A REED BI-STABLE (LATCHING) RELAY¹

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Electro-mechanical latching relays are often slow, noisy, or throw on pulse termination where pulse application is preferable. The Clareed bi-stable relay CRT 1065 avoids many of these difficulties. It is rapid, nearly silent, and throws on pulse onset. Rated for 24 v dc nominal operating voltage, this relay contains two 6400 ohm coils, and one SPST switch rated at 1 amp, 250 v, 15 va maximum.

The 15 va contact rating limits the switch to 625 ma maximum at 24 v dc, and less if derated for long life. The relatively low contact rating also makes spark suppression to quench load transients mandatory. The manufacturer rates the unit for 20 million operations (Clare data sheet 951).

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The relay is held in the closed position by a permanent magnet. Proper polarity must be maintained; with reversed polarity in one coil the magnetic flux is reversed in that coil, and both coils will then act either to open or to close the switch, rather than in opposition. Reverse voltage transients will operate the coils in this manner. An RCA IN538 diode in series with the coils is an inexpensive way to avoid this problem. However, certain loads in parallel with the coils (e.g., some electro-mechanical counters) may produce transients which will "get through" the diode. This can usually be avoided. If not, a more expensive diode may be required.

The relay costs approximately \$6.10 in small quantities, and down to \$4.33 for orders of 100 or more. The diodes cost \$.53 each, or \$.35 in lots of 100.