Relays only)	✓	✓	✓	✓
Break Before Make Verification			✓	✓
Contact Simultaneity			✓	✓
Subgroup 3				
Solderability 2 Samples per Daily Solderability Inspection Lot	✓	✓	✓	✓
Leak Test	✓	✓	✓	✓
External Visual and Mechanical Inspection 2/Lot for Dimension and Weight Check	✓	✓	✓	✓