



Multiple Relay Drive

Description

This circuit is a classic voltage comparator function, with a comparator reference voltage input V_{REF} and an input voltage level V_{IN} . V_{IN} is compared to V_{REF} and the output goes low whenever V_{IN} exceeds V_{REF} , turning on the load. The output of the comparator can easily drive multiple loads, which can include, in this example, two separate relays. The loading can easily be replaced with a combination of other types of loads such as, for example, an inductor plus a capacitor and a resistor in addition to a control gate and a LED indicator. Note that this circuit works with either open-drain or push-pull types of comparator output. If the inductive kick generated by the relay coil is excessive, a reverse biased diode across the relay coil can be added to limit it. There are also relays with diode built-in available on the market. In this case a pull-up resistor is not required even with an open drain output comparator. Alternatively, push-pull outputs can actively pull-up the output to shutdown the load. In either case an output resistor is not needed and its associated power consumption is eliminated.

For full schematic diagram and notes, please register and login at aldinc.com