



## Advantages of Circuit Breaker Type Transfer Switches

Circuit breaker type transfer switch designs take advantage of the technology in switching, contact, arc chute and arcing horn designs that continue to be developed by circuit breaker manufacturers. Just as the original designers of “Open Contact” transfer switches saw the advantages in circuit breaker switching and contact technology available at the time, Circuit Breaker manufactures take advantage of the technical advances of today.

Circuit breaker type transfer switch designs utilize devices that are specifically tested and certified (UL #1008) for automatic transfer switch applications. In addition to being certified to the applicable automatic transfer switch standards, circuit breakers have been certified to other more demanding certification tests such as, UL 489, UL 1087. These certified tests results are recognized by the appropriate certifying bodies and should be considered when comparing automatic transfer switch designs.

In addition to taking advantage of state of the art switching and contact technology, Circuit Breaker type designs also take advantage of the inherent stored energy feature of the “spring over center” mechanism in circuit breakers. The “spring over center” mechanism guarantees consistent, reliable opening and closing of the transfer switch contacts when switching in the manual mode. Circuit Breaker type transfer switches are rated to switch manually while under load because of the inherent stored energy design of insulated case circuit breakers.

Open Contact transfer switches clearly state that all sources of load must be disconnected before operating manually. Manually switching a transfer switch that is connected to an electrical source without a stored energy mechanism may cause premature contact wear and could potentially be a safety risk to operators.

Circuit Breaker type designs utilize two separate, enclosed switching components in a common mechanism. By separating the switching components and enclosing the contacts, circuit breaker automatic transfer switch manufactures are able to provide a higher degree of reliability and redundancy. Logically, separate switching components and enclosed contacts also provide superior operator safety.

Circuit Breaker type transfer switch designs can also be provided with circuit breakers with an inherent self-protecting overcurrent trip unit, providing an additional level of protection. With a correctly coordinated electrical system protection scheme, the integral overcurrent trip unit in the automatic transfer switch will not adversely affect system operation or performance.

Utilizing a Circuit Breaker type transfer switch provides the economic benefits of allowing integral overcurrent protection for applications such as service entrance equipment without the need for external circuit breakers, as is typically the case with open contact design transfer switches.