
Zenith ZTSM & ZTGM

Manual Transfer Switches

Introduction

Some emergency power installations require multiple automatic transfer switches, each feeding a specific load. In many installations where non-critical loads are being served, specifications may call for manual or non-automatic transfer switches. This method is used because operating personnel are present and the loads are not of a critical nature requiring unattended automatic operation.

Because of the less critical function of this equipment, no specific industry requirements have been established. As a result, devices such as double throw disconnect switches have been used. Since the non-automatic transfer switches are part of the emergency power supply system, they should have the same UL 1008 electrical ratings as the automatic transfer switches feeding critical loads. In the event of a short circuit, the non-automatic transfer switches must have the same withstand current ratings as the automatic transfer switches and they must be as rugged and dependable.

Features and Benefits

To meet this need, ABB has developed the Zenith ZTSM and ZTGM Series electrically operated, mechanically held non-automatic transfer switches. These units feature the same construction as the Zenith ZTS and ZTG Series of automatic transfer switches and are supplied with the same electrical ratings and mechanical features. The manual series is electrically operated by means of push buttons mounted on the switch enclosure or at a remote location. Unlike the above mentioned handle-operated disconnect switches, the Zenith ZTSM and ZTGM Series offers additional protection by incorporating Source 1 and Source 2 voltage sensing relays which will not permit the switch to be manually transferred unless the source to which it is being transferred is at 90% of its rated voltage. In addition, the Zenith ZTSM and ZTGM Series are tested and listed per UL 1008 standards. Manual handle-operated, double throw disconnect switches are not listed to this critical standard.



Features

- UL, CSA and IEC Listed
- Amperage sizes: 40, 80, 100, 150, 200², 225, 260, 400, 600, 800, 1000, 1200, 1600, 2000, 2600¹, 3000, 4000²
- Poles: 2, 3 or 4
- Available for operation on all standard voltage systems
- Zenith ZTSM Withstand Current Ratings: Same as Zenith ZTS Series automatic transfer switches
- Zenith ZTGM Withstand Current Ratings: Same as Zenith ZTG Series automatic transfer switches
- Available in standard, delayed and closed transition versions²
- Bypass-Isolation units (Zenith ZBTS Series) also available²
- May be supplied in NEMA1, 3R, 4, 4X, 12 enclosures or open type
- Third-party Seismic Certification to IBC 2006, 3.2g @ Ip = 1.5 (operation during event)

Optional Accessories for Zenith ZTSM

- A Auxiliary Contact**
- A1 Operates on Source 1 failure (SPDT)
 - A1E Operates on Source 2 failure (SPDT)
- K Frequency Meter**
- M Meters:**
- M1 Ammeter: Single phase
 - M2 Ammeter: Three phase with phase selector switch
- S1 Three-position selector switch (Stop/Test/Automatic)**

Optional Accessories for Zenith ZTGM

- E Engine Start Contact**
- P1 Time Delay to Engine Start:**
Standard setting 3 seconds, adjustable 0-10 second
- U Time Delay for Engine Cool Down:**
Allows engine to run unloaded after switch retransfer to Source 1; standard setting 5 minutes, adjustable 0-5 minutes

Standard Accessories

- A Auxiliary Contacts:**
- A3 Closed when switch is in Source 2 position
 - A4 Closed when switch is in Source 1 position
- L Indicating LED Pilot Lights:**
- L1 Indicates switch in Source 2 position
 - L2 Indicates switch in Source 1 position
 - L3 Indicates Source 1 available
 - L4 Indicates Source 2 available
- YE/YN Single Pushbutton to Source 1 and 2**

Notes

- ¹Available on Zenith ZTGM Series Only
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Suggested Specifications

Please refer to ABB’s complete series of transfer switch specifications for your exact configuration. The following is a suggested addendum to those guide specs.

The manual (non-automatic) transfer switch(es) shall be of the same electrical ratings, withstand current ratings and main contact construction as the automatic transfer switch(es).

Switch(es) shall be _____ amp, _____ volt, _____ poles as indicated on the drawings.

Accessory features shall include: (refer to list above). Switch(es) shall be UL 1008 listed and shall be ABB’s Zenith ZTSM Series (or ZTGM as applicable) or approved equal.

Many additional accessories are available to meet installation requirements. Consult your ABB representative with your project needs.

For UL 1008 withstand and closing ratings, dimensions and weights and external power connection size and quantity, please refer to the appropriate ABB publication.

ABB Zenith Controls, Inc.
305 Gregson Drive
Cary, NC 27511
24-hour support:
ABB Technical Services
+1 (800) 637-1738

