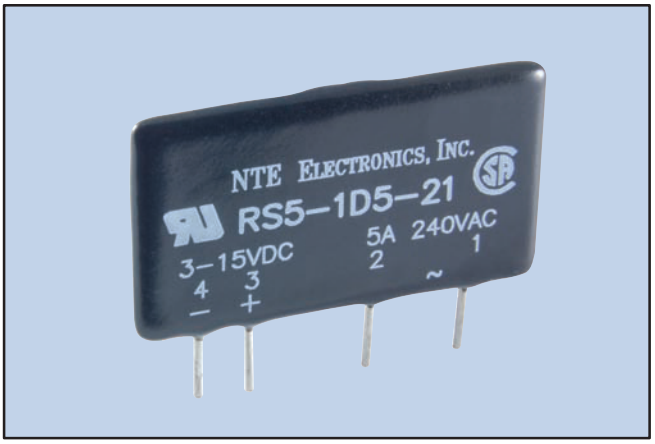
RS5 Series

Features

- Output – SCR AC Switch
- Input – DC or AC Control
- Ultra–High Surge Current Rating
- Available in:
  - Zero–Cross (RS5–1D5–21)
  - Random Turn–On (RS5–1D5–21R)



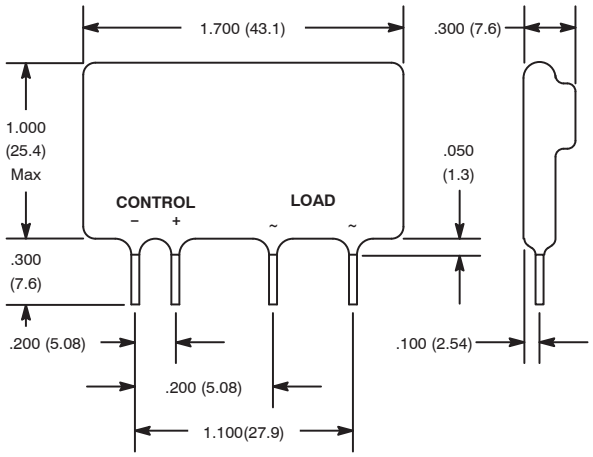
Descriptions

ZERO CROSS – This type of relay has a zero cross detector on the output stage of the relay. This means that the relay will "monitor" the load signal and when this signal gets to the zero volt (amplitude), the relay will trigger after the control voltage has been applied. This will usually take about 8.3msec in a 60Hz signal. These type of relays are mainly used to switch resistive or capacitive loads.

RANDOM TURN–ON – This type of relay does not contain a zero cross detector. Therefore, as soon as you connect a control signal, the relay will immediately turn–on at any phase of the load sine wave. The relay will trigger in a maximum time of 20μsec after the control voltage has been applied. These relays are mainly used to switch inductive loads.

Printed Circuit Board Mountable Solid State Relay, 5 Amp, SPST–NO.

D81



Input Specifications

Control Voltage Range: 3–15VDC
Must Operate Voltage: 3.0VDC
Must Release Voltage: 1.0VDC
Nominal Input Impedance: 300Ω
Typ. Input Current (@ 5VDC): 15mA

Output Specifications

Load Voltage Range (@ 47–63Hz): 12–280V (RMS)
Transient Overvoltage: 600V (Peak)
Load Current Range: 0.06–5A (RMS)
Max. Surge Current (16.6ms): 250A (Peak)
Max. Off–State Leakage Current: 0.1mA (RMS) at rated voltage
Min. Off–State dv/dt:: 500V/μs at max. rated voltage
Max. On–State Voltage Drop: 1.4V (Peak) at rated current
Max. Turn–On Time: 1/2 cycle
Max. Turn–Off Time: 1/2 cycle
Max. I^2t for Fusing (8.3ms): $260A^2s$
Power Factor (Min.) with Max. Load: 0.5

Electrical Specifications

Dielectric Strength (50/60Hx Input/Output/Base): 4000V (RMS)
Min. Insulation Resistance (@ 500VDC): 10^9 Ω
Max. Capacitance (Input/Output): 10pF

Environmental Characteristics

Operating: –30°C to +80°C
Storage: –30°C to +125°C