



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: **OSP – 0035 – 10**

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: General Electric Zenith Controls

Manufacturer's Technical Representative: Ozgur Cantez

Mailing Address: 830 W 40th Street, Chicago, IL 60609

Telephone: 773-299-6720 Email: ozgur.cantez@ge.com

Product Information

Product Name: Automatic & By-Pass Transfer Switches

Product Type: ZT, ZBT-V, ZBT-H Series

Product Model Number: See Certified Product List Table 1A, 1B & 1C

(List all unique product identification numbers and/or part numbers)

General Description: Automatic and By-Pass Transfer Switches, which are manual, automatic, or a combination of both.

The switches transfer power from the incoming utility power to generator power. Seismic enhancements made to the test units and modifications required to address anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid floor mounted

Applicant Information

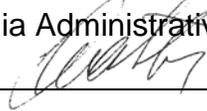
Applicant Company Name: General Electric Zenith Controls

Contact Person: Ozgur Cantez

Mailing Address: 830 W 40th Street, Chicago, IL 60609

Telephone: 773-299-6720 Email: ozgur.cantez@ge.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant:  Date: 2/27/2013

Title: System Engineer Company Name: General Electric Zenith Controls

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: Mason West
Name: Jimmy Wong California License Number: S4744
Mailing Address: 1601 E Miraloma Ave, Placentia, CA 92870
Telephone: 714-630-0701 Email: jwong@masonwest.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

Testing Laboratory

Company Name: Clark Dynamic Test Laboratory
Contact Name: John Antenucci
Mailing Address: 1801 Route 51, Jefferson Hills, PA 15025
Telephone: 412-382-7173 Email: jrantenucci@clarkdynamic.com





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 1.5

S_{DS} (Design spectral response acceleration at short period, g) = 2.0g

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See UUT-1 to UUT-6

Overall dimensions and weight (or range thereof) = See Table 1A, 1B, 1C & 2A

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2010: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Table 1A, 1B, 1C, 2A, 2B, 2C, 3 & UUT-1 to UUT-6

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019

Signature: 

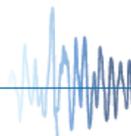
Date: June 6, 2013

Print Name: Timothy J. Piland

Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.0 z/h = 1.0

Condition of Approval (if applicable): _____





MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 1A
 SPECIAL SEISMIC CERTIFICATION
 CERTIFIED PRODUCT LIST**

Manufacturer: General Electric
Product Line: ZT Automatic Transfer Switches

Certified Product Construction Summary:
 Carbon steel enclosures, NEMA Type 1, 3R, 4 or 12

Certified Component Summary:
 2, 3 or 4 pole transfer switches

Certified Mounting Summary:
 All listed units are rigid floor mounted.

Building Code: CBC 2013 **Seismic Certification Limits:** Sps = 2.00 z/h = 1.00 Ip = 1.50

Frame Size	Test Report & Report UUT No.	UUT Number	Models	Amperages	Poles	Dimension (in.)			Weight (lbs)	NEMA Type
						Width	Depth	Height		
F14	T4343, F14 600A	1	ZTG	600	3	24	20	66	265	1
F14	n/a	Interpolated	ZTG, ZTGD	600	2, 3 & 4	24	20	66	214-265	1, 3R, 4, & 12
63L	n/a	Interpolated	ZTS, ZTSD, ZTSCT, Z10, Z1D & Z1C	600	2, 3 & 4	24-40	20	66-74	380-500	1, 3R, 4, & 12
63L	n/a	Interpolated	ZTG, ZTGD, ZTS, ZTSD, ZTSCT, Z10, Z1D & Z1C	800-1200	2, 3 & 4	40	20	74	505-610	1, 3R, 4, & 12
63L	n/a	Interpolated		1600-2000	3 & 4	36	48	90	1010-1190	1
65L	n/a	Interpolated		2600-3000	3 & 4	36	48	90	1130-1415	1
65L	n/a	Interpolated		4000	3 & 4	36-46	48-60	90	1595-2100	1
65L	T4343, 65L 4000A	2	ZTS	4000	4	46	60	90	2100	1

ZT, ATS Models

- ZTG - Open Transition with MX150 Controller
- ZTGD - Delay Transition with MX150 Controller
- ZTS - Open Transition with MX250 Controller
- ZTSD - Delay Transition with MX250 Controller
- ZTSCT - Closed Transition with MX250 Controller
- Z10 - Open Transition with MX350 Controller
- Z1D - Delay Transition with MX350 Controller
- Z1C - Closed Transition with MX350 Controller



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 1B
 SPECIAL SEISMIC CERTIFICATION
 CERTIFIED PRODUCT LIST**

Manufacturer: General Electric

Product Line: ZBT-V By-Pass/Isolation Transfer Switches, Vertical Construction

Certified Product Construction Summary:

Carbon steel enclosures, NEMA Type 1, 3R, 4 or 12

Certified Component Summary:

3 or 4 pole transfer switches

Certified Mounting Summary:

All listed units are rigid floor mounted.

Building Code: CBC 2013

Seismic Certification Limits: S_{ps} = 2.00 z/h = 1.00 I_p = 1.50

Frame Size	Test Report & Report UUT No.	UUT Number	Models	Amperages	Poles	Dimension (in.)			Weight (lbs)	NEMA Type
						Width	Depth	Height		
F14C	T4343, F14C 400A	3	ZBTS-B0	400	3	30	31	83	875	1
F14C	n/a	Interpolated	ZBTS-B0, ZBTSD-B0, ZBTSCT-B0, Z20, Z2D & Z2C	100-400	3 & 4	30-40	28-31	83-90	770-1500	1
64B	n/a	Interpolated		600	3 & 4	36-40	28	90	1220-1635	1, 3R, 4, & 12
64B	n/a	Interpolated		800-1200	3 & 4	40-46	28	90	1355-1745	1, 3R, 4, & 12
65B	n/a	Interpolated		1600-2000	3 & 4	40-50	61	90	3100-4070	1
65B	n/a	Interpolated		3000	3 & 4	40-50	73	90	3500-5070	1
65B	n/a	Interpolated		4000	3 & 4	47-54	81	90	4730-6000	1
65B	T4343, 65B 4000A	4		ZBTS-B0	4000	4	54	81	90	6000

ZBT-V, By-Pass Switch Models

- ZBTS-B0- Open Transition with MX250 Controller
- ZBTSD-B0- Delay Transition with MX250 Controller
- ZBTSCT-B0- Closed Transition with MX250 Controller
- Z20 - Open Transition with MX350 Controller
- Z2D - Delay Transition with MX350 Controller
- Z2C - Closed Transition with MX350 Controller



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 1C
 SPECIAL SEISMIC CERTIFICATION
 CERTIFIED PRODUCT LIST**

Manufacturer: General Electric

Product Line: ZBT-H By-Pass/Isolation Transfer Switches, Horizontal Construction

Certified Product Construction Summary:
 Carbon steel enclosures, NEMA Type 1

Certified Component Summary:
 3 or 4 pole transfer switches

Certified Mounting Summary:
 All listed units are rigid floor mounted.

Building Code: CBC 2013 **Seismic Certification Limits:** S_{bs} = 2.00 z/h = 1.00 I_p = 1.50

Frame Size	Test Report & Report UUT No.	UUT Number	Models	Amperages	Poles	Dimension (in.)			Weight (lbs)	NEMA Type
						Width	Depth	Height		
64B	T4761, 64B 1200A	5	ZBTS-B1	1200	3	39	36	81	1334	1
64B	n/a	Interpolated	ZBTS-B1, ZBTSD-B1, ZBTSCT-B1, Z30, Z3D & Z3C	600-1200	3 & 4	39-42	36	81	1334-1330	1
65B	n/a	Interpolated		3000	3 & 4	40-46	65	80	4456-5747	1
65B	T4761, 65B 3000A	6	ZBTS-B1	3000	4	46	65	80	5747	1

ZBT-H, By-Pass Switch Models

- ZBTS-B1- Open Transition with MX250 Controller
- ZBTSD-B1- Delay Transition with MX250 Controller
- ZBTSCT-B1- Closed Transition with MX250 Controller
- Z30 - Open Transition with MX350 Controller
- Z3D - Delay Transition with MX350 Controller
- Z3C - Closed Transition with MX350 Controller



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

TABLE 2A
SPECIAL SEISMIC CERTIFICATION
TESTED & CERTIFIED ENCLOSURES

Manufacturer: General Electric
Product Line: GE Automatic & By-Pass Transfer Switch Enclosures

Certified Mounting Summary:
 All listed enclosures are rigid floor mounted.

Building Code: CBC 2013 **Seismic Certification Limits:** **S_{ps} = 2.00** **z/h = 1.00** **I_p = 1.50**

Test Report & Report UUT No.	Construction Material	NEMA Type	Dimension (in.)			Weight (lbs)	Model	UUT Number
			Width	Depth	Height			
ZT, Automatic Transfer Switch Enclosures								
T4343	12 ga, CS	1	20	24	66	265	ZTG-600	1
n/a	12 ga, CS	1, 3R, 4 or 12	20	24-40	66-74	215-610	ZTG, ZTGD, ZTS, ZTSD, ZTSCT, Z10, Z1D & Z1C 600-1200	Interpolated
n/a	10 ga, CS	1	36-46	48-60	90	1010-2100	ZTG, ZTGD, ZTS, ZTSD, ZTSCT, Z10, Z1D & Z1C 1600-4000	Interpolated
T4343	10 ga, CS	1	46	60	90	2100	ZTS-4000	2
ZBT-V, By-Pass Transfer Switch Enclosures, Vertical Construction								
T4343	10 ga, CS	1	30	31	83	875	ZBTS-B0-400	3
n/a	10 ga, CS	1, 3R, 4 or 12	30-40	28-31	83-90	770-1500	ZBTS-B0, ZBTSD-B0, ZBTSCT-B0, Z20, Z2D & Z2C 100-400	Interpolated
n/a	10 ga, CS	1, 3R, 4 or 12	36-46	28	90	1220-1745	ZBTS-B0, ZBTSD-B0, ZBTSCT-B0, Z20, Z2D & Z2C 600-1200	Interpolated
n/a	10 ga, CS	1	40-54	61-81	90	3100-6000	ZBTS-B0, ZBTSD-B0, ZBTSCT-B0, Z20, Z2D & Z2C 1600-4000	Interpolated
T4343	10 ga, CS	1	54	81	90	6000	ZBTS-B0-4000	4
ZBT-H, By-Pass Transfer Switch Enclosures, Horizontal Construction								
T4761	10 ga, CS	1	39	36	81	1334	ZBTS-B1-1200	5
n/a	10 ga, CS	1	39-46	36-65	80-81	1334-5930	ZBTS-B1, ZBTSD-B1, ZBTSCT-B1, Z30, Z3D & Z3C 600-3000	Interpolated
T4761	10 ga, CS	1	46	65	80	5747	ZBTS-B1-3000	6

NOTES:

- Listed weights are for entire unit not just enclosure.
- CS = Carbon Steel
- The size, construction material and coating of NEMA Type 3R, 4 and 12 enclosures are identical.
- See below Table for the differences between NEMA Type 1 and Type 3R, 4 & 12 enclosures.

Cabinet Parts	NEMA Type 1	NEMA Type 3R, 4 & 12
Hinges	regular type	barrel type
Door Gasket	not provided	provided
Other	n/a	The body has edges which contact the gasket on the door



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 2B
 SPECIAL SEISMIC CERTIFICATION
 TESTED & CERTIFIED AUTOMATIC & BYPASS
 TRANSFER SWITCHES**

Manufacturer: General Electric

Product Line: GE Automatic & By-Pass Transfer Switches

Certified Mounting Summary:
 All listed units are rigid floor mounted.

Building Code: CBC 2013 **Seismic Certification Limits:** Sbs = 2.00 z/h = 1.00 Ip = 1.50

Model Numbers	Manufacturer	Description	Approx. Weight (lbs)	Test Report & Report UUT No.	UUT number
ZT, Automatic Transfer Switches					
ZTG-600	GE	600A	265	T4343, F14 600A	1
ZTG, ZTGD, ZTS, ZTSD, ZTSCT, Z10, Z1D & Z1C-600 to 4000	GE	600A - 4000A	214-2100	n/a	Interpolated
ZTS-4000	GE	4000A	2100	T4343, 65L 4000A	2
ZBT-V, By-Pass Transfer Switches - Vertical Construction					
ZBTS-B0-400	GE	400A	875	T4343, F14C 400A	3
ZBTS-B0, ZBTSD-B0, ZBTSCT-B0, Z20, Z2D & Z2C-100 to 4000	GE	100A - 4000A	770-6000	n/a	Interpolated
ZBTS-B0-4000	GE	4000A	6000	T4343, 65B 4000A	4
ZBT-H, By-Pass Transfer Switches - Horizontal Construction					
ZBTS-B1-1200	GE	1200A	1334	T4761	5
ZBTS-B1, ZBTSD-B1, ZBTSCT-B1, Z30, Z3D & Z3C-600 to 3000	GE	600A - 3000A	1334-5930	n/a	Interpolated
ZBTS-B1-3000	GE	3000A	5747	T4761	6

NOTES:

- Listed weights are for entire unit not just the transfer switch.

ZT, ATS Models

- ZTG - Open Transition with MX150 Controller
- ZTGD - Delay Transition with MX150 Controller
- ZTS - Open Transition with MX250 Controller
- ZTSD - Delay Transition with MX250 Controller
- ZTSCT - Closed Transition with MX250 Controller
- Z10 - Open Transition with MX350 Controller
- Z1D - Delay Transition with MX350 Controller
- Z1C - Closed Transition with MX350 Controller

ZBT-V, By-Pass Switch Models

- ZBTS-B0- Open Transition with MX250 Controller
- ZBTSD-B0- Delay Transition with MX250 Controller
- ZBTSCT-B0- Closed Transition with MX250 Controller
- Z20 - Open Transition with MX350 Controller
- Z2D - Delay Transition with MX350 Controller
- Z2C - Closed Transition with MX350 Controller

ZBT-H, By-Pass Switch Models

- ZBTS-B1- Open Transition with MX250 Controller
- ZBTSD-B1- Delay Transition with MX250 Controller
- ZBTSCT-B1- Closed Transition with MX250 Controller
- Z30 - Open Transition with MX350 Controller
- Z3D - Delay Transition with MX350 Controller
- Z3C - Closed Transition with MX350 Controller



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 2C
 SPECIAL SEISMIC CERTIFICATION
 TESTED & CERTIFIED CONTROLLERS**

Manufacturer: General Electric

Product Line: GE Automatic & By-Pass Transfer Switch Controllers

Building Code: CBC 2013 **Seismic Certification Limits:** $S_{DS} = 2.00$ $z/h = 1.00$ $I_p = 1.50$

Model Number	Manufacturer	Description	Approx. Weight (lbs)	Test Report & Report UUT No.	UUT number
MX 150	GE	Transfer Switch Controller	12	T4343, F14-600A	1
MX 250	GE	Transfer Switch Controller	12	T4343, 65L-4000A	2
MX 250	GE	Transfer Switch Controller	12	T4343, F14C-400A	3
MX 250	GE	Transfer Switch Controller	12	T4343, 65B-4000A	4
MX 250	GE	Transfer Switch Controller	12	T4761, 64B-1200A	5
MX 250	GE	Transfer Switch Controller	12	T4761, 65B-3000A	6
MX 350	GE	Transfer Switch Controller	2	n/a	Extrapolated
MX 350 CPU	GE	Transfer Switch Controller	3	n/a	Extrapolated



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

**TABLE 3
 SPECIAL SEISMIC CERTIFICATION
 SUMMARY OF TESTED UNITS**

Manufacturer: General Electric
Product Line: ZT Automatic Switches
 ZBT-V & ZBT-H By-Pass Transfer Switches

Tested Product Construction Summary:
 Automatic & By-Pass Transfer Switches in carbon steel cabinets

Tested Options / Component Summary:
 3 or 4 pole transfer switches

Tested Mounting Summary:
 Units are rigid floor mounted.

Building Code: CBC 2013 **Seismic Certification Limits: S_{ds} = 2.00** **z/h = 1.00** **I_p = 1.50**

Test Report & Report UUT No.	Model Tested	NEMA Type	Dimension (in.)			Weight (lbs)	Mounting Configuration	UUT
			Width	Depth	Height			
T4343, F14-600A	ZTG-600, 3 pole, ATS	1	20	24	69	265	Floor mounted	1
T4343, 65L-4000A	ZTS-4000, 4 pole, ATS	1	46	60	90	2100	Floor mounted	2
T4343, F14C-400A	ZBTS-B0-400, 3 pole, By-Pass, Vertical Construction	1	30	31	83	875	Floor mounted	3
T4343, 65B-4000A	ZBTS-B0-4000, 4 pole, By-Pass, Vertical construction	1	54	81	90	6000	Floor mounted	4
T4761, 64B-1200A	ZBTS-B1-1200, 3 pole, By-Pass, Horizontal Construction	1	39	36	81	1334	Floor mounted	5
T4761, 65B-3000A	ZBTS-B1-3000, 4 pole, By-Pass, Horizontal Construction	1	46	65	80	5747	Floor mounted	6



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-1

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric	
Product Line:	ZT Automatic Transfer Switches	
Model Number:	ZTG-600	Report No.: T4343
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.	UUT No. in the Report: F14-600A

Product Construction Summary:

Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:

600 Amp, 3 pole, Automatic Transfer Switch with MX150 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
265	20	24	69	29.7	10.9	> 33.3

SEISMIC TEST PARAMETERS

Building Code	S _{ds}	z/h	I _p	A _{flx-H}	A _{rig-H}	A _{flx-V}	A _{rig-V}
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Tested Unit Mounting Details: Unit was floor mounted with (4) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-2

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric	
Product Line:	ZT Automatic Transfer Switches	
Model Number:	ZTS-4000	Report No.: T4343
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.	UUT No. in the Report: 65L-4000A

Product Construction Summary:
 Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:
 4000 Amp, 4 pole, Automatic Transfer Switch with MX250 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2100	60	46	90	19.5	10.9	> 33.3

SEISMIC TEST PARAMETERS

Building Code	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Unit Mounting Details: Unit was floor mounted with (6) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-3

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric
Product Line:	ZBT-V By-Pass Transfer Switches
Model Number:	ZBTS-B0-400
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.
	Report No.: T4343
	UUT No. in the Report: F14C-400A

Product Construction Summary:
 Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:
 400 Amp, 3 pole, Vertical Construction, By-Pass Transfer Switch with MX250 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
875	29	30	86	7.0	10.2	> 33.3

SEISMIC TEST PARAMETERS

Building Code	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Unit Mounting Details: Unit was floor mounted with (4) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-4

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric	
Product Line:	ZBT-V By-Pass Transfer Switches	
Model Number:	ZTBS-B0-4000	Report No.: T4343
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.	UUT No. in the Report: 65B-4000A

Product Construction Summary:
 Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:
 4000 Amp, 4 pole, Vertical Construction, By-Pass Transfer Switch with MX250 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
6000	81	54	90	8.6	21.0	> 33.3

SEISMIC TEST PARAMETERS

Building Code	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Unit Mounting Details: Unit was floor mounted with (8) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-5

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric Zenith Controls		
Product Line:	ZBT-H By-Pass Transfer Switches		
Model Number:	ZBTS-B1-1200	Report No.: T4761	
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.	UUT No. in the Report: 65B-1200A	

Product Construction Summary:
 Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:
 1200 Amp, 3 pole, Horizontal Construction, By-Pass Transfer Switch with MX250 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1334	36	42	80	8.7	8.9	28.9

SEISMIC TEST PARAMETERS

Building Code	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Unit Mounting Details: Unit was floor mounted with (4) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



MASON WEST, INC.
 1601 E. Miraloma Ave. Placentia, CA 92870
 TEL (714) 630 - 0701, FAX (714) 632 - 0302

UUT-6

UNIT UNDER TEST (UUT) SUMMARY SHEET

Manufacturer:	General Electric Zenith Controls		
Product Line:	ZBT-H By-Pass Transfer Switches		
Model Number:	ZBTS-B1-3000	Report No.: T4761	
Test Laboratory:	Clark Dynamic Test Laboratory, Inc.	UUT No. in the Report: 65B-3000A	

Product Construction Summary:
 Floor mounted, light gage painted, cold rolled steel enclosure, NEMA 1 rated

Component Summary:
 3000 Amp, 4 pole, Horizontal Construction, By-Pass Transfer Switch with MX250 Controller

UUT PROPERTIES

Test Criteria: ICC-ES AC156

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
5747	65	46	80	14.5	14.5	> 33.3

SEISMIC TEST PARAMETERS

Building Code	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2.00	1.00	1.50	3.20	2.40	1.34	0.54

Unit Mounting Details: Unit was floor mounted with (8) - 1/2" diameter Carbon Steel Hex Head Bolts.



UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.