



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0005

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Russelectric, Inc.

Manufacturer's Technical Representative: Elizabeth Stark

Mailing Address: 99 Industrial Park Rd. 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-03 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, Floor/Wall Mounted

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) 861-6913 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

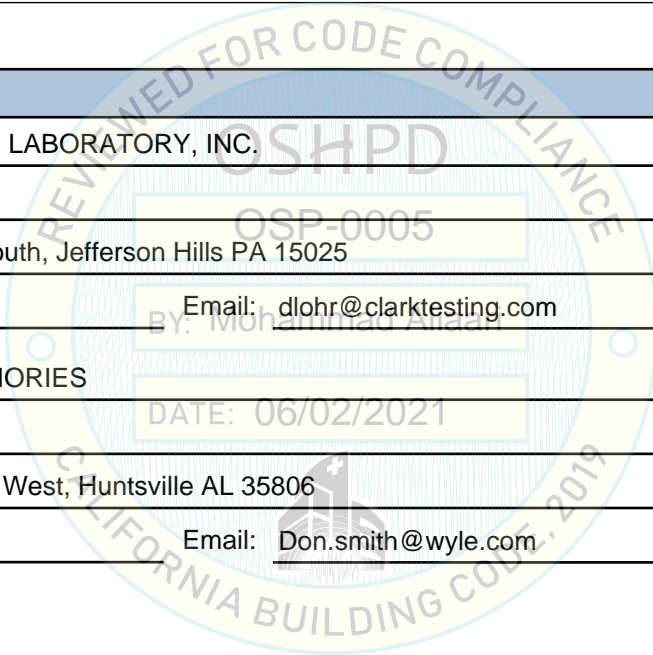
Certification Method

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) = 1.5

SDS (Design spectral response acceleration at short period, g) = 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

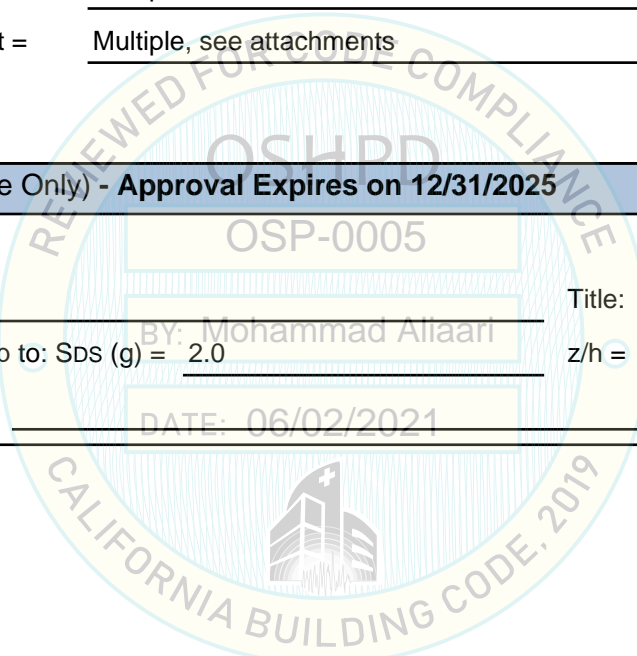
OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 6/2/2021

Name: Mohammad Aliaari Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 2.0 z/h = 1

Condition of Approval (if applicable): DATE: 06/02/2021



RUSSELECTRIC INC. AUTOMATIC TRANSFER AND BYPASS SWITCHES 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-03 Wall Mounted ATS Product Line - Max S_{DS} = 2.0 at z/h = 1.0									
RTS03-ATB8004AMW1	800	F	4	1	31	18	66	625	UUT _z -5
RTS03-ATB8004AMW3R	800	F	4	3R	39	18	69	640	UUT _y -9
Table 2: RTS-03 Floor Mounted ATS Product Line - Max S_{DS} = 2.0 at z/h = 1.0									
RTS03-ATx100 to ATx800	100-800	G	2, 3 & 4	1	24-29	24	92	700-900	Extrapolated
RTS03-ATB8004AMF1	800	G	4	1	29	24	92	900	UUT _z -1
RTS03-ATx1000 to ATx2000	1000-2000	G	2, 3 & 4	1	32-36	32	92	1025-1365	Interpolated
RTS03-ATB20004AMF1	2000	G	4	1	36	32	92	1365	UUT _y -2
RTS03-ATx25004AMF1	2500	G	2, 3 & 4	1	32-36	36	92	1205-1410	Interpolated
RTS03-ATB25004AMF1	2500	G	4	1	36	36	92	1410	UUT _y -3
RTS03-ATx3000	3000	G	2, 3 & 4	1	40-48	40	92	1265-1480	Interpolated
RTS03-ATB30004AMF1	3000	G	4	1	48	40	92	1480	UUT _y -4
Table 3: RTS-03 Floor Mounted Bypass ATS Product Line - Max S_{DS} = 2.0 at z/h = 1.0									
RTS03-ABx100 to ABx800	100-800	A	2, 3 & 4	1	32-36	39	92	1250-1750	Extrapolated
RTS03-ABL8004AMF1	800	A	4	1	36	39	92	1750	UUT _z -6
RTS03-ABx1000 to ABx2000	1000-2000	A	2, 3 & 4	1	36-42	59	92	2200-3400	Interpolated
RTS03-ABx25004xxF1	2500	A	3 & 4	1	36-42	66	92	3500-4365	Interpolated
RTS03-ABL25004AMF1	2500	A	4	1	42	66	92	3800	UUT _y -7
RTS03-ABL30004AMF1	3000	A	4	1	54"	66	92	4365	UUT _x -8

General Notes:

All enclosures are constructed of 12ga, Carbon Steel
Thumbscrews are required for all installations.

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

Bypass: x - L and O switch type selection. See Russelectric Model Number System for 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 - JID-19-01389 y - 53851-1 z - 53237-1

RUSSELECTRIC INC. AUTOMATIC TRANSFER AND BYPASS SWITCH CERTIFIED SUBCOMPONENT MATRICES



Identification Number	Manufacturer	Description	Approximate Weights (lbs)	Representative UUT
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Table 4: RTS-03 Floor Mounted Automatic Transfer Switch - Max $S_{DS} = 2.0$ at $z/h = 1.0$

RTS03-AT 100 to AT 800	Russelectric	100A-800A	150-260	Interpolated
RTS03-AT 800	Russelectric	800A	260	UUT_{z-1} / UUT_{y-9}
RTS03-AT 1000 to AT 2000	Russelectric	1000A-2000A	450-550	Interpolated
RTS03-AT 2000	Russelectric	2000A	550	UUT_{y-2}
RTS03-AT 2500	Russelectric	2500A	580	UUT_{y-3}
RTS03-AT 3000	Russelectric	3000A	700	UUT_{y-4}

Table 5: RTS-03 Floor Mounted Bypass Transfer Switch - Max $S_{DS} = 2.0$ at $z/h = 1.0$

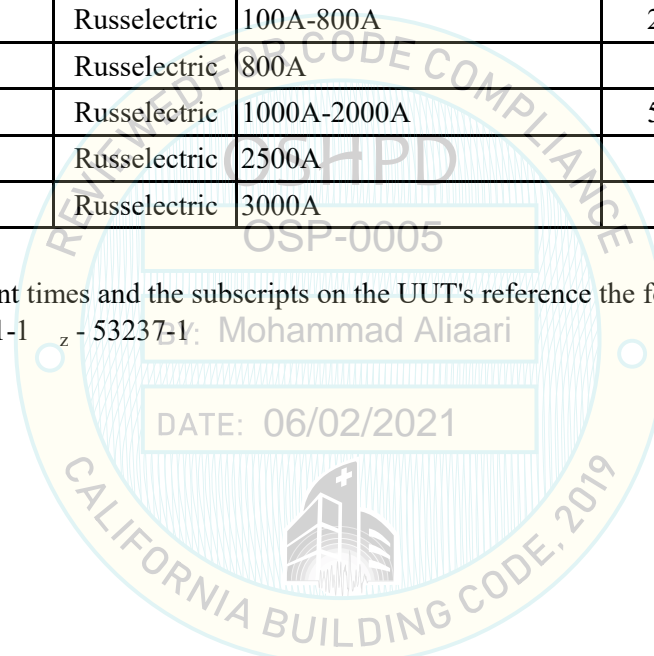
RTS03-ABL 100 to ABL 800	Russelectric	100A-800A	200-300	Extrapolated
RTS03-ABL 800	Russelectric	800A	300	UUT_{z-6}
RTS03-ABL 1000 to ABL 2000	Russelectric	1000A-2000A	550-680	Interpolated
RTS03-ABL 2500	Russelectric	2500A	680	UUT_{y-7}
RTS03-ABL 3000	Russelectric	3000A	710	UUT_{x-8}

General Notes:

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

x - JID-19-01389 y - 53851-1 z - 53237-1 v - Mohammad Aliaari

DATE: 06/02/2021



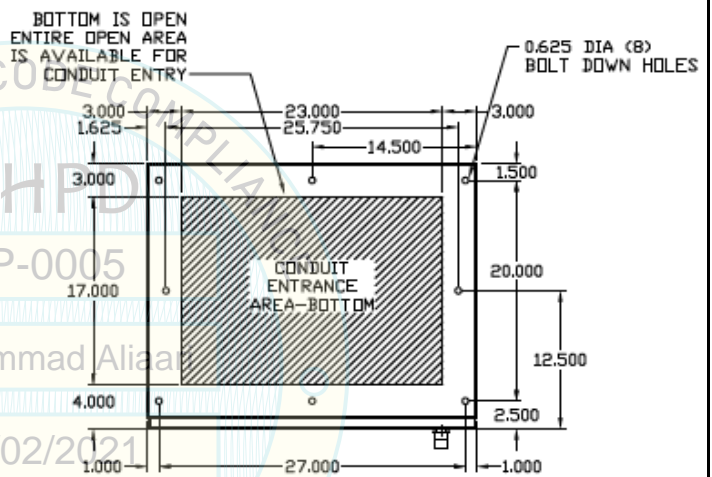
UUT_z-1

UNIT UNDER TEST (UUT) SUMMARY SHEET



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

Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53237-1
Model Number: RTS03-ATB8004AMF1	UUT No. in Test Report: 98006-1
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 ampere rating of 800A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 800A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
900	29.0	24.0	92.0	12.0	9.1	30.3

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	1.33g	0.54g

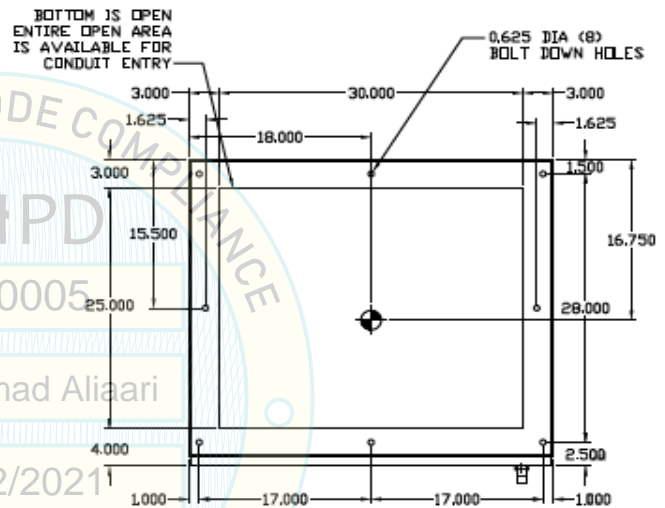
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-2

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) 1/2" diameter grade 5 bolts.
Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53851-1
Model Number: RTS03-ATB20004AMF1	UUT No. in Test Report: 98006-6
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 2000A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 2000A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,365	36.0	32.0	92.0	10.0	5.9	> 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	2.00	1.00	1.50	3.20g	2.40g	1.33g	0.54g

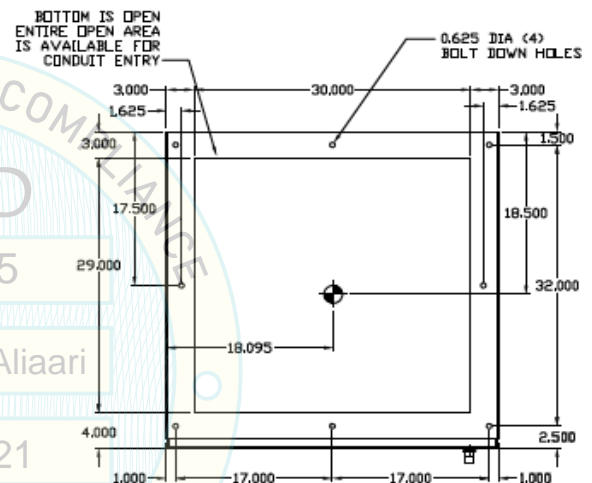
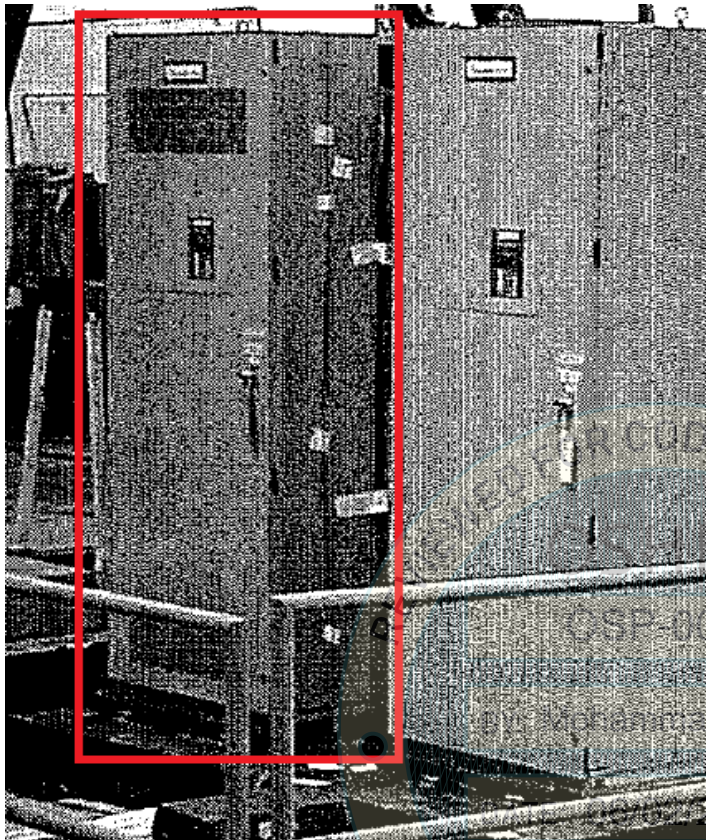
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-3

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) 1/2" diameter grade 5 bolts.
Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53851-1
Model Number: RTS03-ATB25004AMF1	UUT No. in Test Report: 98006-7
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 2000A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,410	36.0	36.0	92.0	10.0	4.8	> 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	2.00	1.00	1.50	3.20g	2.40g	1.33g	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.

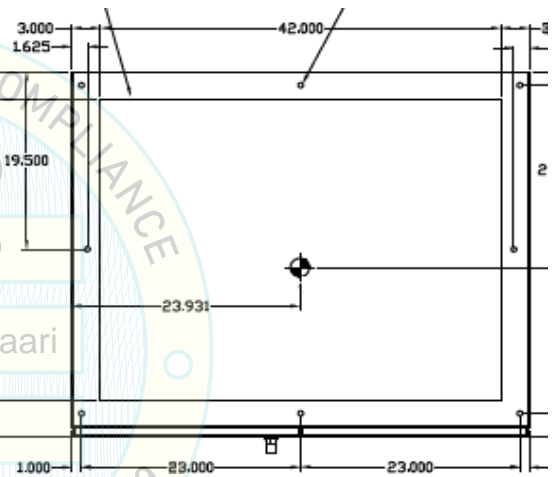
UUT_y-4

UNIT UNDER TEST (UUT) SUMMARY SHEET



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

Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53851-1
Model Number: RTS03-ATB3000AMF1	UUT No. in Test Report: 98006-8
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 3000A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 3000A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
1,480	48.0	40.0	92.0	10.0	4.7	> 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	2.00	1.00	1.50	3.20g	2.40g	1.33g	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_z-5

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



Mounting Details: Rigid wall mounted with (4) 1/2" diameter grade 5 bolts.
Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53237-1
Model Number: RTS03-ATB800AMW1	UUT No. in Test Report: 98006-3
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 ampere rating of 800A.	
UUT Component Description: NEMA1 12ga Carbon Steel Enclosure, and Russelectric 800A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
625	31.0	18.0	66.0	NA	NA	NA

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	1.33g	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.

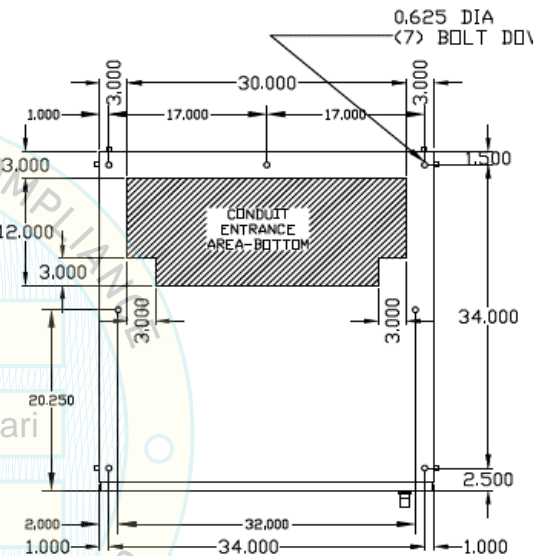
UUT_z-6

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



Mounting Details: Rigid floor mounted with (7) 1/2" diameter grade 5 bolts.

Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: By-Pass Transfer Switches	Report Number: 53237-1
Model Number: RTS03-ABL8004AMF1	UUT No. in Test Report: 98006-4A/B
UUT Function: Bypass Switches provide a fail-safe access port for an in-line active security appliance.	
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
1,750	36.0	39.0	92.0	10.0	9.1	> 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	2.00	1.00	1.50	3.20g	2.40g	1.33g	0.54g

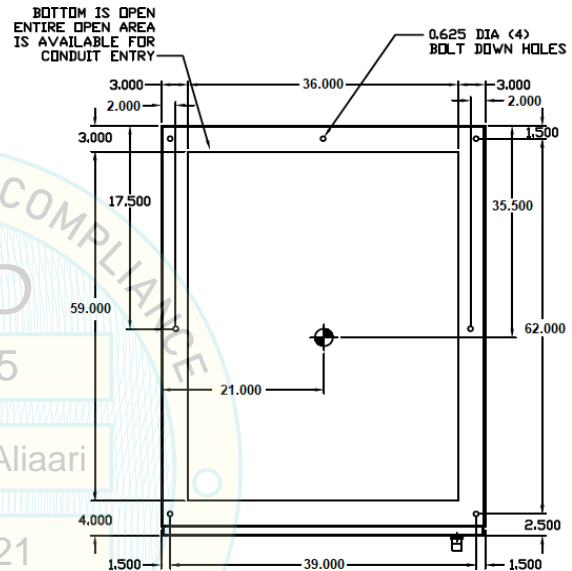
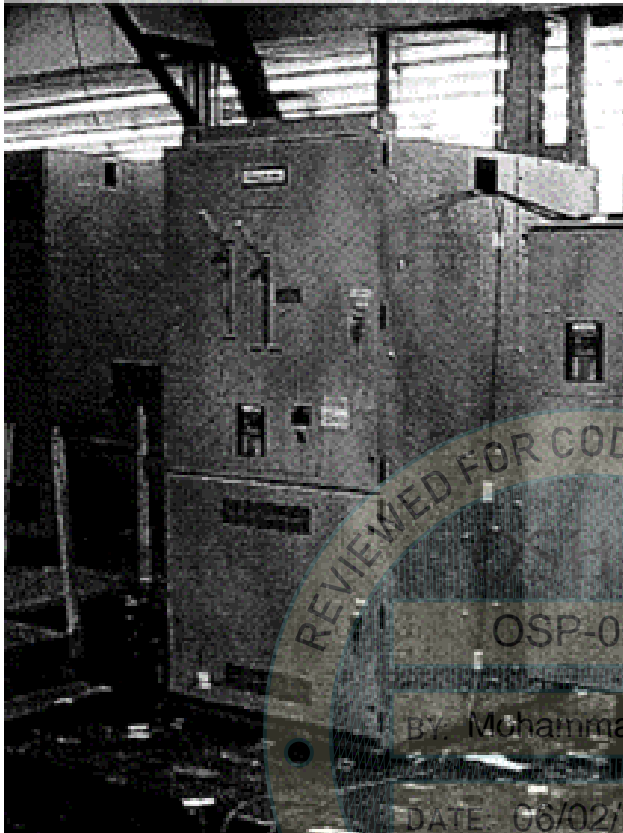
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT_y-7

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (7) 1/2" diameter grade 5 bolts.
Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: By-Pass Transfer Switches	Report Number: 53851-1
Model Number: RTS03-ABL25004AMF1	UUT No. in Test Report: 98006-9A/B
UUT Function: Bypass Switches provide a fail-safe access port for an in-line active security appliance.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a by-pass compartment and a main bus ampere 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 Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
3,800	42.0	66.0	92.0	7.7	6.3	30.3

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	1.33g	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-8

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



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

Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Clark Laboratory
Product Line: By-Pass Transfer Switches	Report Number: JID 19-01389
Model Number: RTS03-ABLB30004AMF1	UUT No. in Test Report: UUT-8x
UUT Function: Bypass Switches provide a fail-safe access port for an in-line active security appliance.	
UUT Description: The unit is a floor mounted NEMA type 1 enclosure comprising of 4-pole transfer switches with a 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	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
4,365	54.0	66.0	91.5	16.9	5.9	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.

UUT_y-9

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



Mounting Details: Rigid wall mounted with (4) 1/2" diameter grade 5 bolts.
Seismic Modifications: Standard Door Thumb Screws Required



Manufacturer: Russelectric, Inc.	Test Location: Wyle Laboratory, Inc.
Product Line: Automatic Transfer Switches	Report Number: 53851-1
Model Number: RTS03-ATL800AMW3R	UUT No. in Test Report: 98006-10
UUT Function: Auto Transfer Switches to switch electrical loads to backup power source	
UUT Description: The unit is a wall mounted NEMA type 3R enclosure comprising of 4-pole transfer switches with a main bus ampere rating of 800A.	
UUT Component Description: NEMA3R 12ga Carbon Steel Enclosure, and Russelectric 800A Automatic Transfer Switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
640	39.0	18.0	69.0	NA	NA	NA

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	1.33g	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.