



## GE Zenith Controls

### **An Introduction to the ZTSCT Series of Closed Transition Transfer Switches**

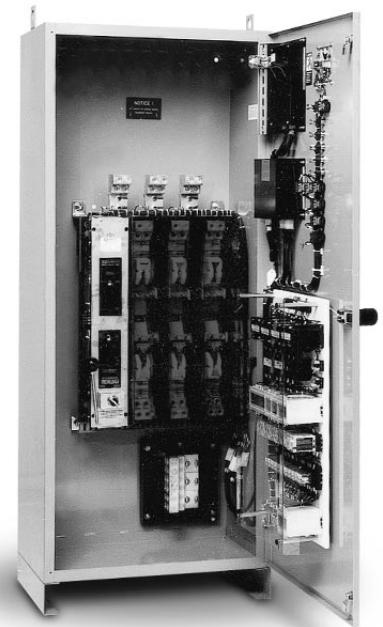
The GE Zenith ZTS Series of transfer switches has become a hallmark of quality and performance since its introduction. The reliability that results from superior design and heavy duty construction has made the ZTS a standard in the industry for critical installations. Our emphasis on research and development, design improvements, materials, manufacturing methods, quality assurance, and service yields products that have been proven in tens of thousands of applications.

Since the first ZTS units were installed, our engineering staff has been dedicated to the improvement and expansion of our line. Today, GE Zenith offers the widest selection of transfer switch products worldwide.

- ZTS Automatic Transfer Switches  
40-4000 Amps
- ZTSD Delayed Transition Transfer Switches  
40-4000 Amps
- ZTSM Manual Transfer Switches  
40-4000 Amps
- ZTSCT Closed Transition Transfer Switches  
100-4000 Amps
- ZBTS Automatic Transfer/Bypass Switches  
100-4000 Amps
- ZBTSD Delayed Transition Bypass Switches  
100-4000 Amps
- ZBTSCT Closed Transition Bypass Switches  
100-4000 Amps
- ZTS-MV Medium Voltage Transfer Switches  
5-15 kV

All ZTS products meet or exceed industry requirements to allow specification and installation with confidence.

- UL 1008 listed through 480 VAC
- CSA C22.2 No. 178 listed through 600 VAC
- IEC 947-6-1 listed through 480 VAC



- Codes and Standards
  - ✓ NFPA 70, 99, 101, 110
  - ✓ IEEE 446, 241
  - ✓ NEC 517, 700, 701, 702
  - ✓ NEMA ICS2-447
- Controls tested in accordance with:
  - ✓ IEEE 472 (ANSI C37.90A)
  - ✓ EN55022 Class B (CISPR 11)  
(Exceeds EN55011 & MILSTD 461 Class 3)
  - ✓ EN61000-4-2 (Level 4)
  - ✓ EN61000-4-3 (ENV50140) 10 v/m
  - ✓ EN61000-4-4
  - ✓ EN61000-4-5, IEEE C62.41 (1.2 X 50ms, 5 & 8 kV)
  - ✓ EN61000-4-6 (ENV50141)
  - ✓ EN61000-4-11
- Enclosures meet the requirements of:
  - ✓ UL 508, 50
  - ✓ ANSI C33.76
  - ✓ ICS 6
  - ✓ NEMA 250
- Quality System:
  - ✓ ISO 9001 Registered

### Electrical Ratings

- Ratings 100 to 4000 amperes
- 2, 3 or 4 Poles
- Open type, NEMA 1, 3R, 4, 4X and 12
- Available in Transfer Switch (ZTSCT) or Transfer/Bypass Switch (ZBTSCT) styles
- Suitable for emergency and standby applications on all classes of load, 100% tungsten rated through 400 amps
- UL 1008 listed at 480 VAC
- CSA certified at 600 VAC
- IEC listed at 480 VAC

### Performance Features

- Incorporates the applicable features of the ZTS and ZBTS Series
- Source parallel time of less than 100 milliseconds
- Closed transition operation (no power interruption) during transfer and retransfer when sources are within specified parameters
- Open transition transfer operation is initiated upon a source failure
- Available in ZTSCT (utility-generator), ZTSCTU (utility-utility) and ZTSCTM (manual) configurations

### Design and Construction Features

- Electrically operated, mechanically held
- Segmented silver tungsten alloy contacts with separate arcing contacts on all sizes
- Arc quenching grids, enclosed arc chambers, and wide contact air gap
- Components accessible for inspection and maintenance without removal of the switch or the power conductors
- Standard annunciation and operational selection package for user interface
- Active control of the generator governor not required, but is available as an option

An automatic transfer switch is the single vital link between utility and alternate power supplies. Yet it is the very operation and testing of this device that may be the cause of concern for many users. Loads such as electronic equipment, HID lighting, motor starters, etc., are sensitive to even the 30-100 millisecond outage experienced during a typical transfer switch operation. Therefore, testing and use of the standby system is not optimized and necessary system checks are not performed because of concerns about the effects of transfer.

In addition to these applications, opportunities for peak shaving and utility incentive rates may be passed over because of the inability to accept the short power interruptions inflicted during operation. In response to the needs of these installations, GE Zenith offers the ZTSCT Closed Transition Transfer Switch and ZBTSCT Closed Transition Transfer/Bypass Switch.

These products utilize the proven switching technology of the ZTS/ZTSD Series of transfer switches combined with controls developed during GE Zenith's years of experience in the manufacture of synchronizing switchgear. They provide the capability to transfer in a closed transition mode when both sources are within preset parameters. Utilizing GE Zenith's high speed drive system, the overlap of the normal and alternate sources is less than 100 milliseconds. When one source is not within specified limits, such as during a power failure, the ZTSCT operates in an open transition mode.

### Description and Operation

Closed transition switches have two basic modes of operation. During a failure of one source or an out of specification condition, the ZTSCT Series operates as a standard delayed transition switch (ZTSD Series). This sequence allows clear separation of an unreliable source from an available one.

Closed transition operation takes place when both sources are within preset voltage and frequency parameters and the phase angle differential is less than five degrees. The closed transition sequence may be initiated by the test switch, a load exerciser clock, peak shaving controls or special utility incentive rate signals.

### Application Information:

- Closed transition switches require a momentary (less than 100 ms) paralleling of the standby source with the utility. This usually requires the owner to obtain approval of the installation by the utility.
- The purpose of a closed transition switch is to prevent the momentary outages that occur during

transfer of a standard unit. This technology is not normally a substitute for a UPS system as it does not provide stored energy capability but rather acts in a complementary fashion.

#### • System application requirements:

The generator set must be provided with an isochronous governor stable at a frequency differential of not more than +/- .25% from 60 Hz.

A 24VDC shunt trip circuit is strongly suggested on one of the feeder breakers, normally the generator feeder. Power for this trip circuit and alarm system backup must be supplied from the engine starting batteries or an equivalent source.

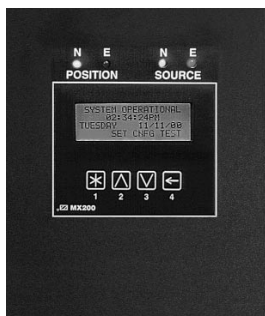
#### • Soft Load:

When conditions are most sensitive to generator voltage drop or frequency dips, GE Zenith can provide a variation of the closed transition method of transfer which combines the attributes of a ZTSCT with generator paralleling switchgear. Employing automatic synchronizing along with active loading controls and a greater interconnect (parallel) time to form a soft-loading/closed transition ATS, GE Zenith Controls the response of the engine generator set to varying load conditions.

As this method of transfer interconnects the utility and generator sources for a longer period (seconds rather than cycles), greater coordination with the utility company is necessary. Typically, more sophisticated relay protection schemes will be required. Therefore we suggest specifying option SL on your ZTSCT (SL) or ZBTSCT (SL) unit and consulting with your GE Zenith representative early in the project cycle to ensure the utmost in support.

### The Indication and Operational Selection package contains the following:

- |                                    |   |
|------------------------------------|---|
| • Sources in Synchronism (lamp)    | • Open/Closed Transition Selector Switch (key operated) |
| • Failure to Synchronize (lamp)    | • Automatic/Test Operation Switch                       |
| • Normal Failure to Open (lamp)    | • Lockout Reset (key operated)                          |
| • Emergency Failure to Open (lamp) | • Shunt Trip Reset (key operated)                       |
| • Shunt Trip Activated (lamp)      | • Annunciator Horn with silence button and lamp         |



GE Zenith's MX200 advanced microprocessor controller manages switch operation via a convenient touchpad which provides indication setting and diagnostic capabilities. As an embedded digital controller, the device offers high reliability and ease of unattended operation across a range of applications.

The MX200 controller is designed for the most demanding transfer or bypass switch applications. The MX200 may be specified with standard option Modules 12 or 25 or it may be programmed to use any or all of the most commonly used options for today's transfer switch equipment. It may also be equipped with our ZNET200 remote communication interface for use with annunciators, modems or PC control.

Standard features include pass code protection, load/no load/fast test feature, commit/no commit transfer selection, backlit/temperature compensated LCD display, watchdog circuit for microprocessor operation, diagnostic displays for ease of maintenance, source connection and transfer data logging and many additional features. The MX200's weather and tamper-resistant control interface make it an ideal choice for a wide range of applications.

Reference GE Zenith Bulletin PB-1402 for more information on this industry leading control system.

*Certain applications may require a discreet logic control panel such as our Solid State Relay Control Panel (SSRCP). GE Zenith can meet these special needs with the highest quality assemblies. Consult the GE Zenith factory with your specific requirements and applications to determine the best power solution.*

#### Performance Features

- UL 1008 listed
- Ringing wave immunity per IEEE 472 (ANSI C37.90A)
- Conducted and Radiated Emissions per EN55022 Class B (CISPR 11) (Exceeds EN55011 & MILSTD 461 Class 3)
- ESD immunity test per EN61000-4-2 (Level 4)
- Radiated RF, electro-magnetic field immunity test per EN61000-4-3 (ENV50140) 10v/m
- Electrical fast transient/burst immunity test per EN61000-4-4
- Surge immunity test per EN61000-4-5 IEEE C62.41 (1.2 X 50µs, 5 & 8 kV)
- Conducted immunity test per EN61000-4-6 (ENV50141)
- Voltage dips and interruption immunity EN61000-4-11

#### User-Friendly Operation

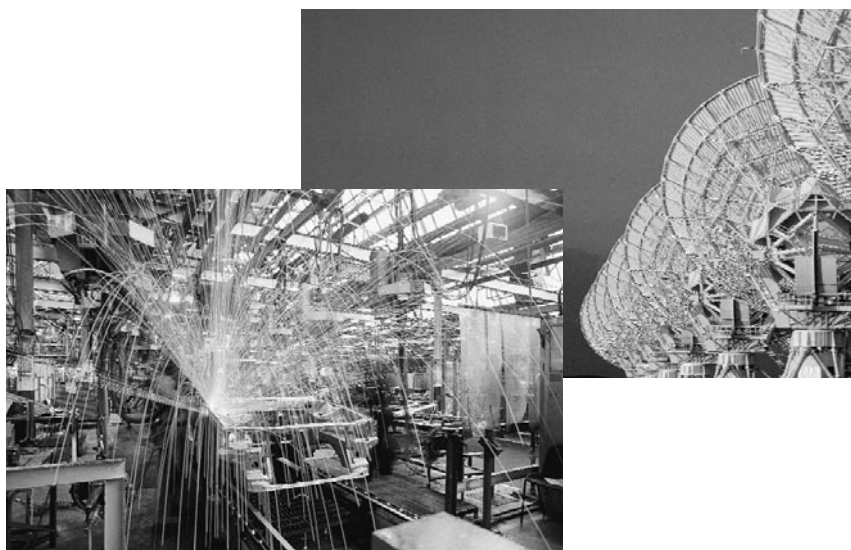
- Multipurpose display: LEDs for continuous monitoring of switch position and source availability; a four line by twenty character LCD display for settings, functions, programming and annunciation
- Through-the-door programming and display
- Simplified keypad entry – menu-driven system is designed for ease of use
- Built-in diagnostics with displays for ease of troubleshooting

#### Additional Features

- Built-in programmable exerciser uses separate microcontroller with independent battery back-up to serve as clock/calendar – battery failure will not affect switch operation
- User settings are unaffected by power outages
- External communication available through ZNET – LonWorks or Modbus network interface (RS 232, RS 485 and other options available) via optional GE Zenith hardware and software

#### Technical Benefits

- Separate line voltage components for controller isolation
- Inputs optoisolated for high electrical immunity to transients and noise
- Built-in electrical operator protection
- Simplified maintenance – major components are easily replaceable
- Close differential under-voltage sensing of the normal source
- Voltage and frequency sensing of the emergency source (all settings are adjustable)



The ZTSCT and ZBTSCT switches include the features listed below as standard equipment in addition to the normal features of all ZTS units.

## GE Zenith's Option Module 12 features:

<b>A3</b>	Emergency Position Indicating Contact
<b>A4</b>	Normal Position Indicating Contact
<b>E</b>	Engine Start Contact
<b>L1</b>	Emergency Position Indicating Lamp
<b>L2</b>	Normal Position Indicating Lamp
<b>L3</b>	Normal Source Available Indicating Lamp
<b>L4</b>	Emergency Source Available Indicating Lamp
<b>P1</b>	Time Delay on Engine Start adjustable .5 - 6 seconds
<b>T</b>	Time Delay on Retransfer adjustable 0 - 60 minutes
<b>U</b>	Time Delay for Engine Cooldown adjustable 0 - 60 minutes
<b>W</b>	Time Delay for Transfer to Emergency adjustable 0 - 5 minutes
<b>DT/DW</b>	Delayed Transfer timers for use when open transfer is selected

## A Auxiliary Contacts:

- A1** Operates on normal line failure (SPDT)
- A1E** Operates on emergency line failure (SPDT)
- A3** Closed when switch is in emergency position
- A4** Closed when switch is in normal position
- A6** Deenergizes external motor control circuit 5 seconds (adjustable) prior to transfer in either direction

## B Battery Chargers

**C** Plant Exerciser (no load): Automatically starts the generator to run unloaded at selected intervals (7 day clock operation)

**C/D** Plant Exerciser (load/no load): Allows the generator to start and run unloaded or to simulate a power failure, start generator and run under load; specify weekly, bi-weekly or calendar (365 day) schedule

## E Engine Start Contact

**F** Fan Contact: Closed when engine runs (S.P.N.O.)

**H** Time Delay - Engine Start: Non-adjustable delay on starting engine after normal failure; factory set at 3 seconds; includes accessory E

## HT Heater and Thermostat

**J** Frequency Sensors: All ZTS Automatic Transfer Switches having an engine generator as the emergency source are supplied with a sensor to prevent transfer until the emergency power reaches 90% of rated voltage and 95% of frequency (adjustable)  
*Additional frequency sensors are available:*

- J1N** Adjustable under-frequency sensor (normal)
- J2** Adjustable solid state close differential over/under-frequency sensor (specify if for normal and/or emergency source) (J2N, J2E)

## K Frequency Meter

## L Indicating LED Pilot Lights:

- L1** Indicates switch in emergency position
- L2** Indicates switch in normal position
- L3** Indicates normal source available
- L4** Indicates emergency source available

## M Meters:

- M1** Ammeter: Single phase
- M2** Ammeter: Three phase with phase selector switch
- M3** Voltmeter: Single phase
- M4** Voltmeter: Three phase with phase selector switch

**P1** Time Delay - Engine Start: Adjustable 0.5 to 10 seconds

**Q2** Peak Shave/Remote Load Test: Input for peak shave or remote load test; includes automatic return to normal if emergency source fails and normal is present; 120 VAC or 24 VDC

**Q3** Inhibit Transfer: Input circuit to inhibit transfer to emergency; 120 VAC or 24 VDC

**Q7** Inhibit Transfer: Input circuit to inhibit transfer to normal; 120 VAC or 24 VDC

**R1** Over-voltage Sensing: Normal (1 or 3 phase)

**R7** Over-voltage Sensing: Emergency (1 phase)

**R8** Over-voltage Sensing: Emergency (3 phase)

**R15** Load Shed Control (ZTS): Input to remote circuit for load shed from emergency to "dead" normal; 120 VAC or 24 VDC

**R15D** Load Shed Control (ZTSD): Input to remote circuit for load shed from emergency to center off position; 120 VAC or 24 VDC

**R16** Phase Sequence Sensing

**R17** Under-voltage Sensing: Emergency (3 phase)

**R50** In-Phase Monitor: Prevents transfer until two sources are in relative synchronism

## S Selector and Disconnect Switches:

- S1** Three-position selector switch (Stop/Test/Automatic)
- S2** Disconnect switch in series with accessory E to disconnect engine starting circuit
- S3** Source selector switch circuit; to select either source as primary
- S5** Auto/manual retransfer selector switch
- S12** Auto/manual operation for ATS

**T** Time Delay on Retransfer to Normal: To delay retransfer to normal source (immediate retransfer on generator set failure); standard setting 30 minutes, adjustable 0-60 minutes

**T3/W3** Time Delays - Presignal for Auxiliary Control: Prior to transfer between two live sources in either direction, provides an adjustable (factory set at 20 seconds) resignal contact closure

**U** Time Delay for Engine Cool Down: Allows engine to run unloaded after switch retransfers to normal; standard setting 5 minutes, adjustable 0-60 minutes

**W** Time Delay on Transfer to Emergency: To delay transfer to emergency after normal source failure; standard setting 1 second, adjustable 0-5 minutes

**YEN** Pushbutton Bypass of T & W Timers

**ZNET** Network communications interface card

**6** Test Switch: A pushbutton (momentary) test switch is standard on all ZTS Automatic Transfer Switches; MX200 microprocessor switches are standard with load/no load and fast test (with load) modes and are pass code protected; other selector switches, available at additional cost, include:

- 6A** Maintained Auto - Maintained Test
- 6B** Maintained Auto - Momentary Test (key operated)
- 6C** Maintained Auto - Maintained Test (key operated)

**Note:** Pass code access standard on MX200 normally eliminates the need for key operated switch

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

ZTSCT Series Closed Transition Transfer Switches								
Ampere Rating	Poles	NEMA 1 Enclosed			Reference Figure	Weight		Application Notes
		Height (A)	Width (B)	Depth (C)		Open Type	NEMA 1	
100, 150 225, 260 400	2, 3 4	74 (188) 74 (188)	30 (76) 30 (76)	19.75 (50) 19.75 (50)	B B	170 (77) 175 (79)	435 (197) 440 (200)	1 – 8
600	2, 3 4	74 (188) 74 (188)	30 (76) 30 (76)	19.75 (50) 19.75 (50)	B B	235 (107) 255 (116)	500 (227) 520 (236)	1 – 8
800, 1000 1200	3 4	74 (188) 74 (188)	30 (76) 40 (102)	19.75 (50) 19.75 (50)	B B	260 (118) 280 (127)	525 (238) 610 (277)	1 – 8
1600 2000	3 4	90 (229) 90 (229)	40 (102) 40 (102)	48 (122) 48 (122)	C C	415 (188) 520 (236)	1140 (517) 1305 (592)	1 – 8
3000	3 4	90 (229) 90 (229)	40 (102) 40 (102)	48 (122) 48 (122)	C C	535 (243) 740 (336)	1260 (572) 1465 (665)	1 – 8, 13, 14
4000	3 4	90 (229) 90 (229)	40 (102) 46.5 (118)	60 (152) 60 (152)	C C	840 (381) 1095 (497)	1665 (755) 1920 (871)	1 – 8, 12, 13, 14

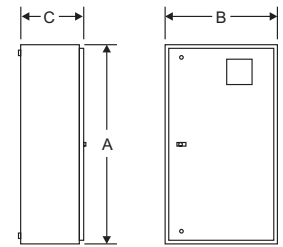


Figure A

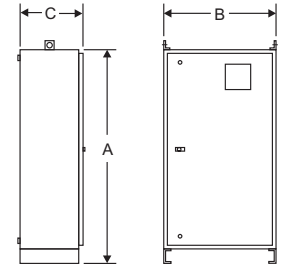


Figure B

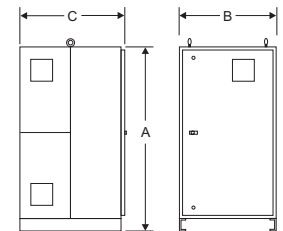


Figure C

### Application Notes:

- Metric dimensions (cm) and weights (Kg) shown in parenthesis adjacent to English measurements in inches and pounds.
- Includes 1.25" door projection beyond base depth. Allow a minimum of 3" additional depth for projection of handle, light, switches, pushbuttons, etc.
- All dimensions and weights are approximate and subject to change without notice.
- Special enclosures (NEMA 3R, 4, 12, etc.) dimensions and layout may differ. Consult the GE Zenith factory for details.
- Normal and emergency may be ordered inverted on any switch. The load may be inverted 600-1200 amps. Consult the factory for details.
- Special lug arrangements may require different enclosure dimensions. For certified drawings, contact the GE Zenith factory.
- Packing materials must be added to weights shown. Allow 15% additional weight for cartons, skids, crates, etc.
- Add 4" in height for removable lifting lugs.
- ZBTS/ZBTS-D 600-1200 amp shipped horizontally (on rear of unit).
- ZBTS 600-1200 standard configuration is top entry. Rear adapter bay required for bottom entry. Consult GE Zenith factory for details.
- Bypass switch weights for 1600-4000 amp units vary up to 10% based on connection configurations. Weights shown are for estimation only.
- 4000 amp depth dimension shown is standard. Depending on your cable/conduit requirements you may desire a deeper enclosure. Consult the GE Zenith factory for further details.
- Lug adapters for 3000-4000 amp limits may be staggered length for ease of entrance. Consult the GE Zenith factory for details.
- Ventilation louvers on rear of enclosure at 3000 and 4000 amps. One side or rear must be clear for airflow with standard cable connections.

ZTS Accessory Matrix			
OPTION	MX200 (Module 25)	MX200 (Module 12)	SSRCP (Module 9)
A1	S	0	0
A1E	S	0	0
A3	S	S	S
A4	S	S	S
A6	S	0	0
C/D	S*	0	0
C/D-14	S*	0	N
C/D-365	S*	0	0
E	S	S	S
J2E	S	0	0
J2N	S	0	0
L1	S	S	S
L2	S	S	S
L3	S	S	0
L4	S	S	0
P1	S	S	S
Q2**	S	0	0
Q3**	S	0	0
R1	S	0	0
R8	S	0	0
R16	S	0	0
R17	S	0	0
R50***	S	S	0
T	S	S	S
U	S	S	S
W	S	S	S
YEN	S	0	0

\* Please indicate choice when ordering – 7 days provided unless specified otherwise (MX200 Module 25)      0 = Optional  
 \*\* Standard voltage 120 VAC; 24 VDC available upon request      S = Standard  
 \*\*\* R50 not supplied on delayed transition models      N = Not available

AL-CU UL Listed Solderless Screw-Type Terminals for External Power Connections					
Switch Size Amps	Normal, Emergency & Load Terminals		Switch Size Amps	Normal, Emergency & Load Terminals	
	Cables per Pole	Range of Wire Sizes		Cables per Pole	Range of Wire Sizes
40-150	1	#8 to 3/0 AWG	800/1000/1200	4	#2 AWG to 600 MCM
225		#6 AWG to 250 MCM	1600	Line and load terminals are located in rear and arranged for bus bar connection. Terminal lugs are available at additional cost. Contact factory for more details.	
260		#6 AWG to 350 MCM	2000		
400		#4 AWG to 600 MCM	3000		
600	2	#2 AWG to 600 MCM	4000		

### Notes:

- Special terminal lugs and neutral bars are available at additional cost. Contact factory and advise cable sizes and number of conductors per pole.
- Fully rated solid neutral (3x standard normal power connection) provided when required by system voltage.
- Normal and emergency may be ordered inverted on any switch. Load may be inverted 600-1200 amps. Consult the factory for details.
- Lug adapters for 3000-4000 amp units may be staggered length for ease of entrance. Consult the factory for details.
- Special lug arrangements may require different enclosure dimensions. For certified drawings, contact the GE Zenith factory.

### Module 9

Includes basic ATS controls for time delay engine start/stop, time delay transfer/retransfer and position indicators.

### Module 12

Includes those options in Module 9 as well as adding source availability indication and an in-phase monitor (or delayed transition).

### Module 25

Includes those options in Module 12 as well as adding source availability auxiliaries, load/no load clock exerciser, over/under-voltage and frequency of both sources, peak shave/remote test and transfer inhibit interfaces, phase sequence protection, timed motor load disconnect circuit and time delay bypass pushbutton.



GE Zenith ZTS Series Automatic Transfer Switches have been subjected to an extensive test program to show that they comply with and exceed UL 1008 standards, as well as the various performance specifications used by most government agencies and major electrical engineering firms throughout the world. The primary test to ensure the quality and dependability of an automatic transfer switch is its ability to close into and withstand high fault currents. The table shows the Underwriters Laboratories and Canadian Standards certified withstand and closing current ratings in symmetrical RMS amperes at 480 and 600 volts AC.

GE Zenith ZTS Switches Rated for Total Systems or Motor Loads (1)		Withstand and Closing Current Ratings per UL 1008 and CSA							
GE Zenith Model No.	UL 1008 ZTS Switch Rating	Current Limiting Fuse			Specific Coordinated Breaker Rating (3)			Any Molded Case Breaker Rating	
		Maximum Fuse Size Amps	Maximum Circuit Amps at 480 VAC (UL)	Maximum Circuit Amps at 600 VAC (CSA)	Maximum Circuit Breaker Size Amps	Maximum Circuit Amps at 480 VAC (UL)	Maximum Circuit Amps at 600 VAC (CSA)	Maximum Circuit Amps at 480 VAC (UL)	Maximum Circuit Amps at 600 VAC (CSA)
ZTS4 (2)	40	50	200,000	150,000	400	30,000	22,000	10,000	10,000
ZTS8 (2)	80	100	200,000	150,000	400	30,000	22,000	10,000	10,000
ZTS10 (2)	100	125	200,000	150,000	400	30,000	22,000	10,000	10,000
ZTS15 (2)	150	200	200,000	150,000	400	30,000	22,000	10,000	10,000
ZTS22 (2)	225	300	200,000	150,000	400	42,000	35,000	30,000	25,000
ZTS26 (2)	260	350	200,000	150,000	400	42,000	35,000	30,000	25,000
ZTS40 (2)	400	500	200,000	150,000	800	50,000	42,000	35,000	30,000
ZTS60	600	750	200,000	150,000	800	65,000	50,000	50,000	42,000
ZTS80	800	1000	200,000	150,000	1200	65,000	65,000	50,000	42,000
ZTS100	1000	1250	200,000	150,000	1600	85,000	65,000	50,000	42,000
ZTS120	1200	1500	200,000	150,000	1600	85,000	65,000	50,000	42,000
ZTS160	1600	2000	200,000	150,000	2500	100,000	85,000	100,000	85,000
ZTS200	2000	2500	200,000	150,000	2500	100,000	85,000	100,000	85,000
ZTS300	3000	4000	200,000	150,000	4000	100,000	85,000	100,000	85,000
ZTS400	4000	6000	200,000	150,000	5000	100,000	85,000	100,000	85,000
ZBTS10 (2)	100	125	200,000	150,000	800	50,000	42,000	35,000	30,000
ZBTS15 (2)	150	200	200,000	150,000	800	50,000	42,000	35,000	30,000
ZBTS22 (2)	225	300	200,000	150,000	800	50,000	42,000	35,000	30,000
ZBTS26 (2)	260	350	200,000	150,000	800	50,000	42,000	35,000	30,000
ZBTS40 (2)	400	600	200,000	150,000	800	50,000	42,000	35,000	30,000
ZBTS60	600	750	200,000	150,000	800	65,000	50,000	50,000	42,000
ZBTS80	800	1000	200,000	150,000	1600	85,000	65,000	50,000	42,000
ZBTS100	1000	1250	200,000	150,000	1600	85,000	65,000	50,000	42,000
ZBTS120	1200	1500	200,000	150,000	1600	85,000	65,000	50,000	42,000
ZBTS160	1600	2500	200,000	150,000	2500	100,000	85,000	100,000	85,000
ZBTS200	2000	2500	200,000	150,000	2500	100,000	85,000	100,000	85,000
ZBTS300	3000	4000	200,000	150,000	4000	100,000	85,000	100,000	85,000
ZBTS400	4000	6000	200,000	150,000	5000	100,000	85,000	100,000	85,000
ZTSD4 (2)	40	50	200,000	150,000	150	22,000	18,000	22,000	18,000
ZTSD8 (2)	80	100	200,000	150,000	150	22,000	18,000	22,000	18,000
ZTSD10 (2)	100	125	200,000	150,000	150	22,000	18,000	22,000	18,000
ZTSD15 (2)	150	200	200,000	150,000	400	42,000	35,000	30,000	25,000
ZTSD22 (2)	225	300	200,000	150,000	400	42,000	35,000	30,000	25,000
ZTSD26 (2)	260	350	200,000	150,000	400	42,000	35,000	30,000	25,000
ZTSD40 (2)	400	600	200,000	150,000	800	50,000	42,000	35,000	30,000

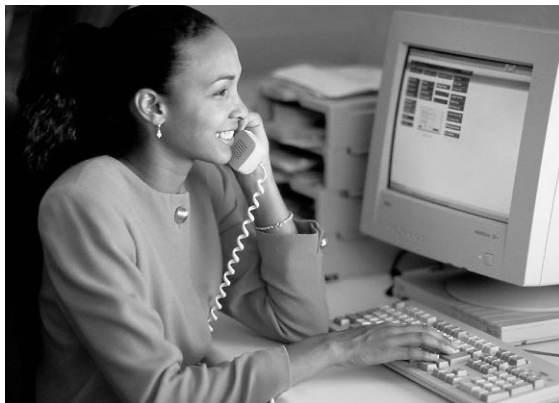
ZTSD 600 amp - 4000 amp – Ratings identical to ZTS Series  
ZTSCT and ZBTSCT 100 amp - 4000 amp – Ratings identical to ZBTS Series

**Notes:**

- For each rating attained in above table, the heat run was performed after the overload and endurance tests.
- These models also listed for 100% tungsten lamp loads.
- Consult factory for coordinated breaker types and ratings.
- All transfer switches are rated in coordination with the protective device installed. Lower rated devices than those shown may be utilized and the system rated accordingly.
- Consult the factory for IEC ratings.

### **Extensive Customer Service and Support**

Supported by a worldwide network of factory-trained Authorized Service Centers, our Technical Service Representatives can provide you with field service, equipment parts and preventive maintenance.



Because emergency power systems are required to operate under the most adverse circumstances, site personnel may be called upon at any time to make decisions regarding the operation of the system, therefore training of these personnel is critical to the future of any installation.

GE Zenith Controls offers a variety of training options including on-site classes for project personnel, factory instruction on your equipment prior to shipment and service schools covering transfer switches and switchgear systems.

### **Product Overview**

When you purchase emergency power equipment, reliability and quality are a necessity. GE Zenith Controls is committed to providing the highest level of quality demanded by the industry. Our complete product line will allow you to specify a total power management system while maintaining overall compatibility and the most comprehensive warranty in the industry.

### **Committed to the Customer**

All team members at GE Zenith are aware of the critical situations in which our products are called upon to perform. With that understanding comes an obligation beyond merely fulfilling an order or turning out a product. Serving that obligation is our mission at GE Zenith Controls.

GE Zenith's team works with you from the first phone call through completed start-up. During the design phase, we can demonstrate our equipment at your site via GE Zenith's product display van. Then, working hand in hand with your consulting engineer, the contractor and the facility owner/operator, we'll ensure that the system fulfills both current and future needs.

"Commitment to our customer" has been GE Zenith's driving force for more than 75 years in the power control industry. This same sense of purpose and responsibility will continue as we address future power control challenges.

### **Specification Assistance**

GE Zenith offers a complete range of product guide specifications to help you determine your needs.

For more information, please consult your local GE Zenith representative, our factory or our website at [www.geindustrial.com](http://www.geindustrial.com).



**GE Zenith Controls**

GE Industrial Systems –  
Power Equipment Business  
830 W. 40<sup>th</sup> Street, Chicago, IL 60609 USA  
773 299-6600, Fax: 630 850-6899  
[www.zenithcontrols.com](http://www.zenithcontrols.com)

