

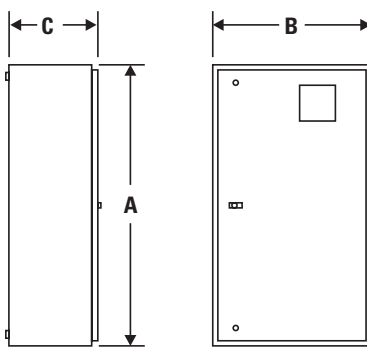
## Dimensional Specifications

ZTG and ZTGD Series Transfer Switches								
Model	Ampere Rating	Poles	NEMA 1 Enclosed				Weight NEMA 1	App. Notes
			Height (A)	Width (B)	Depth (C)	Ref. Fig.		
ZTG	40, 80, 100 150, 200	2, 3 4	24 (61) 24 (61)	18 (46) 18 (46)	10.75 (27) 10.75 (27)	A A	57 (26) 60 (27)	1 – 6
	225	2, 3 4	36 (91)	24 (61)	14.13 (36)	A	150 (68) 155 (70)	1 – 6
ZTGD	40, 80, 100, 150, 225, 260	2, 3 4	46 (117) 46 (117)	24 (61) 24 (61)	14.13 (36) 14.13 (36)	A A	180 (82) 185 (84)	1 – 5
	400	2, 3 4	59 (150) 59 (150)	24 (61) 24 (61)	16.13 (41) 16.13 (41)	A A	240 (109) 245 (111)	1 – 5
ZTG	225, 260 300, 400	2, 3 4	46 (117) 46 (117)	24 (61) 24 (61)	14.13 (36) 14.13 (36)	A A	175 (80) 180 (82)	1 – 5
	600	2, 3 4	66 (168) 74 (188)	24 (61) 30 (76)	19.75 (50) 19.75 (50)	B B	400 (181) 450 (204)	1 – 5, 7
	800, 1000, 1200	2, 3 4	74 (188) 74 (188)	30 (76) 40 (102)	19.75 (50) 19.75 (50)	B B	475 (215) 560 (254)	1 – 5, 7
	1600, 2000 2600, 3000	3 4	90 (229) 90 (229)	30 (76) 36 (91)	48 (122) 48 (122)	C C	1010 (458) 1160 (526)	1 – 5, 7, 8

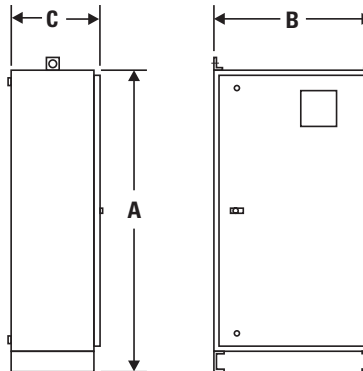
### Application Notes:

- Metric dimensions (cm) and weights (kg) shown in parentheses adjacent to English measurements.
- Includes 1.25" door projection beyond base depth. Allow a minimum of 3" additional depth for projection of handle, lights, switches, pushbuttons, etc.
- All dimensions and weights are approximate and subject to change without notice.
- Packing materials must be added to weights shown. Allow 15% additional weight for cartons, skids, crates, etc.
- Special enclosure (NEMA 3R, 4, 12, etc.) dimensions and layouts may differ. Consult factory for details.
- ZTG 40-200 may require larger enclosure depending on options specified. Consult factory for details.
- Add 3" in height for lifting eyes.
- Ventilation louvers on rear of enclosure at 3000 amps. One side or rear must be clear for airflow with standard cable connections.

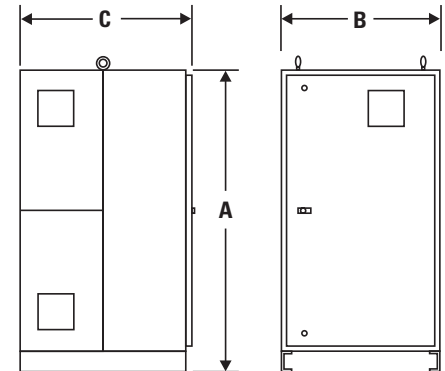
## Reference Figures



**Figure A**  
ZTG Series Transfer Switch  
(40-400 amp)



**Figure B**  
ZTG Series Transfer Switch  
(600-1200 amp)



**Figure C**  
ZTG Series Transfer Switch  
(1600-3000 amp)

## Reference Charts

### Testing Standards

UL, CSA and IEC listed	UL 1008, CSA 22.2 No. 178, IEC 947-6-1
Ringing wave immunity	IEEE 472 (ANSI C37.90A)
Conducted and Radiated Emissions	EN55022 Class B (CISPR 11) (Exceeds EN55011 & MILSTD 461 Class 3)
ESD immunity test	EN61000-4-2 (Level 4)
Radiated RF, electromagnetic field immunity test	EN61000-4-3 (ENV50140) 10v/m
Electrical fast, transient/burst immunity test	EN61000-4-4
Surge immunity test	EN61000-4-5 IEEE C62.41     1.2 X 50 $\mu$ s, 5 & 8 kV
Conducted immunity test	EN61000-4-6 (ENV50141)
Voltage dips and interruption immunity	EN61000-4-11

### AL/CU UL Listed Solderless Screw-Type Terminals for External Power Connections

Switch Size (Amps)	Normal, Emergency and Load Terminals	
	Cables per Pole	Range of Wire Sizes
40	1	#8 to 3/0 AWG
80		
100		
150		
200, 225		
260, 300, 400	2	#6 AWG to 250 MCM
600		#4 AWG to 600 MCM
800, 1000, 1200		#2 AWG to 600 MCM
1600, 2000, 2600, 3000	4	#2 AWG to 600 MCM
	8	#2 AWG to 600 MCM

### MX100 Control Setting Ranges

Control Function		Range	Factory Setting
Normal Line Sensing – Under-voltage	Dropout	75-98%	80%
	Pickup	85-100%	90%
Normal Line Sensing – Under-frequency	Dropout	2Hz below pickup	Set
	Pickup	90-100%	90%
Emergency Line Sensing – Under-voltage	Dropout	75-98%	80%
	Pickup	85-100%	90%
Emergency Line Sensing – Under-frequency	Dropout	2Hz below pickup	Set
	Pickup	90-100%	95%
Time Delay – Engine Start	(Acc. P1)	0-10 seconds	3 seconds
Time Delay – Engine Cool Down	(Acc. U)	0-5 minutes	5 minutes
Time Delay – Transfer to Emergency	(Acc. W)	0-15 seconds	1 second
Time Delay – Retransfer to Normal	(Acc. T)	0-30 minutes	30 minutes
Time Delay – Motor Disconnect or Transfer Presignal	(Acc. A6, or T3/W3)	1-30 seconds	5 seconds
Delayed Transition Time Delays	(DT, DW)	1-30 seconds	5 seconds

**Z T G**  
**Block A**  
**Base Model**

**Block B**  
**Type**

**Standard**  
(Open Transition)

**D**  
Delayed Transition

**K**  
**Block C**  
**Control Panel**

**K**  
MX100 Microprocessor  
Control Unit

**Block D**  
**Ampere Size**

**40** amps

**80** amps

**100** amps

**150** amps

**200** amps

**225** amps

**260** amps

**400** amps

**600** amps

**800** amps

**1000** amps

**1200** amps

**1600** amps

**2000** amps

**2600** amps

**3000** amps

**Block E**  
**Switched Poles**

**B**  
2 Poles

**E**  
3 Poles

**F**  
4 Poles

**Block F**  
**Enclosure Type**

**C**  
Type 1 Enclosed

**S**  
Special Enclosure

**X**  
Open Style Unit

**Block G**  
**Operational Voltage**

**120/240V** 1Ø, 3 wire, 60Hz

**120/208V** 1Ø, 3 wire, 60Hz

**240V** 3Ø, 3 wire, 60Hz

**208V** 3Ø, 3 wire, 60Hz

**220V** 3Ø, 3 wire, 50Hz

**120/240V** 3Ø, 4 wire, 60Hz

**120/208V** 3Ø, 4 wire, 60Hz

**127/220V** 3Ø, 4 wire, 60Hz

**480V** 3Ø, 3 wire, 60Hz

**440V** 3Ø, 3 wire, 60Hz

**440V** 3Ø, 3 wire, 50Hz

**440V** 1Ø, 2 wire, 60Hz

**575V** 3Ø, 3 wire, 60Hz

**347/600V** 3Ø, 4 wire, 60Hz

**277/480V** 3Ø, 4 wire, 60Hz

**240/416V** 3Ø, 4 wire, 60Hz

**220/380V** 3Ø, 4 wire, 60Hz

**220/380V** 3Ø, 4 wire, 50Hz

**240/416V** 3Ø, 4 wire, 50Hz

**Block H**  
**Accessories**

**M 1 3**

Then choose additional accessories

**A6**  
Motor Load Disconnect Circuit

**C**  
Plant Exerciser (no load)

**CD**  
Plant Exerciser 7 Day (load/no load)

**CD365**  
Plant Exerciser 365 Day (load/no load)

**D**  
Plant Exerciser (load)

**HT**  
Heater and Thermostat

**Q2**  
Peak Shave/Remote Load Test

**Q3**  
Inhibit Transfer to Emergency

**T3/W3**  
Transfer Presignal

**ZNET100**  
Network Communication Interface Card

**6A**  
Maintained Test Switch

None

## Switch Types

- **Standard:** Unless otherwise noted, the standard switch with quick transfer will be supplied.
- **Delayed Transition:** When ordered as the ZTGD, the delayed transition switch offers time delay during transfer from one position to the other. This is primarily for transfer of large motor or inductive loads. The operation of the delayed transition switch is totally independent of the synchronism of the power sources, eliminating the need for in-phase monitors or extensive motor-disconnect control wiring between the transfer switch and motor control centers.

## Example

Z T G D K 4 0 E C - 4 M 1 3

This block shows the correct ordering format for a ZTG Series Automatic Transfer Switch with delayed transition, an MX100 microprocessor control unit, 400 amps, 3 poles, NEMA Type 1 enclosure, 120/208V 3Ø, 4 wire, 60 Hz system with Module 13 (standard accessories).

Withstand Current Ratings per UL 1008				
ZTG Switch Ratings (Amps)	Maximum Circuit Amps When Used With		ZTGD Switch Ratings (Amps)	Maximum Circuit Amps When Used With
	Current Limiting Fuse ZTG/ZTGD	Specific Coordinated Breaker Rating		
40, 80 100, 150 200, 225	200,000	30,000	40, 80, 100	22,000
			150, 225 250, 260	42,000
50,000		300, 400	50,000	
65,000		600, 800	65,000	
85,000		1000, 1200	85,000	
100,000		1600, 2000 2600, 3000	100,000	

## ***Additional GE Zenith Controls Products***

- ***Automatic Transfer Switches***

*(ZTS Series specification grade products, including standard transition, delayed transition, closed transition, bypass-isolation and medium voltage transfer switches)*

- ***Power Generation Switchgear***

- ***ZNET™ Communications Networks***

- ***Technical Services, Preventive Maintenance and Extended Service Coverage Programs***



***GE Zenith Controls***



## GE Zenith Controls

### ZTG Series Automatic Transfer Switch



GE Zenith's ZTG Series switches are built for standard applications requiring the dependability and ease of operation found in a power contactor switch.

- Ratings 40 to 3000 amps (2, 3 or 4 poles)
- UL 1008 listed at 480 VAC
- CSA certified at 600 VAC (200-225 amp-480V)
- IEC listed at 480V
- Double throw, mechanically interlocked contactor mechanism
- Electrically operated, mechanically held
- Designed for emergency and standby applications
- Available in standard (ZTG) or delayed transition (ZTGD) models

ZTG switches are equipped with GE Zenith's next-generation MX100 microprocessor panel, which controls the operation and displays the status of the transfer switch's position, timers and available sources. As an embedded digital controller, the MX100 offers high reliability and ease of unattended operation across a range of applications. The MX100 features include:

- Timer and voltage/frequency settings adjustable without disconnection from the power section
- Built-in diagnostics with displays for immediate troubleshooting

- LED indicators for ease of viewing and long life
- Nonvolatile memory—clock battery backup not required for standard switch operation
- Processor and digital circuitry isolated from line voltage
- Inputs optoisolated for high electrical immunity to transients and noise
- Communications header for network interface

### Fully Approved

- UL, CSA and IEC 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, electromagnetic 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 50ms, 5 & 8 kV)
- Conducted immunity test per EN61000-4-6 (ENV50141)
- Voltage dips and interruption immunity EN61000-4-11

### Design and Construction Features

- Close differential 3 phase under-voltage sensing of the normal source—factory standard setting 90% pickup, 80% dropout (adjustable); under-frequency sensing of the normal source factory setting 95% pickup (adjustable)
- Voltage and frequency sensing of the emergency source—factory standard setting 90% pickup voltage, 95% pickup frequency (adjustable)
- Test switch (fast test/load/no load) to simulate normal source failure—automatically bypassed should the emergency source fail
- Type 1 enclosure is standard—also available in open style or Types 3R, 4 or 12

