

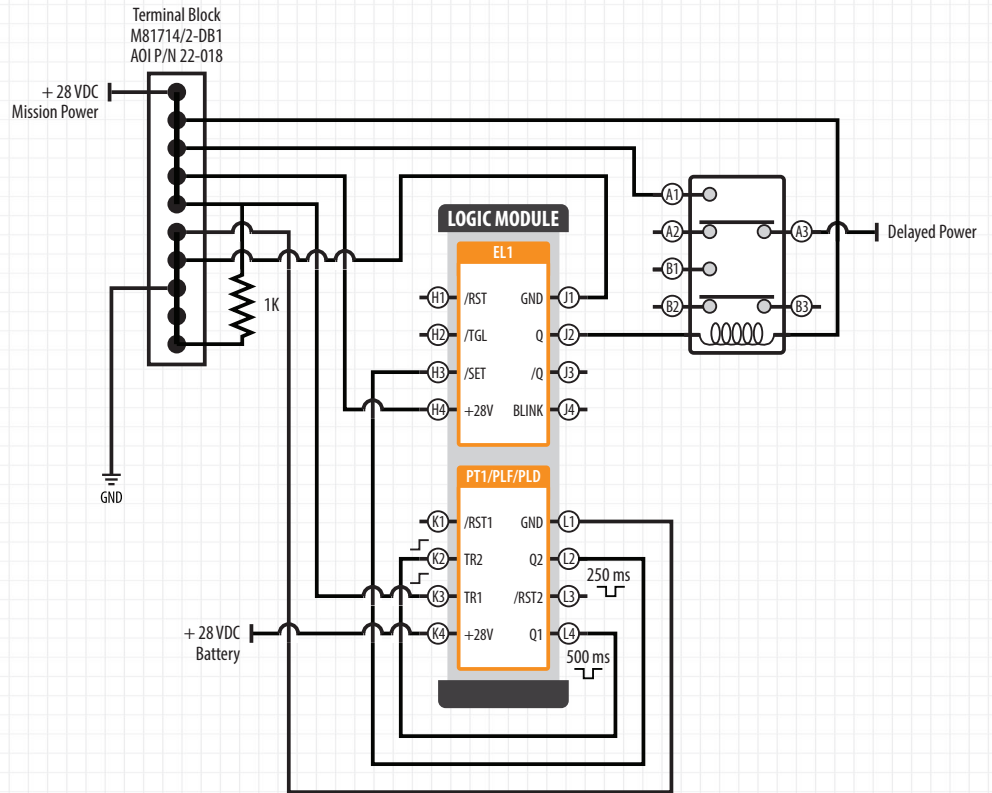
Time Delay Relay Replacement

This solution uses a standalone NEXSYS Module containing an Electronic Latch (EL1) and a Pulse/Timer (PT1). A 1K resistor is used to ensure the mission power input line is pulled to ground when off which enables the PT1 to detect the transition to ON when engaged. The Terminal Block simplifies the wire splicing requirements. The example also requires an external power relay. The PT1 is always energized via battery power to ensure mission power is detected when it is turned on.

The example includes a PT1 configured to detect a rising edge at the TR1 input (K3). When 28VDC is detected the low to high transition initiates a 500ms time delay ground pulse on Q1 (L4) which is fed back to the PT1 TR2 input (K2) which is also configured to detect a rising edge. The resulting rising edge of TR2 (K2) triggers a 250ms pulse that SETS the EL1 /SET input (H3) causing its Q output (J2) to become ground turning on the load relay. Power remains active as long as mission power is on. When mission power is removed for more than 5 seconds the EL1 resets and the system is staged to repeat the power up sequence.

This example initiates a single delay sequence for a single system. The circuit may easily be expanded to coordinate the "power up" of multiple systems with the addition of PT1 components each with a different output delay. The PT1 has timing options of 125ms, 250ms, 500ms, 1 second, 2.5 seconds, 5 seconds, 10 seconds and 20 seconds which may be used to effectively stagger the "power up" of multiple systems.

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



- Channel 1 of the Pulse Timer is the time delay.
- Channel 2 of the Pulse Timer is the pulse used to set the EL1.

To view online, visit www.appliedavionics.com/apx/apx-024.html

