APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0093 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: General Electric

Manufacturer's Technical Representative: Michael Bryant

Mailing Address: 6801 Industrial Drive, Mebane, NC 27302-8603

Telephone: (919) 563-7316 Email: mike.r.bryant@ge.com

Product Information

Product Name: Evolution 8000 & 9000 LV MCC

Product Type: Low Voltage Motor Control Centers

Product Model Number: See Certified Product Table attached
(List all unique product identification numbers and/or part numbers)

General Description: Low voltage motor control centers consisting of main bus sections, incoming (feeder) sections, and corner sections. They are typically installed in multiple sections. Seismic enhancements made to the UUTs & modifications required to address anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigidly floor mounted

Applicant Information

Applicant Company Name: General Electric

Contact Person: Michael Bryant

Mailing Address: 6801 Industrial Drive, Mebane, NC 27302-8603

Telephone: (919) 563-7316 Email: mike.r.bryant@ge.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: Michael Bryant Date: June 12, 2017

Title: Senior Systems Engineering Manager Company Name: General Electric

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

Company Name: Forell/Elsesser Engineers, Inc.

Name: Marco Scanu, SE California License Number: S4454

Mailing Address: 160 Pine St., 6th Flr., San Francisco, CA 94111

Telephone: (415) 837-0700 Email: m.scanu@forell.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): _____

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Testing Laboratory 1

Company Name: Clark Testing Laboratory

Contact Name: John R. Antenucci

Mailing Address: 1801 Route 51, Jefferson Hills, PA 15025

Telephone: (412) 387-1011 Email: jrantenucci@clarktesting.com

Testing Laboratory 2

Company Name: Wyle Laboratories

Contact Name: Rod Thornberry

Mailing Address: 7800 Hwy 20, Huntsville, AL 35806

Telephone: (256) 837-4411 Email:

Seismic Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = See attachment, Certified Products Table

S_{DS} (Design spectral response acceleration at short period, g) = See attachment, Certified Products Table

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

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1

Equipment or Component Natural Frequencies (Hz) = See attachment, UUT Summary Sheets

Overall dimensions and weight (or range thereof) = See attachment, Certified Products Table

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, 2015: ☐ Yes ☒ No

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List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☒ Calculations ☒ Manufacturer's Catalog

☒ Other(s) (Please Specify): Certified Products Table, Certified Subcomponents Table, UUT Summary Sheets

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: _____ Date: July 10, 2018

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above z/h = 1

Condition of Approval (if applicable):

General Electric - Low Voltage Motor Control Centers
I. Certified Products Table

Spectra Series 8000 & Evolution 9000 Low Voltage Motor Control Center

	Ampacity	Width	Depth	Height	Weight	NEMA rating	Test Status	S_{DS}[3](g)	F_P/W_p
Evolution E9000	600A	20''	20''	90''	383 lbs	1	3380-UUT4A	2.71	2.03
Spectra 8000 & Evolution 9000 Low Voltage Motor Control Center	600A - 2500A	20''	20.0 in	90"- 112"	383 lbs - 478 lbs	1, 3R	Interpolated	2.71	2.03
Evolution E9000	600A	20''	20"	112" [5]	478 lbs	1	3380-UUT4B	2.71	2.03
Spectra 8000 & Evolution 9000 Low Voltage Motor Control Center	600A - 3200A	20"- 36"	13"-42.5"	90"- 112"	478 lbs - 823 lbs	1, 3R	Interpolated/Extrapolated	2.45	1.84
Evolution E9000	600A	20''	27" [4]	102.5" [5]	823 lbs	3R	3380-UUT1A	2.45	1.84
Spectra 8000 & Evolution 9000 Low Voltage Motor Control Center	600A - 3200A	20"- 36"	13"-42.5"	90"- 112"	828 lbs - 1,836 lbs	1, 3R	Interpolated	1.79	1.34
Evolution E9000	2500A	36''	42.5" [4]	102.5" [5]	1,836 lbs	3R	3380-UUT2A	1.79	1.34

Notes

1. Enclosures are indoor (NEMA-1) or outdoor (NEMA-3R), using cold-formed carbon steel.
2. Dimensions are for individual sections. Sections may be installed alone or bayed together. Table limits the size of individual enclosure sections.
3. S_{DS} rating is limited to the lower S_{DS} rating of the either the Section or the Interior Subcomponents - see Certified Subcomponents Table.
4. Dimensions includes NEMA 3R rear Extension.
5. Dimension includes Top Hat or NEMA 3R drip-proof roof.
6. Spectra and Evolution Motor Control Centers are built from the same enclosures and components.
7. The test report for additional UUTs are included in this application package. Only the UUTs listed in the table above are submitted to certify the enclosure itself. Other UUTs in this application are included for subcomponent certification only.

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General Electric - Low Voltage Motor Control Centers
II. Certified Subcomponents Table

Subcomponent	Manufacturer	Part #	Testing Status	S_{DS}
Add-ons				
Top Pull Box, 20" High	GE	N/A	3380 UUT 4	2.71 g
Note: All Add-Ons are constructed of cold formed carbon steel				
Bus				
Copper	GE	N/A	52870-1 UUT-A, UUT-B	2.50 g
Stab ASM, 600A Bus	GE	190B1679G2	52870-1 UUT-A, UUT-B	2.50 g
Disconnects (Molded Case Circuit Breakers and Molded Case Switches)				
Spectra RMS Circuit Breakers and Mag-Break Motor Circuit Protectors				
S* type Breakers, 15A-30A	GE	S*	Extrapolated	2.50 g
S*-type Breakers, 30A		SELA36AI0030	52870-1 UUT-A, UUT-B	2.50 g
S* type Breakers, 30A-400A		S*	Interpolated	2.50 g
S*-type Breakers, 400A		SGLA36AI0400	52870-1 UUT-A, UUT-B	2.50 g
S* type Breakers, 400A-600A		S*	Interpolated	2.20 g
S*-type Breakers, 600A		SGLA36AI0600	8639 UUT 2	2.20 g
S* type Breakers, 600A-1200A		S*	Interpolated	2.15 g
S*-type Breakers, 1200A		SKPA36AT1200	3380 UUT 3	2.15 g
Notes: Second letter in part # always indicates amperage range and breaker (B & C = 10-100A, E=10-150A, F=70-250A, G & J=60-600A, K=300-1200A)				
Insulated Case Circuit Breakers				
EntelliGuard G Frame 800A - 2000A	GE	GA**M2X	Extrapolated	2.50 g
EntelliGuard G Frame 2000A		GA20M2X	10155-UUT2	2.50 g
EntelliGuard G Frame 2500A-3200A		GA**M2X	Extrapolated	2.50 g
PowerBreak II (PBII) 800A - 4000A		SS*, SH8	Interpolated/Extrapolated	1.67 g
Power Break II (PBII) 2500A		SSF4G7X21000000	3380 - UUT2A	1.79 g
PowerBreak II (PBII), 3000A		SSD30D30H	8055-UUT 1	1.67 g
Notes: G*, SS*, SH*, & WS* (WavePro) breakers are physically and functionally similar but marketed for different applications.				
STARTERS				
Contactor	GE	CR104PLG22W	3380 UUT 2B	1.57 g
Start Button	GE	CR104PBG10B1	3380 UUT 3	2.15 g
Stop Button	GE	CR104PBG01R1	3380 UUT 3	2.15 g
Select Switch	GE	CR104PSG34Y1	3380 UUT 3	2.15 g
Contactor Light	GE	CR104PLG22R	3380 UUT 3	2.15 g
Contactors	GE	CR306C002ACDT	52870-1 UUT-A, UUT-B	2.50 g
		CL*, CK*, CR305*, CR306*	Interpolated	2.45 g
		CL02A310TJ	3380 UUT 1	2.45 g
		CR305C002AAST	3380 UUT 1	2.45 g
FNVR, FVR, 2S1W, 2S2W, RVAT, Y Delta CT Starters				
Size 1	GE	CR306C104	3380 UUT 1	2.45 g
Size 1 - Size 6		CR3*	Interpolated	2.45 g
Size 5		CR306HH104	52870-1 UUT-A, UUT-B	2.50 g
Vacuum Starter FVNRV				
Size 4	GE	169C6383CEG1	3380 UUT 4	2.71 g
Size 4 - Size 6		169C6*	Interpolated	2.15 g
Size 6		169C6383BXG3	3380 UUT 3	2.15 g
Solid State Starters RV XT(SSS)				
Size 1	GE	QT10008U11DS	3380 UUT 1	2.45 g
Size 1 - Size 6		QT*	Interpolated	2.15 g
Size 6		QT20580U11DS	3380 UUT 3	2.15 g
Solid State Starters RV BP(SSS)				
Size 1	GE	QC2GDP	3380 UUT 1	2.45 g
Size 1 - Size 6		QC*	Interpolated	2.15 g
Size 6		QC2TDP	3380 UUT 3	2.15 g
VFD Drives				
Size 1	GE	6KGP43007X9XXXA1	3380 UUT 1	2.45 g
Size 1 - Size 4		6KP*	Interpolated	1.66 g
Size 4		6KP1143060X9B1	52870-1 UUT-D	1.66 g
Size 4 - Size 6		6KP*	Interpolated	1.40 g
Size 6		6KFP43500X8XXCA1	8639 UUT 1	1.40 g

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General Electric - Low Voltage Motor Control Centers
II. Certified Subcomponents Table

Subcomponent	Manufacturer	Part #	Testing Status	S_{DS}
Fans and Filters with VFD				
VFD Shroud Fan	GE	110C1556G2	52870-1 UUT-D	1.66 g
VFD Shroud Fan		110C1556G3	3380 UUT 3	2.15 g
Muffin Fans, Top Mounted	CFN Standard Distributor	273A7844CWP1	3380 UUT 1	2.45 g
Muffin Fans, Door Mounted		273A7844CWP8	8639 UUT 1	1.40 g
Transformers (with copper windings only)				
GE Control Power Transformer, 0.05kVA-0.15kVA	GE	9T*	Extrapolated	2.5 g
GE Control Power Transformer, 0.15kVA		9T58K0504G37	52870-1 UUT-A, UUT-B	2.5 g
GE Control Power Transformer, 0.15kVA-0.3kVA		9T*	Interpolated	2.50 g
GE Control Power Transformer, 0.3kVA		9T58R0507G76	3380 UUT 4	2.71 g
GE Control Power Transformer, 0.3kVA-0.5kVA		9T*	Interpolated	2.15 g
GE Control Power Transformer, 0.5kVA		9T58R0000G09	3380 UUT 3	2.15 g
Potential Transformer				
Potential Transformer	MIC	B100-2989-5	52870-1 UUT-A, UUT-B	2.5 g
Potential Transformer	ITI	460-480	3380 UUT 2B	1.57 g
Voltage Transformer	ITI-GE	2VT469-480	3380 UUT 1	2.45 g
Voltage Transformer	GE	302A3600CGP108	3380 UUT 2B	1.57 g
Voltage Transformer	GE	302A3600CGP110	52870-1 UUT-D	1.66 g
Current Transformer	GE	75A105899P129	3380 UUT 2B	1.57 g
Current Transformer	ITI	2SFT500	3380 UUT 2B	1.57 g
Auto Transformer	AFP	MA3-0221-6-0480	3380 UUT 2B	1.57 g
Lighting Panels				
A Series® Panelboard 225A	GE	ALM3424MTX	8101-UUT1	1.60 g
A Series® Panelboard 125A-600A		AL*, AQ*, AE*, AD*, AS*	Interpolated	1.60 g
A Series® Panelboard 600A		ADM3366MTX	8101-UUT5	1.70 g
Surge Protective Device (SPD) Previously called Transient Voltage Surge Supression (TVSS)				
SPD, 25kA per mode/50kA per phase	GE	TPME480D06ME	3380 UUT 4	2.71 g
SPD, 25kA per mode/50kA per phase		TPHE*, TPME*, TME*, ATME*	Interpolated	2.45 g
SPD, 50kA per mode/130kA per phase		TPHE*, TPME*, TME*, ATME*	Interpolated	2.45 g
SPD, 80kA per mode/160kA per phase		TPME*, TME*, ATME*	Interpolated	2.45 g
SPD, 80kA per mode/130kA per phase		TPME*, TME*, ATME*	Interpolated	2.45 g
SPD, 100kA per mode/200kA per phase		TPHE*, THE*, ATHE*, TPME*	Interpolated	2.45 g
SPD, 150kA per mode/300kA per phase		TPHE*, THE*, ATHE*, TPME*	Interpolated	2.45 g
SPD, 200kA per mode/400kA per phase		TPHE480D20ME	3380 UUT 1	2.45 g
SPD, 300kA per mode/600kA per phase		TPHE*, THE*	Extrapolated	2.45 g
Note: SPDs are the all physically similar. The prefixes indicate a different logic for interruptions.				
Relays				
Relays	GE	RL4RA022TJ	3380 UUT 4	2.71 g
		RL4RA031TJ	3380 UUT 1	2.45 g
		RL4RA040TJ	3380 UUT 2B	1.57 g
Relays	GE	CR324F360F	52870-1 UUT-D	1.66 g
		CR324C360E	3380 UUT 2B	1.57 g
		CR324C360F	52870-1 UUT-D	1.66 g
		CR324E660F	3380 UUT 2B	1.57 g
OL Relay MM300 with DEVICE NET	GE	MM300XEHD3CAXXXX	3380 UUT 1	2.45 g
Relay	AMS	MCR120B02202	3380 UUT 1	2.45 g
Relay, BGFL	ITI	BGFL159-1200	3380 UUT 4	2.71 g
Relay, BGFL	ITI	BGFL159-60	3380 UUT 4	2.71 g
Relay, MGE	MGE	250ACPX-143	3380 UUT 4	2.71 g
Relay,CIC	CIC	RB08	3380 UUT 4	2.71 g
Relay, MGE	MGE	750XBXC-24D	3380 UUT 4	2.71 g
Relay, CR120	GE	CR120BL02202	3380 UUT 4	2.71 g
Relay, MDL	GE	IC693MDL240	3380 UUT 4	2.71 g
Relay, MDL	GE	IC693MDL940	3380 UUT 4	2.71 g

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General Electric - Low Voltage Motor Control Centers
II. Certified Subcomponents Table

Subcomponent	Manufacturer	Part #	Testing Status	S_{DS}
Fuses				
Fuse	GE	190B1421G1	52870-1 UUT-A, UUT-B	2.5g
Fuse	Mersen	TMR1	52870-1 UUT-A, UUT-B	2.5g
Fuse	Mersen	TRM1-6/10	3380 UUT 1	2.45 g
Fuse	Mersen	TMR3	8639 UUT 2	2.2g
Fuse	Mersen	TRM3-2/10	3380 UUT 4	2.71 g
Fuse	Mersen	TRM10	3380 UUT 2B	1.57 g
Fuse	Mersen	ATMR1	52870-1 UUT-A, UUT-B	2.5g
Fuse	Mersen	ATMR1-1/2	3380 UUT 1	2.45 g
Fuse	Mersen	ATMR2	3380 UUT 4	2.71 g
Fuse	Mersen	ATMR3	3380 UUT 4	2.71 g
Power Factor Fuse	Mersen	ATMR4	3380 UUT 4	2.71 g
Fuse	Mersen	ATMR5	3380 UUT 4	2.71 g
Fuse	Mersen	FEC-11-11	3380 UUT 1	2.45 g
Fuses	Mersen	A50QS50	3380 UUT 1	2.45 g
Power Factor Fuse	Mersen	A6T50	3380 UUT 4	2.71 g
Power Factor Fuse	Mersen	A6T60	3380 UUT 4	2.71 g
Fuse	Mersen	AJT10	3380 UUT 2B	1.57 g
Relay Fuse	Mersen	ATMR10	52870-1 UUT-A, UUT-B	2.5g
Fuse Block	Mersen	30311	3380 UUT 2B	1.57 g
Fuse Block	Mersen	30312R	52870-1 UUT-A, UUT-B	2.5g
3 Pole Fuse Block	Mersen	3032-S	52870-1 UUT-A, UUT-B	2.5g
Power Factor Fuse Block	Mersen	30323R	3380 UUT 4	2.71 g
Power Factor Fuse Block	Mersen	60608T	3380 UUT 4	2.71 g
Fuse Block	Mersen	PCC361	3380 UUT 4	2.71 g
Fuse Block	Mersen	P243E	3380 UUT 1	2.45 g
Fuse Block	Mersen	US3J2	3380 UUT 2B	1.57 g
Fuse Block	GE	190B1660P3	52870-1 UUT-A, UUT-B	2.5g
Terminal Block	GE	190B1631G2	52870-1 UUT-D	1.66g
Terminal Block	GE	190B163G3	8639 UUT 2	2.2g
Automatic Transfer Switches				
Automatic Transfer Switches	GE	ZTG000A00020E	8101-UUT3	1.70 g
		ATS*, ZTG*	Interpolated	1.70 g
		ZTGD00A0U020E	8101-UUT 3	1.70 g
Fusible Switches				
Fusible Switch Unit, 30A	GE	ADS36030HS	10155-UUT6	2.50 g
Fusible Switch Unit, 30A-1200A		ADS*	Interpolated	2.50 g
Fusible Switch Unit, 1200A		ADS36120LB	10155-UUT6	2.50 g
Ammeter				
Ammeter	Yokogawa	250440LSLS7JHRU	3380 UUT 1	2.45 g
Ammeter	Crompton	459-78AA-LSMT	3380 UUT 2B	1.57 g
Ammeter Switch	American Solenoid	A11A048-723E	3380 UUT 1	2.45 g
Voltmeter				
Voltmeter, 600V	Weschler Instruments	103021PZSJ	3380 UUT 1	2.45 g
Voltage Switch	American Solenoid	A11A004-721E	3380 UUT 1	2.45 g
Power Factor Capacitor				
Power Factor Capacitor, 1kVAR	SPR	1543PCDM	3380 UUT 4	2.71 g
Power Factor Capacitor, 1kVAR		17X43PCDM	3380 UUT 4	2.71 g
Power Factor Capacitor, 1kVAR-50kVAR		1***PCDM	Interpolated	2.71 g
Power Factor Capacitor, 50kVAR		143PCDM	3380 UUT 4	2.71 g
Strip Heaters				
Heater	Chromalox	CR123C137B	52870-1 UUT-A, UUT-B	2.50 g
		CR***	Interpolated	2.50 g
		CR123C955A	52870-1 UUT-A, UUT-B	2.50 g

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General Electric - Low Voltage Motor Control Centers
II. Certified Subcomponents Table

Subcomponent	Manufacturer	Part #	Testing Status	S_{DS}
Harmonic Filters				
Filter	GE	273A7844CWP4	3380 UUT 1	2.45 g
Line and Load Filters and Reactors				
Line Reactor	TCI	KLR80ATB	52870-1 UUT-D	1.66 g
Line Filter	TCI	KLC80B	52870-1 UUT-D	1.66 g
Line Filter	TCI	KLR950CCB	8639 UUT 1	1.40 g
Control Devices and Meter Accessories				
Coil	GE	55-501336G002	3380 UUT 2B	1.57 g
Coil	GE	55-501336G004	3380 UUT 2B	1.57 g
Surge Arrestor Capacitor	DLA	CA603MB-CA	3380 UUT 2B	1.57 g
Surge Arrestor Lighting	DLA	MO603MB	3380 UUT 2B	1.57 g
Ground Fault Transformer Kit	ITI-GE	GFM-252	3380 UUT 1	2.45 g
Ground Fault Transformer	ITI-GE	GFM156	3380 UUT 1	2.45 g
SPVR Phase Monitor	ITI	SPVRB-480	3380 UUT 2B	1.57 g
Phase Monitor	Mersen	FEC-11-11	3380 UUT 4	2.71 g
Metering Monitoring Options and Accessories				
Coil Suppressor	GE	273A7844ARG5	3380 UUT 1	2.45 g
Device Net, COMM Module	MatrikonOPC	OPCDEV	3380 UUT 1	2.45 g
MM200/300 Sensor	ITI-GE	3P22-SD-41476	3380 UUT 1	2.45 g
MM200/300 Sensor	ITI	3P4-SD-41765	3380 UUT 4	2.71 g
MM200 W/ PROFIBUS	GE	MM200XXH2S	3380 UUT 4	2.71 g
Ethernet Cable	GE	8040172	3380 UUT 4	2.71 g
Current Sensor	SSA	TCSH4A	3380 UUT 2B	1.57 g
Cap Trip Device	ITI	CTD-10	3380 UUT 2B	1.57 g
PQM II Meter Kit w/ ALL OPTIONS	GE	PQMII-T20-C-A	3380 UUT 4	2.71 g
Reset Button	GE	CR104PBG10B1	3380 UUT 4	2.71 g
RJ 45 Connector	AEC	RJF21NSCC	3380 UUT 4	2.71 g
Genius PLC	GE	IC660BBS103	3380 UUT 4	2.71 g
PLC Power Supply	GE	IC693PWR321	3380 UUT 4	2.71 g
PLC CPU	GE	IC693CPU311	3380 UUT 4	2.71 g
Filler	GE	IC693ACC310	3380 UUT 4	2.71 g

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8639 – UUT 1: UUT1A & UUT1B
1200A Evolution E9000
Cold Formed Carbon Steel
Section A: 24”W x 22”D x 91.5”H, 776 lbs
Section B: 30”W x 22”D x 91.5”H, 969 lbs
Floor mounted using: (8) – 1/2”-13 bolts



8639 -UUT 1- Internal Components

Internal Components	Manufacturer	Part #
1200A Copper Bus	GE	-
SK, Circuit Breaker 1200A	GE	SKLA36AT1200
Line Reactor	GE	KLR80ATB
Control Power Transformer, 300VA	GE	9T58K0504G38
Fuse	Mersen	ATMR1
Fuse	Mersen	TMR1
VFD Drive Size 6, 500HP	GE	6KFP43500X8XXCA1
Fuse Block	Mersen	30312R
Fuse	Mersen	ATMR10
Line Filter	GE	KLR950CCB
Relay	GE	RL4RA022TJ
Relay	GE	RL4RA031TJ
Fan, Top Mounted	CFN Standard Distributor	273A7844CWP8

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.40	1	1.5	2.24	1.68	0.94	0.38

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	7.0 Hz	27.2 Hz	33.3+ Hz	

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8639 – UUT 2
600A Evolution E9000
Cold Formed Carbon Steel
20”W x 20”D x 91.5”H, 451 lbs
Floor mounted using: (4) – 1/2”-13 bolts



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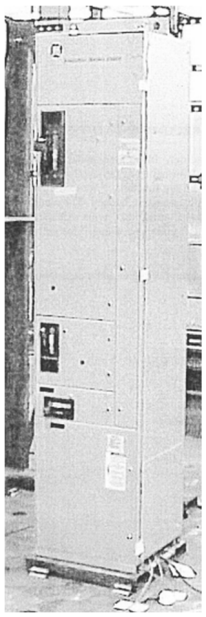
8639 -UUT 2- Internal Components

Internal Components	Manufacturer	Part #
600A Copper Bus	GE	-
Heater	Chromalox	CR123C419A
SG, Circuit Breaker, 600A	GE	SGLA36AI0600
CPT, 300VA	GE	9T58K0507G37
Contactor	GE	CR306HH004JE4H
Terminal Block	GE	190B163G3
Fuse	GE	190B1421G1
Fuses	Mersen	ATMR2
Fuse Block	Mersen	30312R
Fuse	GE	ATMR10
Fuse	Mersen	TMR3

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.2	1	1.5	3.52	2.64	1.47	0.59

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	8.6 Hz	5.4 Hz	33.3+ Hz	

52870-1 – UUT A
600A Evolution E9000
Cold Formed Carbon Steel
20”W x 20”D x 90”H, 550 lbs
Floor mounted using: (4) – 1/2”-13 bolts



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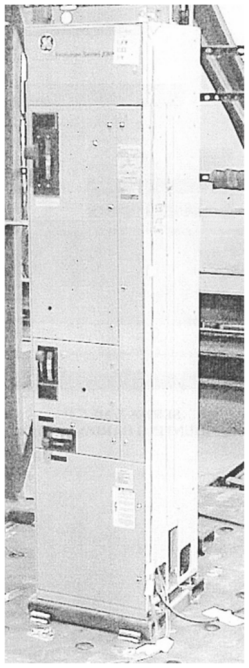
52870-1 -UUT A- Internal Components

Internal Components	Manufacturer	Part #
600A Copper Bus	GE	-
Stab ASM, 600A Bus	GE	190B1679G2
Contactor	GE	CR306C002ACDT
Starter Size 5, FVNR	GE	CR306HH104
Potential Transformer	MIC	B100-2989-5
CPT, 150VA	GE	9T58K0504G37
Fuse	GE	190B1421G1
Fuse	Mersen	TMR1
Fuse	Mersen	ATMR1
Fuse Block	Mersen	30312R
Fuse Block	GE	190B1660P3
3 Pole Fuse Block	Mersen	3032-S
Relay Fuse	Mersen	ATMR10
Relay	GE	RL4RA022TJ
Heater	Chromalox	CR123C955A
Heater	Chromalox	CR123C137B
SG Circuit Breaker, 400A	GE	SGLA36AI0400
SE, Circuit Breaker 30A	GE	SELA36AI0030

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.5	1	1.5	4.00	3.00	1.68	0.68

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	8.7 Hz	5.1 Hz	9.7 Hz	

52870-1 – UUT B
600A Evolution E9000
Cold Formed Carbon Steel
20”W x 20”D x 90”H, 572 lbs
Floor mounted using: (4) – 1/2”-13 bolts



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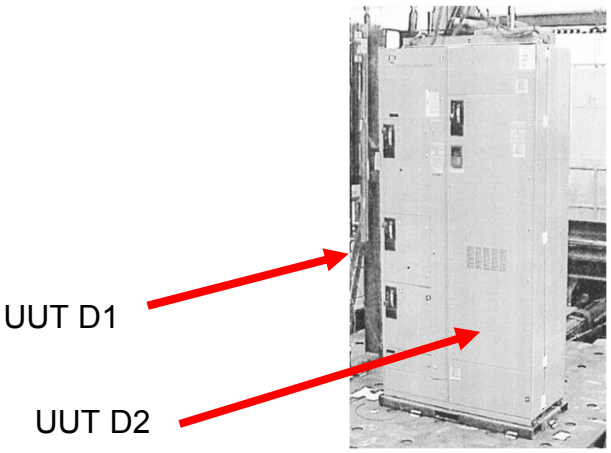
52870-1 -UUT B- Internal Components

Internal Components	Manufacturer	Part #
600A Copper Bus	GE	-
Stab ASM, 600A Bus	GE	190B1679G2
Contactor	GE	CR306C002ACDT
Starter Size 5	GE	CR306HH104
Potential Transformer	MIC	B100-2989-5
CPT, 150VA	GE	9T58K0504G37
Fuse	GE	190B1421G1
Fuse	Mersen	TMR1
Fuse	Mersen	ATMR1
Fuse Block	Mersen	30312R
Fuse Block	GE	190B1660P3
3 Pole Fuse Block	Mersen	3032-S
Relay Fuse	Mersen	ATMR10
Relay	GE	RL4RA022TJ
Heater	Chromalox	CR123C955A
Heater	Chromalox	CR123C137B
SE, Circuit Breaker 30A	GE	SELA36AI0030
SG Circuit Breaker, 400A	GE	SGLA36AI0400

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.5	1	1.5	4.00	3.00	1.68	0.68

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	6.0 Hz	5.8 Hz	8.9 Hz	

52870-1 – UUT D: UUT D1 & UUT D2
600A Evolution E9000
Cold Formed Carbon Steel
Section 1: 20”W x 20”D x 90”H, 522 lbs
Section 2: 20”W x 20”D x 90”H, 626 lbs
Floor mounted using: (8) – 1/2”-13 bolts



52870-1 -UUT D- Internal Components

Internal Components	Manufacturer	Part #
600A Copper Bus	GE	-
SE, Circuit Breaker 30A	GE	SELA36AI0030
SE, Circuit Breaker 150A	GE	SELA36AI0150
Contactor	GE	CR305F002AYH
Contactor	GE	CR309C002CCD
CPT, 150VA	GE	9T58K0504G37
CPT, 300VA	GE	9T58K0507G38
Relay	GE	CR324F360F
Relay	GE	CR324C360F
Relay	GE	RL4RA022TJ
Relay	GE	RL4RA031TJ
Fuse	GE	190B1421G1
Fuse	Mersen	ATMR2
Fuse	Mersen	TMR3
Fuse	Mersen	ATMR1
Fuse	Mersen	TMR1
3 Pole Fuse Block	Mersen	3032-S
Terminal Block	GE	190B1631G2
Heater	Chromalox	CR123F149C
Heater	GE	CR123C137B
Voltage Transformer	GE	302A3600CGP110
VFD Drive Sz 4	GE	6KP1143060X9B1
VFD Shroud Fan	GE	110C1556G2
Coil Suppressor	GE	273A7844ARG5
Line Reactor	GE	KLR80ATB
Load Filter	GE	KLC80B

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Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.66	1	1.5	2.66	1.99	1.11	0.45

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	9.2 Hz	6.2 Hz	9.9 Hz	

3380 – UUT 1: UUT 1A & UUT 1B
600A Evolution E9000
Cold Formed Carbon Steel
Section A: 20”W x 27”D x 102.5”H, 823 lbs
Section B: 20”W x 27”D x 102.5”H, 823 lbs
Floor mounted using: (8) – 1/2”-13 bolts



3380 -UUT 1- Internal Components

Internal Components	Manufacturer	Part #
SPD, 200kA per mode/400kA per phase	GE	TPHE480D20ME
Spectra E, 20A Circuit Breaker	GE	SELA36AT0020
VFD Drive, Size 1	GE	6KGP43007X9XXXA1
Control Power Transformer, 150 VA	GE	9T58R0504G06
Relay	GE	RL4RA031TJ
Muffin Fan, Top Mounted	CFN Standard Distributor	273A7844CWP1
Fuse	Mersen	ATMR1-1/2
Fuse	Mersen	TRM1-6/10
Fuse Block	Mersen	3032-S
Device Net, COMM Module	MatrikonOPC	OPCDEV
Filter	GE	273A7844CWP4
Starter FVNR Size 1	GE	CR306C104
Spectra E, 15A Circuit Breaker	GE	SELA36AT0015
OL Relay MM300 with DEVICE NET	GE	MM300XEHD3CAXXXX
Contactor	GE	CR305C002AAST
Fuse	Mersen	ATMR5
Fuse	Mersen	FEC-11-11
MM200/300 Sensor	ITI-GE	3P22-SD-41476
Relay	AMS	MCR120B02202
Ethernet Cable	GE	8040172
Voltage Transformer	ITI-GE	2VT469-480
Fuse Block	Mersen	PCC361
Ammeter Switch	AMS	A11A048-723E
Voltage Switch	AMS	A11A004-721E
Fuse	Mersen	ATMR3
Voltmeter, 600V	Weschler Instruments	103021PZSJ

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3380 -UUT 1- Internal Components Cont'd

Internal Components	Manufacturer	Part #
Ammeter	Yokogawa	250440LSLS7JHRU
Solid State Starter (SSS) Size 1	GE	QT10008U11DS
Contactor	GE	CL02A310TJ
Coil Suppressor	GE	273A7844ARG5
Ground Fault Transformer Kit	ITI-GE	GFM-252
Ground Fault Transformer	ITI-GE	GFM156
Fuses	Mersen	A50QS50
Fuse Block	Mersen	P243E
Solid State Starter Size 1	GE	QC2GDP

Buildings Codes				Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016				AC156	2.45	1	1.5	3.92	2.94	1.64	0.66
Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing							
	17.94 Hz	8.37 Hz	>33.3 Hz								

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3380 – UUT 2A
2500A Evolution E9000
Cold Formed Carbon Steel
42.5”W x 37”D x102.5”H, 1836 lbs
Floor mounted using: (4) – 1/2”-13 bolts



UUT 2A

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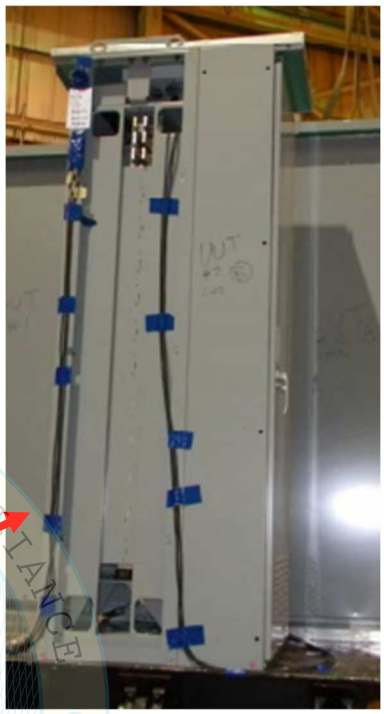
3380 -UUT 2A- Internal Components

Internal Components	Manufacturer	Part #
Power Break II 2500A	GE	SSF4G7X21000000

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.79	1	1.5	2.86	2.15	1.20	0.48

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	3.69 hz	2.85 Hz	28.8 Hz	

3380 – UUT 2B
2500A Evolution E9000
Cold Formed Carbon Steel
25.25”W x 37”D x102.5”H, 1102 lbs
Floor mounted using: (4) – 1/2”-13 bolts



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3380 -UUT 2B- Internal Components

Internal Components	Manufacturer	Part #
Potential Transformer	ITI	460-480
Control Power Transformer, 300VA	GE	9T58R0507G76
Fuse	Mersen	ATMR2
Fuse Block	Mersen	PCC361
Fuse	Mersen	ATMR3
Fuse	Mersen	TRM3-2/10
Current Transformer	GE	75A105899P129
SPVR Phase Monitor	ITI	SPVRB-480
Contactor	GE	CR104PLG22W
Surge Arrestor Capacitor	DLA	CA603MB-CA
Surge Arestor Lighting	DLA	MO603MB
Relay	GE	RL4RA040TJ
Current Sensor	SSA	TCSH4A
Voltage Transformer	GE	302A3600CGP108
Fuse	Mersen	AJT10
Fuse	Mersen	TRM10
Fuse Block	Mersen	US3J2
Fuse Block	Mersen	30311
Cap Trip Device	ITI	CTD-10

3380 -UUT 2B- Internal Components Cont'd

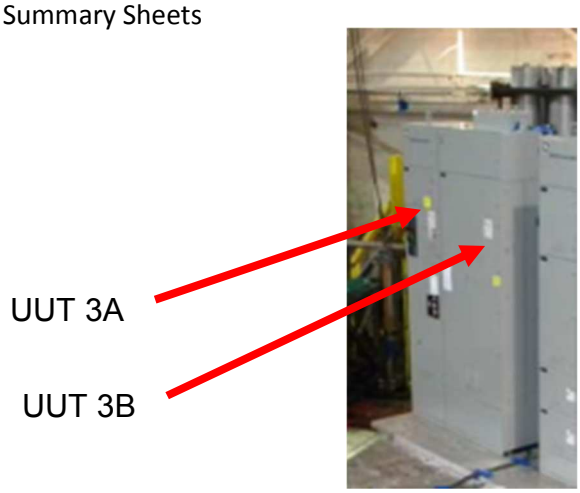
Internal Components	Manufacturer	Part #
PQM II Meter Kit w/ ALL OPTIONS	GE	PQMII-T20-C-A
Starter Size 1, 2S1WCT	GE	CR309S002BHD
Relay	GE	CR324C360F
Relay	GE	CR324C360E
Spectra E 150A Frame Circuit Breaker	GE	SELA36AT0007
Control Power Transformer, 150VA	GE	9T58R0504G06
Fuse	Mersen	ATMR1-1/2
Fuse	Mersen	TRM1-6/10
Ammeter	Crompton	459-78AA-LSMT
Current Transformer	ITI	2SFT500
Heater	Chromolax	CR123C356A
Heater	Chromolax	CR123C301A
Fuse Block	Mersen	3032-S
Contactor	GE	CR305E002AYH
Coil	GE	55-501336G004
Relay	GE	CR324E660F
Contactor	GE	CR305E004AALH
Spectra E 150A Frame Circuit Breaker	GE	SELA36AT0100
Auto Transformer	AFP	MA3-0221-6-0480
Fuse Block	Mersen	30312R
Relay Fuses	Mersen	ATMR10
Relay	GE	RL4RA022TJBTLF30C
Ammeter	Crompton	549-78AA-LSNT
Ground Fault CT	ITI	GFM-252
Ground Fault CT	ITI	GFM156
Coil	GE	55-501336G002
Heater	Chromolax	CR123F487B
Contactor Light	GE	CR104PLG22R

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Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.57	1	1.5	2.51	1.88	1.05	0.42

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	3.77 Hz	8.47 Hz	>33.3 Hz	

3380 – UUT 3: UUT 3A & UUT 3B
800A Evolution E9000
Cold Formed Carbon Steel
Section A: 20”W x 20”D x 91.5”H, 378 lbs
Section B: 30”W x 20”D x 91.5”H, 568 lbs
Floor mounted using: (8) – 1/2”-13 bolts



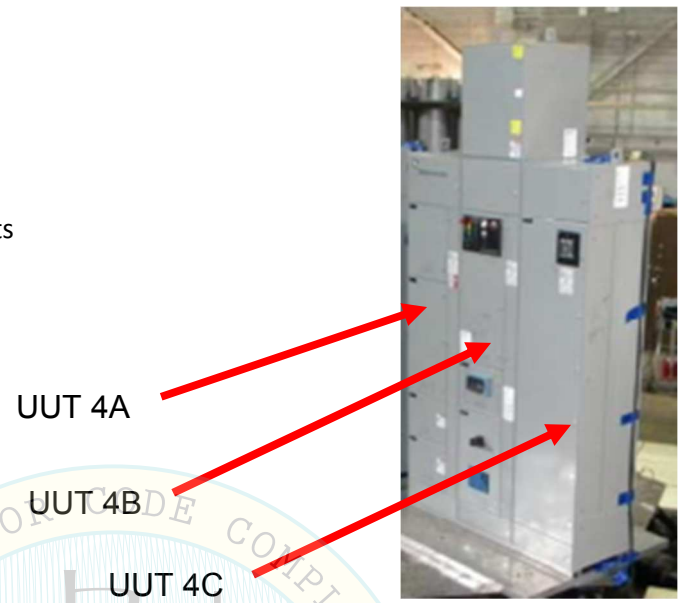
3380 -UUT 3- Internal Components

Internal Components	Manufacturer	Part #
Solid State Starter, 6, 400HP	GE	QT20580U11DS
Spectra G 600A Frame, Circuit Breaker	GE	SGLA36AT0600
Start Button	GE	CR104PBG10B1
Stop Button	GE	CR104PBG01R1
Select Switch	GE	CR104PSG34Y1
Heater	Chromolax	CR123C356A
Contactor Light	GE	CR104PLG22R
Relay	GE	RL4RA022TJ
Vacuum Starter Size 6, FVNRV	GE	169C6383BXG3
Control Power Transformer, 500VA	GE	9T58R0000G09
Control Power Transformer, 300VA	GE	9T58R0507G76
Fuse	Mersen	ATMR2
Fuse	Mersen	TRM3-2/10
Relay	GE	RL4RA031TJ
VFD Shroud Fan	GE	110C1556G3
Spectra K, 1200A Frame Circuit Breaker	GE	SKPA36AT1200
Coil Suppressor	GE	273A7844ARG5
Solid State Starter Size 6	GE	QC2TDP

Buildings Codes				Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016				AC156	2.15	1	1.5	3.44	2.58	1.44	0.58
Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing							
	7.89 Hz	5.82 Hz	>33.3 Hz								

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3380 – UUT 4: UUT 4A, UUT 4B & UUT 4C
600A Evolution E9000
Cold Formed Carbon Steel
Section A: 20”W x 20”D x 92”H, 383 lbs
Section B: 20”W x 20”D x 112”H, 478 lbs
Section C: 20”W x 20”D x 92”H, 383 lbs
Floor mounted using: (12) – 1/2”-13 bolts



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3380 -UUT 4- Internal Components

Internal Components	Manufacturer	Part #
Power Factor Capacitor, 50kVAR	SPR	143PCDM
Power Factor Fuse	Mersen	ATMR4
Power Factor Fuse Block	Mersen	30323R
Power Factor Capacitor, 1kVAR	SPR	1543PCDM
Power Factor Capacitor, 1kVAR	SPR	17X43PCDM
Power Factor Fuse	Mersen	A6T50
Power Factor Fuse	Mersen	A6T60
Power Factor Fuse Block	Mersen	60608T
Top Pull Box, 20" High	GE	N/A
Size 4 Vacuum Starter, FVNRV	GE	169C6383CEG1
Spectra F 250A Frame, Circuit Breaker	GE	SFLA36AT0250
MM200 W/ PROFIBUS	GE	MM200XXH2S
Fuse	Mersen	ATMR5
Phase Monitor	Mersen	FEC-11-11
MM200/300 Sensor	ITI	3P4-SD-41765
Relay	GE	RL4RA022TJ
Reset Button	GE	CR104PBG10B1
RJ 45 Connector	AEC	RJF21NSCC
Ethernet Cable	GE	8040172
Fuse	Mersen	ATMR2
Fuse Block	Mersen	PCC361
Fuse	Mersen	TRM3-2/10
Fuse	Mersen	ATMR3
Control Power Transformer, 300VA	GE	9T58R0507G76
PQM II with ALL OPTIONS	GE	PQMII-T20-C-A

3380 -UUT 4- Internal Components Cont'd

Internal Components	Manufacturer	Part #
TVSS, 50kA SPD, 25kA per mode/50kA per phase	GE	TPME480D06ME
Relay, BGFL	ITI	BGFL159-1200
Relay, BGFL	ITI	BGFL159-60
Relay, MGE	MGE	250ACPX-143
Relay,CIC	CIC	RB08
Relay, MGE	MGE	750XBXC-24D
Relay, CR120	GE	CR120BL02202
Genius PLC	GE	IC660BBS103
PLC Power Supply	GE	IC693PWR321
PLC CPU	GE	IC693CPU311
Relay, MDL	GE	IC693MDL240
Relay, MDL	GE	IC693MDL940
Filler	GE	IC693ACC310

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.71	1	1.5	4.34	3.25	1.82	0.73

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	11.2 Hz	10.38 Hz	12.2 Hz	

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10155 - UUT 2

2000A Evolution Switchboard
w/ Entelliguard G Global Air Circuit Breaker (GACB)
Disconnect with Top Entry
0.105" Cold-Formed Carbon Steel
35"W x 35"D x 90"H (123"H w/ top feeder)
Weight: 1435 lbs

Floor mounted with (8) ½"-13 Grade 5 bolts



UUT2 on right

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CALIFORNIA BUILDING CODE, 2016

2000A Entelliguard G Global Air Circuit Breaker (GACB) w/ Top Entry– 10155-UUT 2 – Internal Components

Internal Components	Manufacturer	Part #
2000A Copper silver-plated bus	GE	
2000A Enteliguard G Global Air Circuit Breaker (GACB) - Frame 1 w/ Cassette	GE	GA20M2X
Heater	Chromalox Inc.	CRX# OT-1225-*
Fuse	Ferraz Shawmut	A4J6
	Ferraz Shawmut	AJT1-1/2
	Tri-onic	TR3R
Fuse Block	Bussmann	15149-2
	Bussmann	15149-3
	Ferraz Shawmut	20321
Relay	ITI (Instrument Transformers, Inc.)	SPVRB 480
Control Power Transformer	GE	9T58K2808
Thermostat	Dayton	8U33
Humidistat	Honeywell	H46C1000
Top Entry Cabinet	GE	

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.50	1.0	1.5	4.00	3.00	1.68	0.68

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	8.2 Hz	16.8 Hz	31.0 Hz	

10155 - UUT 6

4000A Evolution Switchboard Distribution Section
0.105" Cold-Formed Carbon Steel
45"W x 25"D x 91"H
Weight: 870 lbs

Floor mounted with (4) ½"-13 Grade 5 bolts



UUT-6 on the right

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4000A Distribution Section – 10155-UUT6 – Internal Components

Internal Components	Manufacturer	Part #
4000A Alumimum tin-plated bus	GE	
1200A Distribution (Spectra Series Panelboard)	GE	APNB3812 (interior), APF9638E (front), APB4465 (box)
1200A TK Series 3 pole breaker	GE	TKM3F
ADS 30A Switch	GE	ADS36030HS
ADS 1200A Switch	GE	ADS36120LB
TVSS (large)	GE	TPHE480D30PP
1200A fuse	Ferraz Shawmut	A4BY1200
Class R fuse (30A)	Little Fuse	FLSR

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	2.50	1.0	1.5	4.00	3.00	1.68	0.68

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	9.48 Hz	11.4 Hz	13.0 Hz	

8101 – UUT 1

Integrated Switchboard Distribution Section
0.105” Cold-Formed Carbon Steel
40”W x 15”D x 90”H
Weight: 435 lbs

Floor mounted with (4) ½”-13 Grade 5 bolts



UUT1 on the Left

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Integrated Switchboard Distribution Section - 8101 -UUT1 - Internal Components

Internal Components	Manufacturer	Part #
A Series Panel Board 400A	GE	AQM3424MTX
A Series Panel Board 225 A	GE	ALM3424MTX
Spectra F Circuit Breaker 250A	GE	SFLA36AT0250

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.60	1.0	1.5	2.56	1.92	1.07	0.43

	F-B	S-S	V	
Lowest Natural Frequency	19.5 Hz	12.5 Hz	22.5 Hz	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing

8101 – UUT 3

Integrated Switchboard with ATS Switches
0.105" Cold-Formed Carbon Steel
20"W x 30"D x 90"H
Weight: 405 lbs

Floor mounted with (4) ½"-13 Grade 5 bolts



UUT3 on the Left

REVIEWED FOR CODE COMPLIANCE
oshpd
OSP-0093-10
BY: Timothy J. Piland
DATE: 07/10/2018
CALIFORNIA BUILDING CODE, 2016

Integrated Switchboard with ATS Switches - 8101-UUT3 - Internal Components

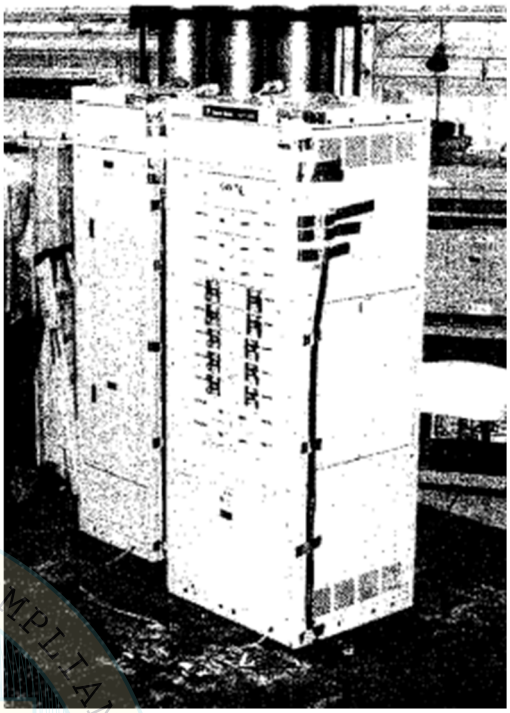
Internal Components	Manufacturer	Part #
Automatic Transfer Switch ATS 200A	GE	ZTG000A00020E
Automatic Transfer Switch ATS 200A	GE	ZTGD00A0U020E

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.70	1.0	1.5	2.72	2.04	1.14	0.46

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	15.5 Hz	14.8 Hz	44.5 Hz	

8101 – UUT 5
Integrated Switchboard with A Series Panel
0.105” Cold-Formed Carbon Steel
25”W x 15”D x 90”H
Weight: 380 lbs

Floor mounted with (4) ½”-13 Grade 5 bolts



UUT5 on the Left

REVIEWED FOR CODE COMPLIANCE
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CALIFORNIA BUILDING CODE 2016

Integrated Switchboard with A Series Panel - 8101 - UUT5- Internal Components

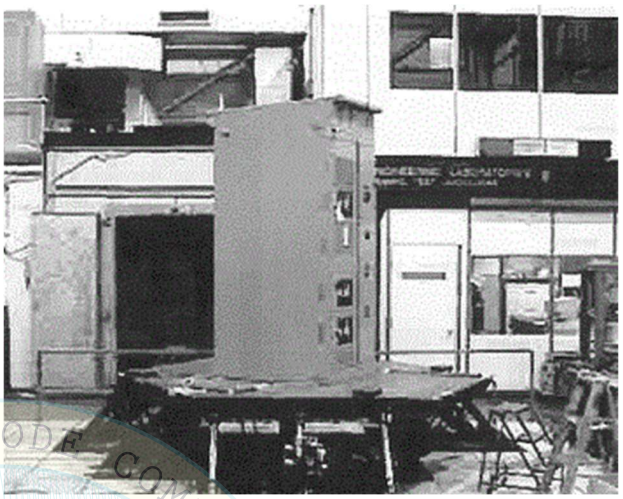
Internal Components	Manufacturer	Part #
A Series Panel Board 600A	GE	ADM3366MTX
TVSS (large)	GE	TPHE480D30PP

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.70	1.0	1.5	2.72	2.04	1.14	0.46

	F-B	S-S	V	
Lowest Natural Frequency	12.5 Hz	12.5 Hz	33.3+ Hz	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing

8055 – UUT 1B

Power Break II Switchboard
0.105" Cold-Formed Carbon Steel
Section B: 22"W x 50"D x 104"H, 2,129 lbs
(Height includes 12" drip roof)
Floor mounted with (4) ½"-13 Grade 5 bolts



UUT1B on left

REVIEWED FOR CODE COMPLIANCE
OSHPD
OSP-0093-10
REVIEWED BY: Timothy J. Piland
REVIEW DATE: 07/10/2018
CALIFORNIA BUILDING CODE, 2016

Power Break II Switchboard - 8055-UUT1B - Internal Components

Internal Components	Manufacturer	Part #
Power Break II Circuit Breaker 3000A	GE	SSD30D30H
Power Break II Circuit Breaker 2000A	GE	SSD20B20H
Power Break II Circuit Breaker 800A	GE	SSD08B08H

Buildings Codes	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016	AC156	1.67	1.0	1.5	2.67	2.00	1.12	0.45

Lowest Natural Frequency	F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 testing. UUT full of contents during testing
	12.4 Hz	7.8 Hz	36.5 Hz	