



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0096

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Russelectric, Inc.

Manufacturer's Technical Representative: Elizabeth Stark

Mailing Address: South Shore Park, Hingham, MA 02043

Telephone: (781) 749-6000 Email: estark@russelectric.com

Product Information

Product Name: Emergency and Standby Power Systems

Product Type: Automatic Transfer Switches

Product Model Number: See Certified Product List Tables 1 to 3

General Description: Russelectric RTS-30 Series Automatic & By-Pass Transfer Switches installed in NEMA 1 rated enclosures. The primary function is to transfer from a primary source to an emergency generator or secondary power source.

Mounting Description: Rigid, See Certified Product Tables

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe

Mailing Address: 1199 Shoreline Drive Suite 310, Boise, ID 83702

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Title: President





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FACILITIES DEVELOPMENT DIVISION**

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

Company Name: W.E. GUNDY & ASSOCIATES INC.

Name: Travis Soppe

California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989

Email: tsoppe@wegai.com

Certification Method

GR-63-Core

ICC-ES AC156

IEEE 344

IEEE 693

NEBS 3

Other (Please Specify): _____

Testing Laboratory

Company Name: CLARK TESTING LABORATORY, INC.

Contact Person: Devon Lohr

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

Telephone: (412) 387-1027

Email: dlohr@clarktesting.com

Company Name: WYLE LABORATORIES

Contact Person: Don Smith

Mailing Address: 7800 Highway 20 West, Huntsville AL 35806

Telephone: (256) 837-4411

Email: Don.smith@wyle.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = Multiple, see attachments

SDS (Design spectral response acceleration at short period, g) = ATS Floor Units = 1.2, ATS Wall and Bypass Floor Units = 2.0

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = Multiple, see attachments

Overall dimensions and weight = Multiple, see attachments

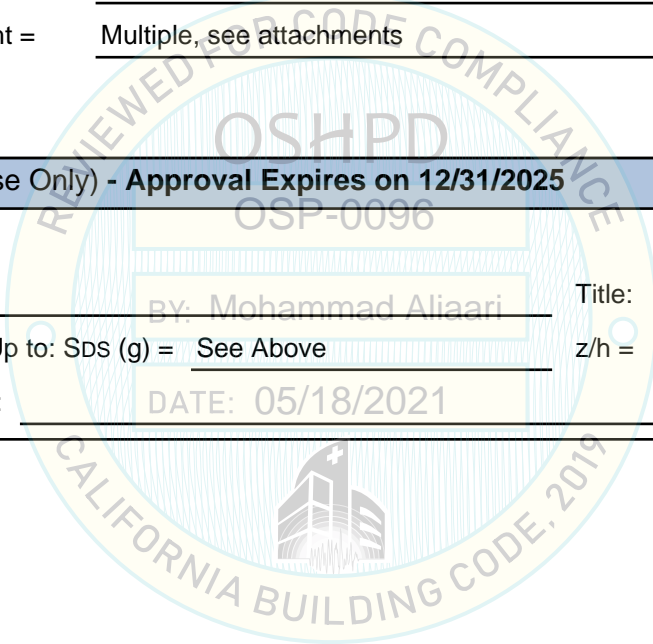
OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 5/18/2021

Name: Mohammad Aliaari Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = 1

Condition of Approval (if applicable): DATE: 05/18/2021



RUSSELECTRIC INC. AUTOMATIC TRANSFER AND BYPASS SWITCH CERTIFIED PRODUCT LINE MATRICES



ID/Catalog Number	Ampere Rating	Frame	Poles	NEMA Rating	Equipment Dimensions (in)			Weight (lbs)	Representative ¹ UUT
					Width	Depth	Height		
Table 1: RTS-30 Wall Mounted ATS Product Line - Max S_{DS} = 2.0 at z/h = 1.0 - F_p / W_p = 1.50									
RTS30-ATB800BOW1	800	E	4	1	31	18	66	565	UUT _x -2
Table 2: RTS-30 Floor Mounted ATS Product Line - Max S_{DS} = 1.2 at z/h = 1.0 - F_p / W_p = 0.90									
RTS30-ATx100 to RTS30-ATx800	100-800	F	3 & 4	1	24-29	24	92	550-735	Extrapolated
RTS30-ATC8004BOF1	800	F	4	1	29	24	92	735	UUT _x -1
RTS30-ATx1000 to RTS30-ATx2000	1000-2000	F	3 & 4	1	32-36	32	92	735-1065	Interpolated
RTS30-ATC20004BOF1	2000	F	4	1	36	32	92	1065	UUT _x -3
RTS30-ATx2000 to RTS30-ATx2500	2000-2500	F	3 & 4	1	32-36	36	92	1065-1190	Interpolated
RTS30-ATB25004BOF1	2500	F	4	1	36	36	92	1190	UUT _x -4
Table 3: RTS-30 Floor Mounted Bypass ATS Product Line - Max S_{DS} = 2.0 at z/h = 1.0 - F_p / W_p = 1.5									
RTS30-ABxx100 to RTS30-ABxx800	100-800	D	3 & 4	1	32-36	39	92	1500-1860	Extrapolated
RTS30-ABLB8004BOF1	800	D	4	1	36	39	92	1860	UUT _x -7
RTS30-ABxx1000 to RTS30-ABxx2000	1000-2000	D	3 & 4	1	36-42	59	92	1860-3550	Interpolated
RTS30-ABxx2000 to RTS30-ABxx2500	2000-2500	D	3 & 4	1	36-42	65	92	3550-3950	Interpolated
RTS30-ABLB25004BOF1	2500	D	4	1	42	65	92	3883	UUT _x -5
RTS30-ABxx2500 to RTS30-ABxx3000	2500-3000	D	3 & 4	1	42	65	92	3800-4350	Interpolated
RTS30-ABLB30004AMF1	3000	D	4	1	42	65	92	4326	UUT _y -8

General Notes:

All NEMA 1 enclosures are constructed of 12ga, Carbon Steel

x - A, B, and C operator selection. See Russelectric Model Number System for operator selection.

xx - BL or BO Switch Type selection.

¹ The units were tested at different times and the subscripts on the UUT's reference the following lab test reports:

x - 57108-1 y - JID-19-01389

RUSSELECTRIC INC. AUTOMATIC TRANSFER AND BYPASS SWITCH CERTIFIED SUBCOMPONENT MATRICES



Identification Number	Manufacturer	Description	Approximate Weights (lbs)	Representative ¹ UUT
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Table 4: RTS-30 Floor Mounted Automatic Transfer Switch Panel - Max $S_{DS} = 1.2$ at $z/h = 1.0$

RTS30-ATA100 to ATC800	Russelectric	100A-800A	300-400	Extrapolated
RTS30-ATC800	Russelectric	800A	400	UUT _x -1
RTS30-ATA100 to ATC2000	Russelectric	1000A-2000A	550-650	Interpolated
RTS30-ATC2000	Russelectric	2000A	650	UUT _x -3
RTS30-ATA2500 to ATC2500	Russelectric	2500A	700	Interpolated
RTS30-ATB2500	Russelectric	2500A	700	UUT _x -4

Table 5: RTS-30 Floor Mounted Bypass Transfer Switch Panel - Max $S_{DS} = 2.0$ at $z/h = 1.0$

RTS30-ABLA100 to ABOC800	Russelectric	100A-800A	360-460	Extrapolated
RTS30-ABLB800	Russelectric	800A	470	UUT _x -7
RTS30-ABLA1000 to ABOC2000	Russelectric	1000A-2000A	650-780	Interpolated
RTS30-ABLA2500 to ABOC2500	Russelectric	2500A	850	Interpolated
RTS30-ABLB2500	Russelectric	2500A	850	UUT _x -5
RTS30-ABLB3000	Russelectric	3000A	900	UUT _y -8

General Notes:

Tables present the critical ATS and Bypass transfer switch panels that are internal to the complete assembly.

¹ The units were tested at different times and the subscripts on the UUT's reference the following lab test reports:

x - 57108-1 y - JID-19-01389

By: Mohammad Aliaari

DATE: 05/18/2021

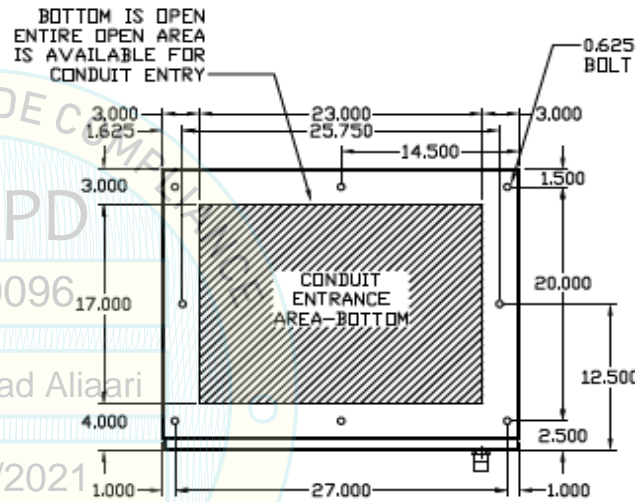


UUT_x-1

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (8) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Automatic Transfer Switches	Report Number: 57108-1
Identification Number: RTS30-ATC8004BOF1	UUT No. in Test Report: 98014-1

UUT Function: Auto Transfer Switches to switch electrical loads to backup power source.

UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a main bus ampre rating of 800A.

UUT Component Description:
NEMA1 12ga Carbon Steel Enclosure, and Russelectric 800A Automatic Transfer Switch

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
735	29.0	24.0	92.0	13	6.7	>33

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019/ ICC-ES-AC156	1.20	1.00	1.50	1.92g	1.44g	0.80g	0.32g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_x-2

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid wall mounted with (4) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Automatic Transfer Switches	Report Number: 57108-1
Identification Number: RTS30-ATB800BOW1	UUT No. in Test Report: 98014-2

UUT Function: Auto Transfer Switches to switch electrical loads to backup power source.

UUT Description: The unit is a wall mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a main bus ampre rating of 800A.

UUT Component Description:
NEMA1 12ga Carbon Steel Enclosure, and Russelectric 800A Automatic Transfer Switch

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
565	31.0	18.0	66.0	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	1.34g	0.54g

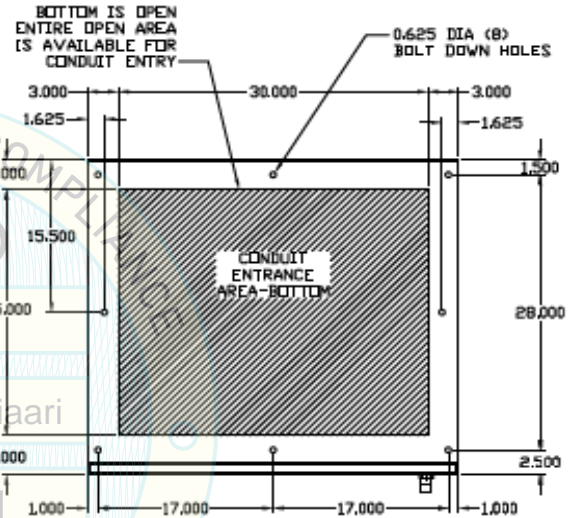
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_x-3

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (8) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Automatic Transfer Switches	Report Number: 57108-1
Identification Number: RTS30-ATC20004BOF1	UUT No. in Test Report: 98014-3
UUT Function: Auto Transfer Switches to switch electrical loads to backup power source.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a main bus ampre rating of 2000A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 2000A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,065	36.0	32.0	92.0	9.3	3.6	> 33

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	1.20	1.00	1.50	1.92g	1.44g	0.80g	0.32g

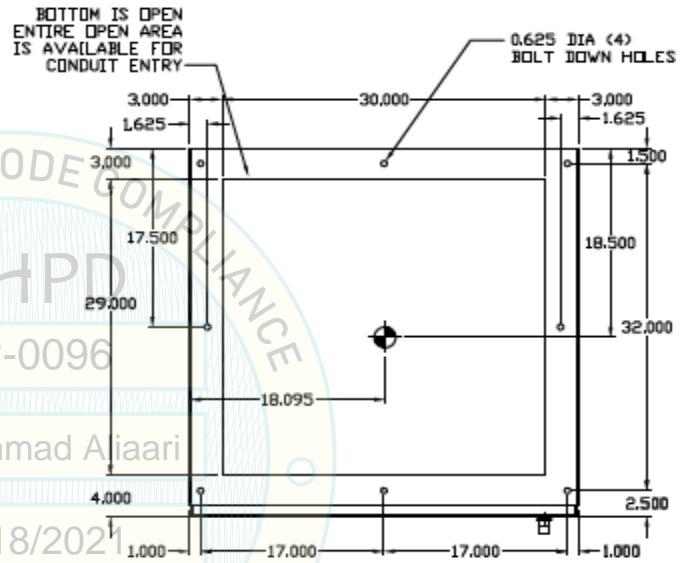
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_x-4

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (4) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Automatic Transfer Switches	Report Number: 57108-1
Identification Number: RTS30-ATB25004BOF1	UUT No. in Test Report: 98014-4
UUT Function: Auto Transfer Switches to switch electrical loads to backup power source.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a main bus ampere rating of 2500A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 2500A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,190	36.0	36.0	92.0	17.0	13.0	> 33

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	1.20	1.00	1.50	1.92g	1.44g	0.80g	0.32g

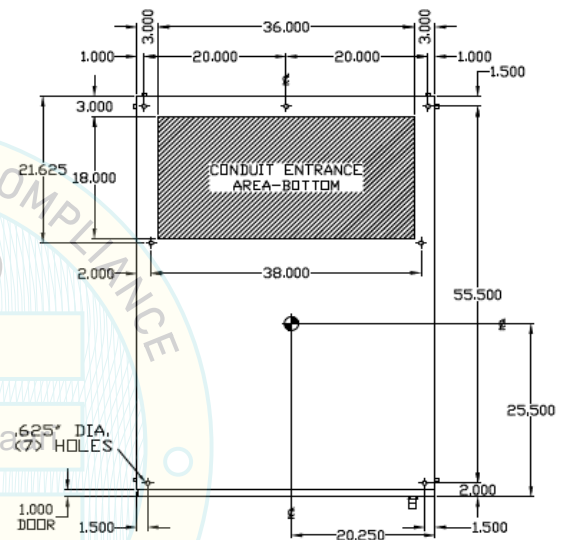
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_{x-5}

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (6) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Bypass Transfer Switches	Report Number: 57108-1
Model Number: RTS30-ABLB25004BOF1	UUT No. in Test Report: 98014-5
UUT Function: Bypass Transfer Switches to switch electrical loads to backup power source.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with by-pass compartment and a main bus ampre rating of 2500A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 2500A By-Pass Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
3,883	42.0	65.0	92.0	7.5	4.5	20.0

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	1.34g	0.54g

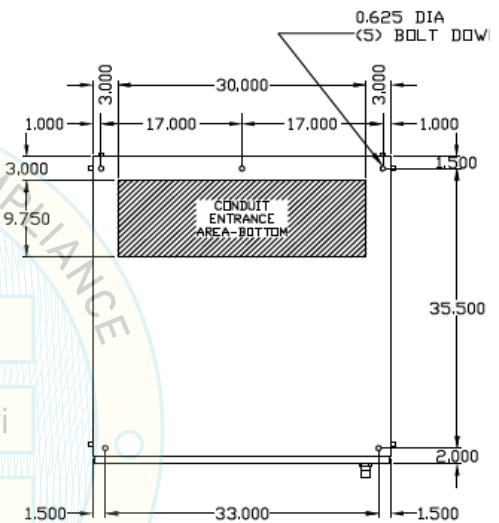
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_x-7

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (5) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc
Product Line: RTS 30 Cycle - Bypass Transfer Switches	Report Number: 57108-1
Identification Number: RTS30-ABLB8004BOF1	UUT No. in Test Report: 98014-8
UUT Function: Bypass Transfer Switches to switch electrical loads to backup power source.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with by-pass compartment and a main bus ampre rating of 800A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 800A By-Pass Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,860	36.0	39.0	92.0	12.0	6.3	19.0

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	1.34g	0.54g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-8

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid floor mounted with (6) 1/2" diameter grade 5 bolts



Manufacturer: Russelectric, Inc.	Test Location: Clark Laboratory
Product Line: RTS 30 Cycle - Bypass Transfer Switches	Report Number: JID-19-01389
Identification Number: RTS30-ABLB30004AMF1	UUT No. in Test Report: UUT-8y
UUT Function: Bypass Transfer Switches to switch electrical loads to backup power source.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with by-pass compartment and a main bus ampre rating of 3000A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 3000A By-Pass Transfer Switch Design modification bracket required for power supply (drawing M103504)	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
4,326	42.0	65.0	92.0	14.2	4.9	32.5

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
	2.50	0.00	1.50	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.