



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0094-10

Check whether application is: NEW RENEWAL

1.0 Square D by Schneider Electric North America Philip Caldwell
Manufacturer *Manufacturer's Technical Representative*

1990 Sandifer Blvd, Seneca, SC 29678
Mailing Address

864-886-1471 philip.caldwell@us.schneider-electric.com
Telephone *E-mail Address*

2.0 Powerbus & I-Line / I-Line II Busways LV Busways and Plug-In / Bolt-On Units
Product Name *Product Type*

Powerbus (PBC) & Powerbus plug-in units PBPTB, PBPFA, PBPQO, PBPQOR;
 I-Line (AP, CP), I-Line II (AF, CF), & I-Line plug-in units, which include fusibles, circuit breakers, ground
 detectors/neutralizers, and combinations.
Product Model No (List all unique product identification numbers and/or serial numbers)

General Description: Low voltage busway mounted to wall, floor, or ceiling and plug-in units in
 light gauge sheet metal over metal framed enclosures mounted to busway and/or wall, floor,
 or ceiling.

3.0 Square D by Schneider Electric North America Philip Caldwell for Brett Wheless
Applicant Company Name *Contact Person*

1010 Airpark Center Dr., Nashville, TN 37217 *Philip J. Caldwell*
Mailing Address

615-844-8365 brett.wheless@us.schneider-electric.com
Telephone *E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Philip J. Caldwell
Signature of Applicant

1/14/2011
Date

Edison Expert
Title

Schneider Electric
Company Name

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Registered Design Professional Preparing the Report

4.0 University of Alabama - Birmingham

Lee Gholamreza Moradi		C41383
<i>Contact Name</i>		<i>California License Number</i>
4824 Sulphur Springs Rd, Hoover, AL 35226		
<i>Mailing Address</i>		
205-975-2718	moradi@uab.edu	
<i>Telephone</i>	<i>E-mail Address</i>	

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 Forell-Elsesser Engineers, Inc.

Marco Scanu, SE		S4454
<i>Contact Name</i>		<i>California License Number</i>
160 Pine St., 6 th Flr., San Francisco, CA 94111		
<i>Mailing Address</i>		
415-837-0700	m.scanu@forell.com	
<i>Telephone</i>	<i>E-mail Address</i>	

Anchorage Pre-Approval

- 6.0 Anchorage is pre-approved under OPA-
(Separate application for anchorage pre-approval is required)
- Anchorage is not Pre-approved

Certification Method

- 7.0 Testing in accordance with: ICC-ES AC-156 Other (Please Specify):
-
- Analysis
- Experience data
- Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

8.0 Wyle Laboratories

7800 Hwy 20, Huntsville, AL 35806		Rod Thornberry
<i>Mailing Address</i>		<i>Contact Name</i>
(256) 837-4411	E-mail:	
<i>Telephone</i>		



Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 1.66g

S_{DS} (Spectral response acceleration at short period) = 2.21g

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

R_p (Equipment or component response modification factor) = 6.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component fundamental period(s) = n/a

Building period limits (if any) = n/a

Overall dimensions and weight (or range thereof) = See Product Range Summary

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

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

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

10.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report
- Drawings
- Manufacturer's Catalog
- Calculations
- Other (Please Specify): SE Acceptance Letter, Product Range Summary, CAN2-1708A.5 & AC156 Requirements Checklist

11.0 OSHPD Approval (For Office Use Only)

<p style="text-align: center; margin: 0;">Signature & Date Chris Tokas, SHFR</p> <p style="text-align: center; margin: 0;">Name & Title</p>	<p>1/14/11</p>	<p>December 31, 2016</p> <p style="text-align: center; margin: 0;">Approval Expiration Date</p> <p>S_{DS} (g) = 2.21 z/h = 1.0</p> <p style="text-align: center; margin: 0;">Special Seismic Certification Valid Up to</p>
<p>Condition of Approval (if any):</p>		

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OSP APPLICATION
 Square D Low Voltage Busways and Plug-In Units
 Product Range Summary

6/21/2010

**Square D Low Voltage Busways and Plug-In Units
 Product Range Summary**

Busway	Material	Length	Width	Depth	Typ. Service Weight (lbs)	Notes
Powerbus						
Powerbus 100A	copper	48 - 120 in	3.5 in	5.5 in	23 - 58 lbs	
Powerbus 225A	copper	48 - 120 in	3.5 in	5.5 in	23 - 58 lbs	UUT1
I-Line / I-Line II						
I-Line 225A - 600A	copper/alum.	48 - 120 in	8.8 in	5.9 in	362 - 906 lbs	
I-Line II 800A - 1000A	copper/alum.	48 - 120 in	8.8 in	5.9 in	362 - 906 lbs	
I-Line II 1200A - 2000A	copper/alum.	48 - 120 in	8.8 in	5.9 in	362 - 906 lbs	
I-Line II 2500A - 5000A	copper/alum.	48 - 120 in	8.8 in	5.9 in	362 - 906 lbs	UUT1

Plug-in & Bolt-On Units	Height	Width	Depth	Typ. Service Weight (lbs)	Notes
100-225A Tap Box	10 - 15 in	9 - 20.4 in	4.6 - 8 in	16 - 28 lbs	UUT1
15-100A FA Operator/Breaker	10 - 15 in	9 - 20.4 in	4.6 - 8 in	16 - 28 lbs	UUT1
15-100A QO/QOR Circuit Breakers	10 - 15 in	9 - 20.4 in	4.6 - 8 in	16 - 28 lbs	UUT1
225-5000A Tap Box	28 in	35 - 63 in	14 - 60 in	550 lbs	UUT1
30-1600A Fusible Switch	15 - 24.3 in	8.9 - 56.3 in	4.6 - 20.1 in	15 - 350 lbs	UUT1
15-1600A Circuit Breaker	8.3 - 24.3 in	13 - 56.8 in	7.1 - 20.1 in	28 - 350 lbs	UUT1

FORELL/ELSESSER ENGINEERS, INC.
 Structural Engineers
 160 Pine St., 6th Floor
 San Francisco, CA 94111

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UUT TEST SETUP

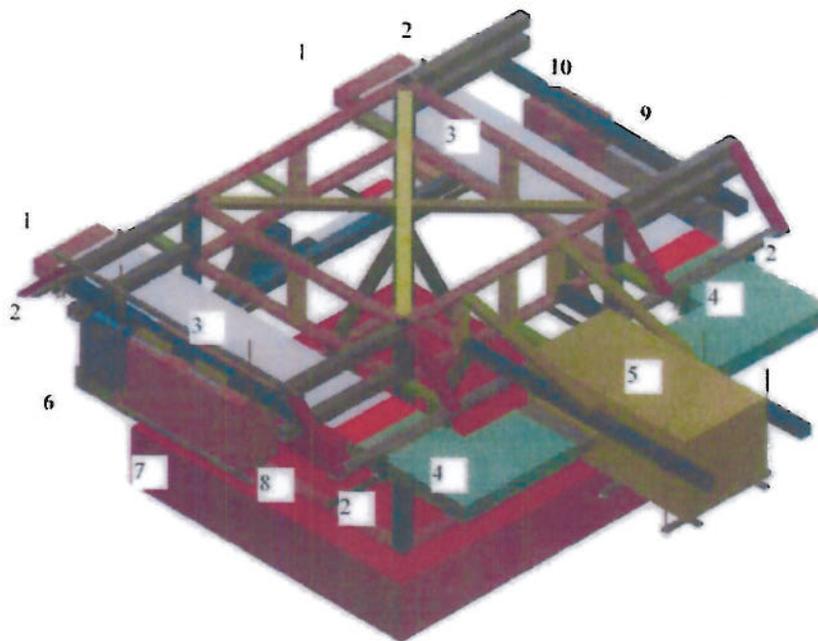
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Annex A

ACCEPTANCE CRITERIA FOR SEISMIC QUALIFICATION BY SHAKE-TABLE TESTING ON NONSTRUCTURAL COMPONENTS AND SYSTEMS

**Section 4.4.1 UUT1 Required Information Template
 Test Series #1: Horizontal Test Setup**



Test Series #1 - View 1

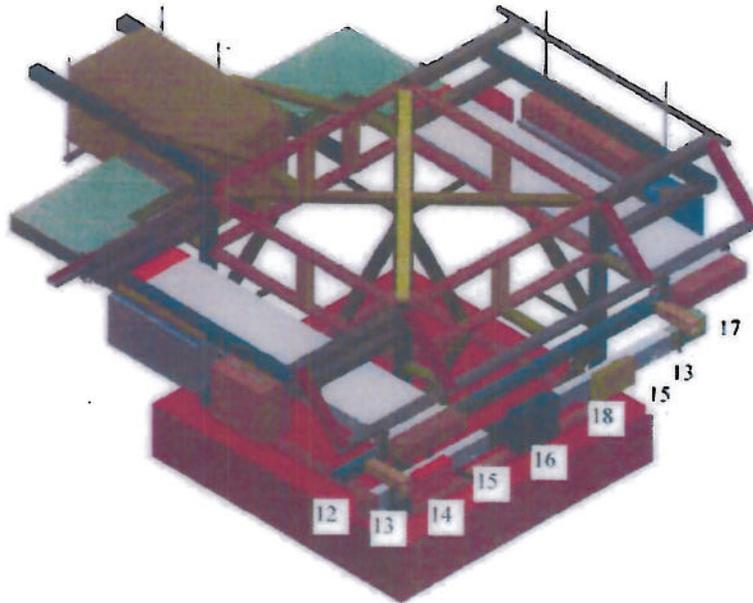
IL2 5000A copper busway run with plug-in units

UUT1	Catalog Number	Device Description	QTY
1	ACF25ECM54	5000A COPPER IP54 END CLOSURE	2
2	IL2 FLATWISE HANGER	5000A FLATWISE HANGER	4
3	CP2550G10STM54	10FT 5000A COPPER IP54 PLUG-IN DUCT	2
4	CF2550G72LFS36B36M54	5000A COPPER IP54 FLATWISE ELBOW	2
5	CF2550GCTB	5000A COPPER CENTER TAP BOX	1
6	PQ4620G	200A PQ FUSIBLE PLUG-IN UNIT	1
7	PTRL36160GNHU31A	1600A R-FRAME BREAKER PLUG-IN UNIT	1
8	PJJ36250GN	250A J FRAME BREAKER PLUG-IN UNIT	1
9	PBL134600GN	600A L FRAME BREAKER PLUG-IN UNIT	1
10	PBQA3640G	400A PBQA FUSIBLE PLUG-IN UNIT	1

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Low Voltage Busway
 Shake Table Seismic Test Plan



Test Series #1 – View 2

PB225A busway run with plug-in units

UUT#	Catalog Number	Device Description	QTY
12	PB225EC	POWERBUS225 225A END CLOSURE	2
13	PB225FH	POWERBUS225 225A HANGER	2
14	PBPQOR5A100M420B	POWERBUS225 100A QOR PLUG-IN UNIT WITH RECEPTACLES	1
15	PBCPSA225ST48	POWERBUS225 48IN 225A 5 BAR PLUG-IN BUSWAY	2
16	PBCF5A225TB	POWERBUS225 225A TAP BOX	1
17	PBCF5A225LL	POWERBUS225 225A ELBOW LEFT	1
18	PBPF5A100	POWERBUS225 100A FA PLUG-IN UNIT	1

The Test Series #1 consists of a 5000A copper H.2 flatwise busway run with plug-in units and a PB225 busway run with plug-in units. The total weight of the devices is approximately 4800 lbs (not including the test fixture).

Installation Sequence:

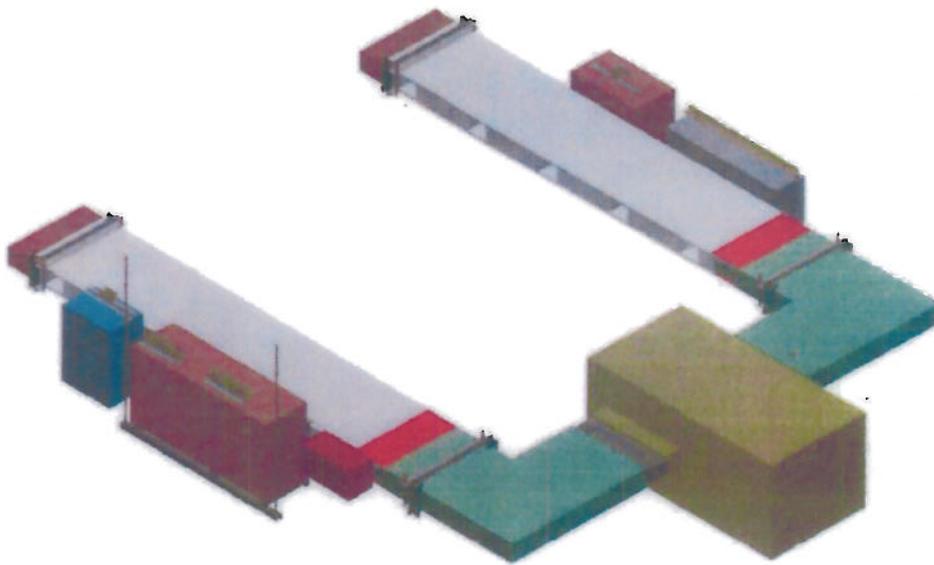
1. 5000A H.2 Flatwise Busway Run
2. H.2 Plug-in Units
3. PB225 Busway Run & Plug-in Units

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**Low Voltage Busway
Shake Table Seismic Test Plan**

Annex A1: IL2 Flatwise Busway Layout



IL2 Flatwise Busway Layout

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