

Three Position Toggle Function, Alternate Action

This application uses an alternate action illuminated pushbutton switch to provide function similar to a traditional three position toggle switch. The primary active state occurs in the unlatched position and is the off state. Each time the switch is latched the active state toggles between SYS1 and SYS2. This example has the same function as a 3 position toggle switch but with the added value of an illuminated legend.

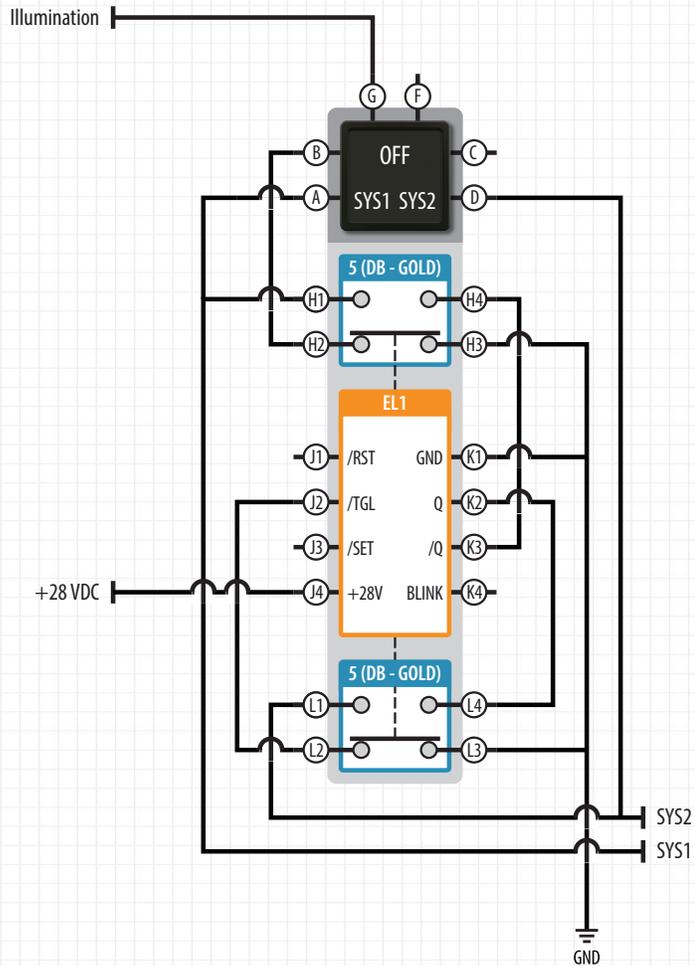
The three position function is achieved with a single alternate action VIVISUN High Capacity Body that contains two double break switch poles and a NEXSYS Electronic Latch (EL1).

The unlatched state is off with the "OFF" legend (B) illuminated from the normally closed contact (H2) of the initial switch pole. When the switch is latched the (H2) pin goes open turning off the "OFF" legend and closing the H1, H4 and L1, L4 contacts. Both contact sets are closed but the EL1 power up state is with only the /Q output (K3) active which illuminates the SYS1 (A) legend through the H1 and H4 contacts and activates the SYS1 function. When the switch is unlatched the OFF legend illuminates again and the SYS1 legend and function are canceled. Unlatching the switch also provides ground to the /TGL input (J2) activating the Q output (K2) setting the unit to provide ground when the switch is latched a second time closing contacts L1 and L4. This provides a ground to illuminate the SYS2 legend and activate the SYS2 function. Each time the alternate action switch is unlatched the function toggles between Q and /Q outputs and the lighted legend and function are only activated when the switch is latched.

This application is an effective alternative to a three way toggle switch with all operational hardware contained in a single alternate action VIVISUN High Capacity Body. This circuit may be used as a base design that may be expanded to include time delay options with the Pulse/Timer or power conditioning flexibilities with the Solid State Relay.

To view a Three Position Toggle Function, Momentary Action, visit www.appliedavionics.com/apx/apx-033.html

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