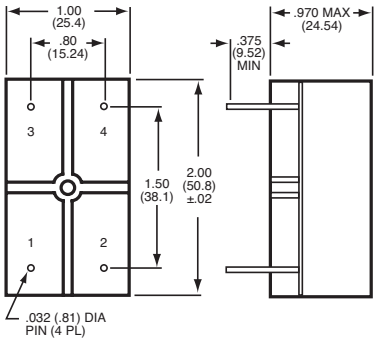
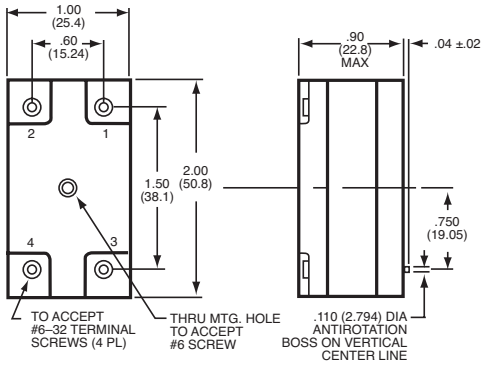
Part Number	Description
601-1*	5A, 280Vac solid-state relay
601-2*	10A, 280Vac solid-state relay

*Add H suffix for higher over voltage
See Note 3

MECHANICAL SPECIFICATION



PC BOARD VERSION (5A)
601-1, -1H



SCREW TERMINAL VERSION (10A)
601-2, -2H

WEIGHT: 3.0 oz. (85g)

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE:
X.XX ±.01 INCHES
X.XXX ±.005 INCHES

Figure 1 – 601-1 and 601-2 relays; dimensions in inches (mm)

WIRING DIAGRAM

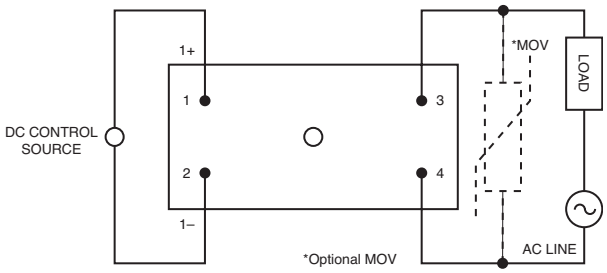


Figure 2

FEATURES

- Optical Isolation: Isolates control elements from load transients
- Floating Output: Eliminates ground loops and signal-level ground noise.
- Zero Voltage Turn-On: Reduces switching transient noise
- Low Off-State Leakage Current: High off-state impedance.
- High Dielectric Strength: For safety and protection of signal-level circuits.

DESCRIPTION

This series of AC SSRs has been designed to incorporate custom integrated circuits to replace conventional discrete circuitry. The result is a relay with low component count, high performance, reliability, and low cost. Optical coupling between control and load provides a minimum of 1500 Vrms input/output isolation. The output circuitry includes built-in snubber protection to guarantee high immunity from false triggering and reliable switching of low power factor loads.These relays are available in three terminal styles for optimum mounting flexibility. Pin terminals mount directly on a printed circuit board, screw terminals or quick disconnect terminals are for chassis or heat sink mounting.

INPUT (CONTROL) SPECIFICATIONS

	Min	Max	Units
Control Voltage Range	3.0	32.0	Vdc
Input Current		14	mA
Must Turn-On Voltage	3.0		Vdc
Must Turn-Off Voltage		1.0	Vdc
Reverse Voltage		–32	Vdc

OUTPUT (LOAD) SPECIFICATIONS

	Min	Max	Units
Load Voltage Rating		250	Vrms
Output Current Rating			
601-1	0.1	5.0	Arms
601-2	0.1	10.0	Arms
Frequency Range	47	70.0	Hz
Over Voltage Range			
601-1, -2	500		Vpeak
601-1H, -2H	600		Vpeak
On-State Voltage Drop (@ Rated Current)		4.0	Vrms
Surge Current Rating (16 ms) (See Figure 6 and Note 4)		1000	%
Turn-On Time		0.5	Cycle
Turn-Off Time		1.0	Cycle
Off-State Leakage @ 250 Vrms		9.0	mArms
Off-State dv/dt (See Note 1)	200		V/μs
Capacitance (Input to Output)		15.0	pF

ENVIRONMENTAL SPECIFICATIONS

	Min	Max	Units
Operating Temperature	–40	+80	°C
Storage Temperature	–40	+80	°C
Junction Temperature (T_J)		125	°C
Dielectric Strength	1500		Vac
Isolation	10^9		Ohms
Thermal Resistance			
(θ_{JA}) 601-1		19.0	°C/W
(θ_{JS}) 601-2		4.8	°C/W

NOTES
1. Output transient (dv/dt) protection is provided in all models and they are designed to switch resistive or inductive loads to 0.2 power factor. The dv/dt rating is based on a source impedance of 50 ohms.
2. For any mounting conditions: 5-amp relays, θ_{JA} = 19°C/W. For 10-amp relays, θ_{JS} = 4.8°C/W.
3. Basic part number provides screw terminals or PC board pins (Figure 1). For single 1/4-inch quick disconnect terminals, add suffix 'Q" to 10-amp part numbers, or "QQ" suffix for double 1/4-inch quick disconnects. (Examples: 601-2Q, 601-2QQ).
4. Triac may lose blocking capability during and after surge until T(J) falls below maximum.
5. Relays mounted with silicone grease on heat sink such as Astrodyne, Inc., Type 2518-0500-A00B (for 1.0°C/W).

CHARACTERISTICS CURVES

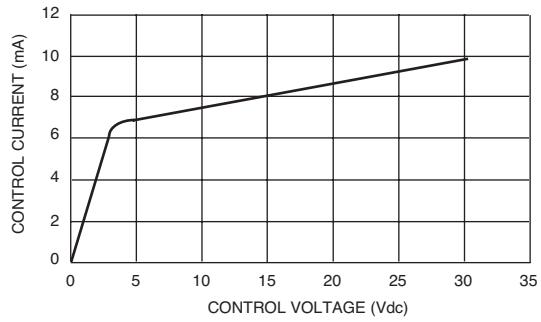


Figure 3 – Typical input current vs. control voltage

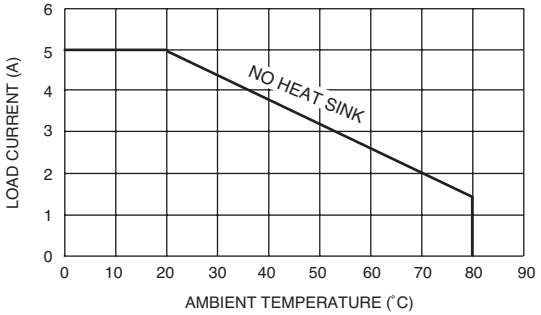


Figure 4 – Maximum load current vs. ambient temperature 601-1

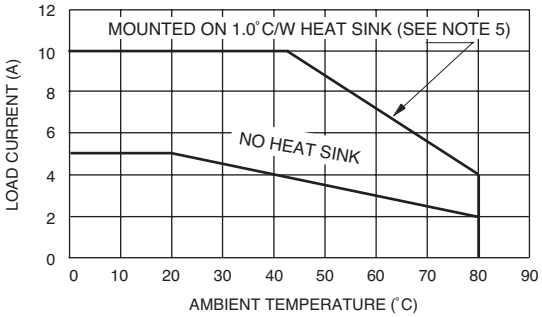


Figure 5 – Maximum load current vs. ambient temperature 601-2

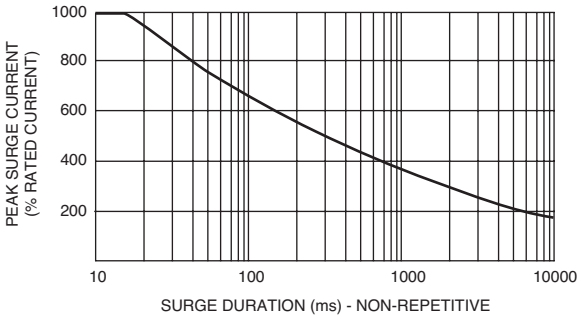


Figure 6 – Maximum surge as function of load voltage

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Teledyne Relays:

601-2 601-1