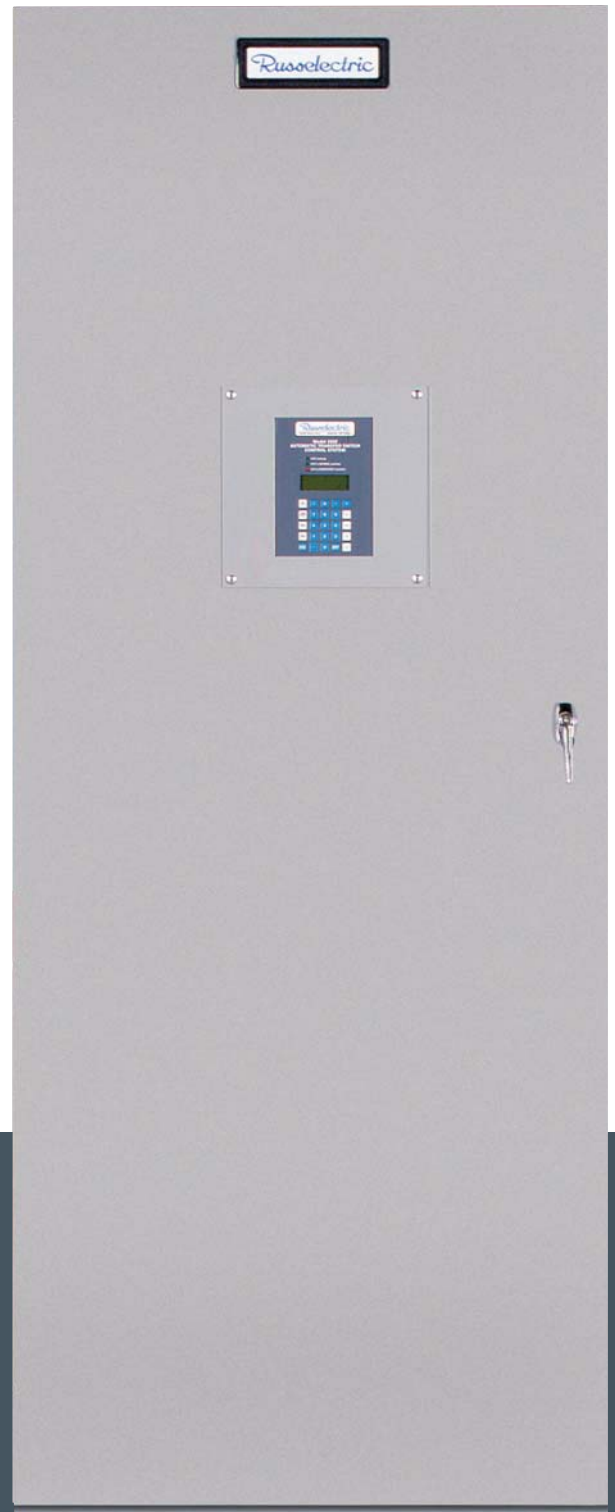


Ruselectric

AUTOMATIC TRANSFER SWITCHES

TYPE RMTD-CT
Dual Motor Operator
Closed Transition



RMTD-CT

Russelectric Closed Transition Automatic Transfer Switches

Russelectric RMTD-CT Closed Transition Transfer Switches offer the advantage of zero power interruption during both testing and automatic retransfer to normal. They are built to the same stringent standards as the company's widely respected break-before-make switches. They are identical in size and carry the same closing and withstand ratings as open transition switches.

High Speed Motors Provide Rapid (less than 100 milliseconds) Transition

To provide the rapid transition necessary to provide the absolute minimum time in which both normal and emergency sources are connected to the load, Russelectric uses special high speed motors. Transfer occurs only when both sources are within an acceptable window of synchronization. Tests show that transition times are substantially lower than 100 milliseconds.

The Industry's Highest 3-Cycle Closing and Withstand Ratings

Russelectric transfer switches have the highest 3-cycle closing and withstand ratings of any switches available today (see chart).

3-Cycle Closing and Withstand Ratings RMS Symmetrical Amperes 480 VAC Based on Testing Under UL-1008

Switch Rating Amperes	Closing and Withstand
100 - 400	42,000
600 - 800	65,000
1000 - 1200	85,000
1600 - 4000	100,000

These 3-cycle ratings mean that Russelectric transfer switches are not restricted to specific manufacturer's circuit breakers, but are fully rated and labeled for use with any manufacturer's circuit breaker with instantaneous trip. These unrestricted ratings are extremely important, since they allow engineers to apply switches without problems of coordination with different breaker types.

Underwriters' Laboratories, Inc. requires a transfer switch to be able to close in on the same amount of fault current as it can withstand before they allow it to be

listed with a short circuit rating. In view of this, fuse protection becomes mandatory where extremely high short circuit current is available. All Russelectric transfer switches have closing and withstand ratings of 200,000 amperes when coordinated with current limiting fuses.

Sequence of Operations

1. Transfer upon loss of normal source
Upon reduction of normal source voltage below a preset value after a preset time delay, the Russelectric RMTD-CT will signal the engine generator to start. When the engine generator has reached acceptable voltage and frequency, the transfer switch will transfer to the engine generator source in open transition. The load will be served by the engine generator until the ATS detects return of the normal source to acceptable values. After a preset time delay to allow stabilization of the normal source, the ATS is ready to retransfer.

2. Retransfer upon return of power from the normal source

When the Russelectric RMTD-CT is ready to retransfer, a synch-check function will initiate transfer when the engine generator is in synchronism with the utility source. The open contacts (normal source) will close followed by the opening of the closed contacts (emergency source), providing closed transition transfer. The period of time in which both sets of contacts are closed will be less than 100 milliseconds. A separate timer will monitor the closed transition period, and will initiate a signal to reopen the set of contacts that have just been closed, should the closed transition time exceed the setting of the timer. In addition, a signal will be available for alarm or remote breaker tripping should the closed transition period exceed the timer's setting. Should generator power fail at any time after utility power has returned, but before the stabilization time delay relay has timed out, the ATS will automatically retransfer, open transition, to the utility source.

3. Load test

Upon initiation of load test, the ATS will signal the engine generator to start. When the engine generator has reached acceptable voltage and frequency, a synch check function will initiate transfer to the

engine generator in closed transition by closing the emergency source contacts and then opening the normal source contacts. The closed transition time will be less than 100 milliseconds. After the load test period, retransfer shall be closed transition to the normal source as described above under retransfer to the Normal Source.

The timer, monitoring excessive closed transition transfer time, will be active during this operation. Failure of the generator source during load test will result in automatic open transition retransfer to the normal source.



Microprocessor-Based Control System

The Russelectric Model 2000 microprocessor-based control system is pre-programmed at the factory to control all of the operational functions of the automatic transfer switch, including standard accessories and optional accessories as specified by the purchaser.

The controller also senses the normal source and emergency source voltages, provides LED indicators to show whether the ATS is in the normal or emergency position, and to confirm that the CPU is running.

For further information or a specification on RMTD-CT switches, consult factory.

Russelectric

South Shore Park, Hingham, MA 02043-4387
TEL: 781 749-6000 ■ FAX: 781 749-4205
e-mail: info@russelectric.com
www.russelectric.com