

## 20 Second Power Up Delay

### Time Delay Relay Replacement

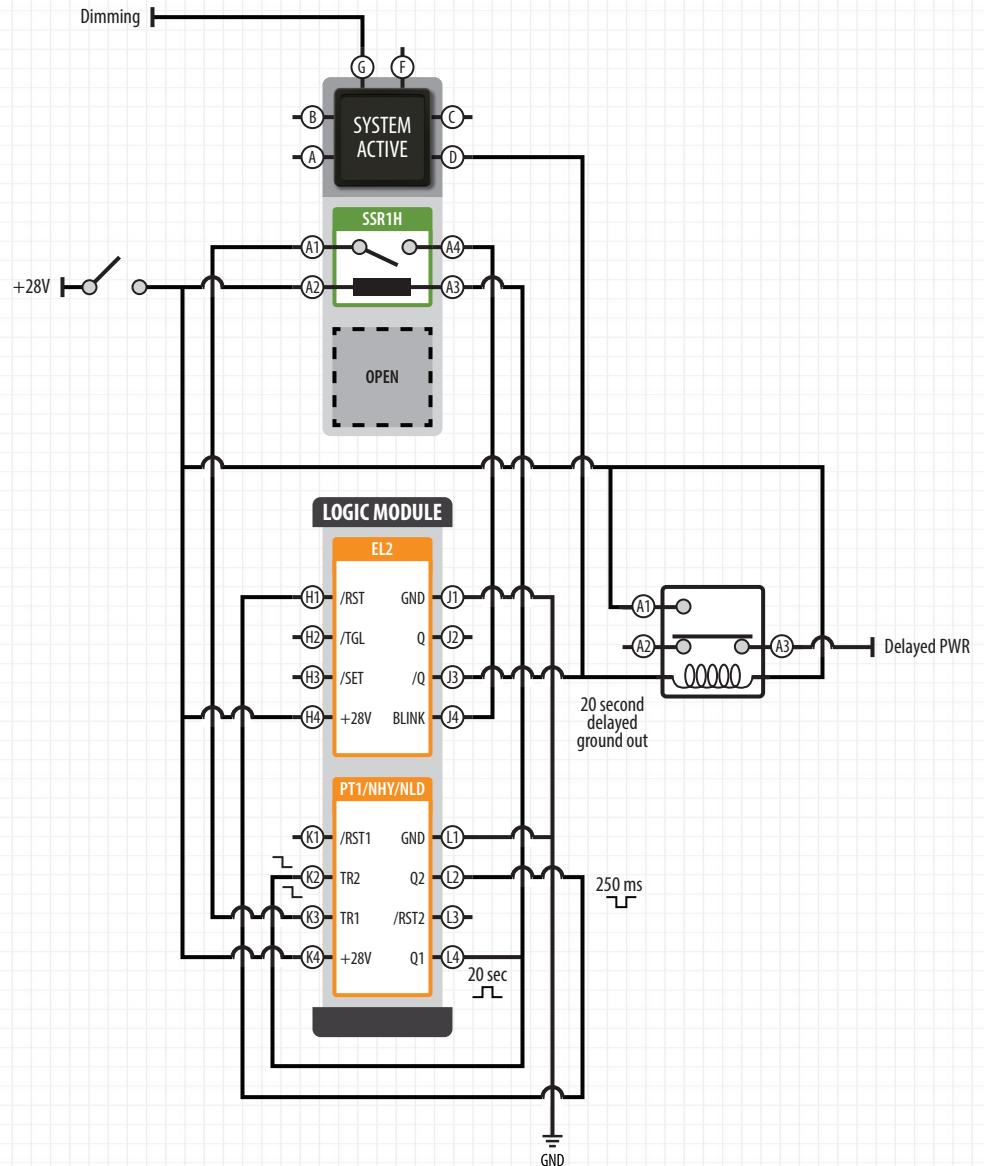
This application provides a delayed electrical system startup. A 20 second power up delay occurs following activation of mission power assuring primary avionics systems have completed power up and have stabilized before auxiliary systems power up. The auxiliary systems depend upon the stability of primary systems for calibration and correct power up.

This application requires a VIVISUN Compact Body with a NEXSYS Solid State Relay (SSR1H) and a separate NEXSYS LOGIC Module (LM) containing an Electronic Latch (EL2) and a Pulse/ Timer (PT1). In this application the LOGIC Module is configured at full capacity containing two (8-Pin) Logic components and the Compact Body which is the "SYSTEM ACTIVE" indicator, serves as the host location for the (4- Pin) SSR1H component.

When power is applied (28V) to (H4) the EL2 will activate with the 1Hz BLINK output (J4) active. This signal is gated by the SSR1H (A4-A1) to the TR1 input (K3) of the PT1. This signal will trip the Channel 1 TR1 input (K3) of the PT1 which is configured with a falling edge input detection resulting in a 20 second normally ground output (L4) that becomes high impedance for the 20 second delay. Also, when the output (Q1) becomes high impedance the SSR1H will go open preventing the input from being re-triggered during the pulse delay. As the 20 second delay concludes the falling edge of the pulse triggers the Channel 2 TR2 input (K2) of the PT1 generating a 250ms ground pulse to Reset the EL2. This condition will remain until power is cycled repeating the delay sequence.

This application performs the function of a time delay relay with all component hardware efficiently contained within the Compact Body and the LOGIC Module. Duplication of this circuit with different time sequences will allow multiple systems to power up, each with a unique delay interval. The PT1 has time specification options of 250ms, 500ms, 1 second, 2.5, 10 and 20 seconds. Additional delay options can also be specified by including an Electronic Rotary (ER1).

To speak with our Technical Support team on how NEXSYS LOGIC Component Technology can be used to add avionics system capabilities or solve your system integration challenges call us at 1-888-848-4786.



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