

APPLICATION FOR OSHDD SDECIAL SEISMIC	OFFICE USE C	DNLY							
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSF	9 – 0094 – 10							
OSHPD Special Seismic Certification Preapproval (OSP)									
Type: 🗌 New 🖾 Renewal									
Manufacturer Information									
Manufacturer: Square D by Schneider Electric									
Manufacturer's Technical Representative:	/ Engineer								
Mailing Address: 330 Weakley Lane, Smyrna, TN 37167									
Telephone: 615-459-8466 Email: jeff.ga	scher@schneider-electric.com	<u>n</u>							
Product Information									
Product Name: Square D I-Line II Busway Systems.									
Product Type:Busway and Plug-In / Bolt-On Units – Low Voltage (6	00 Volts and Below)								
Product Model Number: <u>I-Line II Busway (see Certified Product Listing</u> (List all unique product identification numbers and/or part numbers)	g tables)								
General Description: Low voltage busway systems and plug-in units in sheet metal framed enclosures, which include fusibles, circuit breakers, ground detectors/neutralizers and combinations (see Certified Major Sub-Component tables). Sheet metal framed enclosures come in NEMA Type 1 and Type 3R ratings and IP54 rating. Modifications required to address anomalies observed during the tests shall be incorporated into the production units.									
Mounting Description: Horizontal busways shall be rigidly suspended and at all splices and Plug-ins. Vertical busways shall be spring-isola at 8'-0" o.c. max. and at all splices and Plug-ins. Rigid vertical and la from all bends. All Plug-ins require independent rigid vertical and late	with rigid lateral braces at 10 ated floor mounted with rigid lateral support shall be require eral support. Cable braces ar	)'-0" o.c. max. ateral braces d within 1'-0" re <i>not</i> allowed.							
Applicant Information									
Applicant Company Name: _ Square D by Schneider Electric									
Contact Person: Eduardo Miller									
Mailing Address: 1010 Airpark Center Drive, Nashville, TN 37217									
Telephone: <u>615-514-8360</u> Email: <u>eduare</u>	lo.miller@schneider-electric.c	<u>:om</u>							
I hereby agree to reimburse the Office of Statewide Health I accordance with the California Administrative Code, 2016.	Planning and Developme	ent review fees in							
Signature of Applicant:	Date: _12	2/24/2016							
Title: Marketing Offer Manager Company Name: Schne	ider Electric								
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	M AMAAAA	OSHPD							
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	A with the Madian	Page 1 of 3							

# OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

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., 6 <sup>th</sup> Flr., San Francisco, CA 94111								
Telephone: (415) 837-0700 Email: <u>m.scanu@forell.com</u>								
Supports and Attachments Preapproval								
<ul> <li>Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)</li> <li>Supports and attachments are not preapproved</li> </ul>								
Certification Method								
<ul> <li>☑ Testing in accordance with: ☑ ICC-ES AC156</li> <li>☑ Other (Please Specify):</li></ul>								
Testing Laboratory								
Company Name: <u>NTS – Huntsville (formerly Wyle Laboratories)</u>								
Contact Name:Tom Boonarkat – Engineering Manager, Nuclear and Commercial Test Department								
Mailing Address:7800 Highway 20 West, Huntsville, AL 35806								
Telephone: 256-837-4411 Email: tom.boonarkat@nts.com								

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

OSP-0094-10

OSHPD

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 (Fp/Wp) = See Certified Product Listing tables									
$S_{DS}$ (Design spectral response acceleration at short period, g) = <u>See attachment</u>									
a <sub>p</sub> (In-structure equipment or component amplification factor) = <u>See attachment</u>									
R <sub>p</sub> (Equipment or component response modification factor) = <u>See attachment</u>									
$\Omega_0$ (System overstrength factor) = _2.0									
I <sub>p</sub> (Importance factor) = 1.5									
z/h (Height factor ratio) = <u>See attachment</u>									
Equipment or Component Natural Frequencies (Hz) = <u>See attachment</u>									
Overall dimensions and weight (or range thereof) = <u>See attachment</u>									
Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: 🗌 Yes 🛛 No									
Design Basis of Equipment or Components (V/W) =									
S <sub>DS</sub> (Design spectral response acceleration at short period, g) =									
S <sub>D1</sub> (Design spectral response acceleration at 1 second period, g) =									
R (Response modification coefficient ) =									
$\Omega_0$ (System overstrength factor) =									
Cd (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									
List of Attachments Supporting Special Seismic Certification									
🛛 Test Report(s) 🗌 Drawings 🖾 Calculations 🖾 Manufacturer's Catalog									
Other(s) (Please Specify): Certified Products Table, Certified Sub-Components Table, UUT Summary Sheets									
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022									
Signature: Date: Date: June 26, 2017									
Print Name: Timothy J. Piland Title: SSE									
Special Seismic Certification Valid Up to : S <sub>DS</sub> (g) = <u>See Above</u> z/h = <u>See Above</u>									
Condition of Approval (if applicable): Horizontal busways shall be rigidly suspended with rigid lateral braces at 10'-0" o.c. max.									
and at all splices and Plug-ins. Vertical busways shall be spring-isolated floor mounted with rigid lateral braces at 8'-0" o.c. max. and at all splices and Plug-ins. Rigid vertical and lateral support shall be required within 1'-0" from all bends. All Plug-ins require independent rigid vertical and lateral support. Cable braces are <b>not</b> allowed.									
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"									

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

## Certified Product Listing Busway

Manufacturer:Square D by Schneider ElectricProduct Category:Busway – Low Voltage (600 Volts and Below)Product Line Models:I-Line II Busway

Product Options: I-Line II Busway systems are integrated, low voltage, feeder and plug-on units and other elements that offer both horizontal and vertical distribution runs (see Certified Major Sub-Component tables). Sheet metal framed busway runs come in NEMA Type 1 and 3R ratings and IP54 rating.

Product Mounting:

Schneider

Electric

Horizontally Suspended Mounts or Vertical Spring Mounts

	I-Line II Busway <sup>1</sup>														
						Horizontal Ru	ns – 10	Ft. Hange	er Spaci	ng	Vertical Runs – 1	4'-0" Fi	t. Spring I	Vount	Spacing
Amnacity						a	Lateral Bracing 8'-0" Max. a <sub>p</sub> =2.5, R <sub>p</sub> =2.0								
Rating	Reference Number <sup>2</sup>	Width	Height	Weight	Material		0	Certificati	ion Leve	el <sup>4</sup>		Certification Level <sup>4</sup>			
(A)		(in.)	(in.)	(lbs/ft)	Wateria	Test Status <sup>3</sup>	z/ł	n = 0	z/h = 1		Test Status <sup>3</sup>	z/h = 0		z/h = 1	
(~)						Test Status	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	Test Status	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
	CP2508G10ST	3.8	5.9	16.7	Copper						PR048881-TR-16 UUT3	2.19	1.64	2.05	4.61
800	CF2508G6ST	3.8	5.9	14.6	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63	PR048881-TR-16 UUT3	2.19	1.64	2.05	4.61
	CP2508G4ST	3.8	5.9	16.7	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63					
	C*08*ST*	3.8	5.9	16.7	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
1000	C*10*ST*	4.3	5.9	19.5	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
1200	C*12*ST*	5.3	5.9	22.9	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
1350	C*13*ST*	5.8	5.9	24.9	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
1600	C*16*ST*	6.7	5.9	29.6	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
2000	C*20*ST*	7.8	5.9	32.9	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
2500	C*25*ST*	12.7	5.9	49.8	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
3000	C*30*ST*	15.2	5.9	53.8	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
3200	C*32*ST*	16.2	5.9	62.3	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
4000	C*40*ST*	23.6	5.9	74.7	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
	C*50*ST*	25.1	5.9	92.7	Copper	Interpolated	2.26	1.02	2.26	1.63	Interpolated	2.04	1.53	2.00	4.50
	CP2550G10STM54	25.1	5.9	92.7	Copper	56276R08 UUT1A	3.66	1.65	2.29	1.65					
5000	CF2550G6ST	25.1	5.9	90.6	Copper						PR048881-TR-16 UUT4	2.04	1.53	2.00	4.50
	CF2550G10ST	25.1	5.9	90.6	Copper						PR048881-TR-16 UUT4	2.04	1.53	2.00	4.50

Notes:

1. I-Line II Busway is manufactured by Schneider Electric.

2. Busway are identified by reference number as described on the Reference Number Decoder.

3. The I-Line II Busway listed here include part numbers which identify configuration, manufacturer, and materials. Tested units and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

4. Certification level is limited to the lower rating of either the Certified Product Listing, as listed here, or as listed on the Major Sub-Components table.

5. Support required within 12" from horizontal to vertical orientation transitions or horizontal joint splices



## Certified Major Sub-Components Listing Busway

I-Line II Busway Fittings <sup>1</sup>												
	Ampacity	Reference Number <sup>2</sup>		Usisht	\A/eicht				Certificat	ion Level <sup>4</sup>	l,5	
Fitting	Rating			Height	weight	Material	Test Status <sup>3</sup>	z/	h = 0	z/h = 1		
туре	(A)		(in.)	(in.)	(au)			S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	
	800	CF2508GCTB	35	28	262	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63	
		C*08*TB*	11.0 - 35	15.2 -28.0	262	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1000	C*10*TB*	11.0 - 35	15.2 -28.0	277	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1200	C*12*TB*	11.0 - 35	15.2 -28.0	307	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1350	C*13*TB*	14.8 - 35	19.1 - 28.0	322	Copper	Interpolated	2.26	1.02	2.26	1.63	
Tan Day	1600	C*16*TB*	14.8 - 35	19.1 - 28.0	348	Copper	Interpolated	2.26	1.02	2.26	1.63	
тар вох	2000	C*20*TB*	14.8 - 35	19.1 - 28.0	390	Copper	Interpolated	2.26	1.02	2.26	1.63	
2 3 3 4	2500	C*25*TB*	20.9 - 45.8	25.1 - 28.0	541	Copper	Interpolated	2.26	1.02	2.26	1.63	
	3000	C*30*TB*	20.9 - 60.0	25.1 - 28.0	573	Copper	Interpolated	2.26	1.02	2.26	1.63	
	3200	C*32*TB*	20.9 - 41.7	28.0	612	Copper	Interpolated	2.26	1.02	2.26	1.63	
	4000	C*40*TB*	29.8 - 63.0	28.0 - 34.3	743	Copper	Interpolated	2.26	1.02	2.26	1.63	
	5000	C*50*TB*	29.8 - 63.0	28.0 - 34.3	871	Copper	Interpolated	2.26	1.02	2.26	1.63	
	5000	CF2550GCTB	63.0	28.0	871	Copper	52676R08 UUT1A	3.66	1.65	2.29	1.65	
	800	CF2508GLFM11	12.9	5.9	34	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63	
		C*08*LF*	12.9	5.9	34	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1000	C*10*LF*	13.2	5.9	38	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1200	C*12*LF*	14.7	5.9	51	Copper	Interpolated	2.26	1.02	2.26	1.63	
	1350	C*13*LF*	14.9	5.9	55	Copper	Interpolated	2.26	1.02	2.26	1.63	
Flat	1600	C*16*LF*	15.4	5.9	66	Copper	Interpolated	2.26	1.02	2.26	1.63	
Elbow	2000	C*20*LF*	16.9	5.9	79	Copper	Interpolated	2.26	1.02	2.26	1.63	
	2500	C*25*LF*	21.4	5.9	137	Copper	Interpolated	2.26	1.02	2.26	1.63	
	3000	C*30*LF*	23.6	5.9	158	Copper	Interpolated	2.26	1.02	2.26	1.63	
	3200	C*32*LF*	24.1	5.9	195	Copper	Interpolated	2.26	1.02	2.26	1.63	
	4000	C*40*LF*	32.8	5.9	288	Copper	Interpolated	2.26	1.02	2.26	1.63	
	E000	C*50*LF*	48.6	5.9	357	Copper	Interpolated	2.26	1.02	2.26	1.63	
	5000	CF2550G72LFS36B36M54	48.6	5.9	487	Copper	52676R08 UUT1A	3.66	1.65	2.29	1.65	

Notes:

1. All busway fittings are manufactured by Schneider Electric.

2. Busway fittings are identified by reference number as described on the Reference Number Decoder.

3. The sub-components listed here include part numbers which identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

4. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table.

5. Certification is for horizontal suspended mounting.



## Certified Major Sub-Components Listing Busway

I-Line II Busway Fittings <sup>1</sup> (Cont.)											
Eitting	Ampacity	Reference Number <sup>2</sup>	\A/idth	Hoight	Moight			Certification Level <sup>4</sup>			
Type	Rating		(in.)	(in.)	(lbc)	Material	Test Status <sup>3</sup>	z/	′h = 0	z/h = 1	
туре	(A)				(105)			S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>
Edge Elbow <sup>5</sup>	800	CF2508GLEM11	3.8	5.9	34	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63
	800	CF2508GLEM11	3.8	5.9	34	Copper	PR048881-TR-16 UUT2	2.26	1.70	2.26	5.09
	800	C*08*LE*	3.8	5.9	35	Copper	Interpolated	2.04	1.53	2.00	4.50
	1000	C*10*LE*	4.3	5.9	38	Copper	Interpolated	2.04	1.53	2.00	4.50
	1200	C*12*LE*	5.3	5.9	47	Copper	Interpolated	2.04	1.53	2.00	4.50
	1350	C*13*LE*	5.8	5.9	57	Copper	Interpolated	2.04	1.53	2.00	4.50
Edgo	1600	C*16*LE*	6.7	5.9	69	Copper	Interpolated	2.04	1.53	2.00	4.50
Euge	2000	C*20*LE*	7.8	5.9	88	Copper	Interpolated	2.04	1.53	2.00	4.50
EIDOW	2500	C*25*LE*	12.7	5.9	106	Copper	Interpolated	2.04	1.53	2.00	4.50
	3000	C*30*LE*	15.2	5.9	119	Copper	Interpolated	2.04	1.53	2.00	4.50
	3200	C*32*LE*	16.2	5.9	136	Copper	Interpolated	2.04	1.53	2.00	4.50
	4000	C*40*LE*	23.6	5.9	171	Copper	Interpolated	2.04	1.53	2.00	4.50
	E000	C*50*LE*	25.1	5.9	202	Copper	Interpolated	2.04	1.53	2.00	4.50
	5000	CF2550GLEM11	25.1	5.9	202	Copper	PR048881-TR-16 UUT4	2.04	1.53	2.00	4.50
	800	ACF-38-EC	4.34	7.1	4	Copper	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63
	1000	ACF-43-EC	4.84	7.1	4	Copper	Interpolated	2.26	1.02	2.26	1.63
	1200	ACF-53-EC	5.84	7.1	5	Copper	Interpolated	2.26	1.02	2.26	1.63
	1350	ACF-58-EC	6.34	7.1	5	Copper	Interpolated	2.26	1.02	2.26	1.63
	1600	ACF-67-EC	7.24	7.1	5	Copper	Interpolated	2.26	1.02	2.26	1.63
End Cap <sup>5</sup>	2000	ACF-78-EC	8.34	7.1	6	Copper	Interpolated	2.26	1.02	2.26	1.63
	2500	ACF-13-EC	13.22	7.1	9	Copper	Interpolated	2.26	1.02	2.26	1.63
	3000	ACF-15-EC	15.72	7.1	10	Copper	Interpolated	2.26	1.02	2.26	1.63
	3200	ACF-17-EC	16.72	7.1	11	Copper	Interpolated	2.26	1.02	2.26	1.63
	4000	ACF-24-EC	24.1	7.1	15	Copper	Interpolated	2.26	1.02	2.26	1.63
	5000	ACF-25-EC	25.6	7.1	16	Copper	56276R08 UUT1A	3.66	1.65	2.29	1.65
End Cap <sup>6</sup>	5000	ACF-25-EC	25.6	7.1	16	Copper	PR048881-TR-16 UUT4	2.04	1.53	2.00	4.50

Notes:

1. All busway fittings are manufactured by Schneider Electric.

2. Busway fittings are identified by reference number as described on the Reference Number Decoder.

3. The sub-components listed here include part numbers which identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

4. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table.

5. Certification is for horizontal suspended mounting.

6. Certification is for vertical floor spring mounting.



I-Line II Busway Plug-In Units												
Plug-In Unit Type	Rated Voltage	Rated Current	Manufacturer	Part Number / Identifier	Test Status <sup>1</sup>	Grade (:	Certificati z/h = 0)	on Level <sup>2</sup> Roof (z/h = 1)				
	(V)	(A)				S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub> (g)	F <sub>p</sub> /W <sub>p</sub>			
Moldod Case Circuit	600	250	Schneider Electric	PJJ36250GN	52676R08 UUT1A	3.66	1.65	2.29	1.65			
Nolded Case Circuit	120-600	15-1600	Schneider Electric	P*	Interpolated	2.34	1.05	1.23	0.89			
Breakers	600	1600	Schneider Electric	PTRL36160GNHU31A	52676R08 UUT1A	2.34	1.05	1.23	0.89			
	600	200	Schneider Electric	PQ4620G	52676R08 UUT1A	3.66	1.65	2.29	1.65			
Fusible Switches	120-600	30–400	Schneider Electric	P*	Interpolated	2.34	1.05	1.23	0.89			
	600	400	Schneider Electric	PBQA3640G	52676R08 UUT1A	2.34	1.05	1.23	0.89			
	600	NA	Schneider Electric	PIU8IMA24	PR048881-TR-16 UUT1	2.26	1.02	2.26	1.63			
Surge Protective Devices	120-600	NA	Schneider Electric	PIU*	Extrapolated	2.26	1.02	2.26	1.63			

#### Notes:

1. The sub-components listed here include part numbers which identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

2. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table. Certification is for horizontal suspended mounting.

3. All Surge Protective Devices are structurally identical; the only difference is rating and software.



## I-Line<sup>™</sup> 800–5000 Busway Catalog Numbering System

Catalog numbers are composed of three basic parts: the **prefix** (as shown), the **body**, plus the **suffix** of each individual busway component.

- The **prefix** contains the general busway type.
- The **body** contains the number of poles, the amperage, and ground system.
- The suffix contains the descriptive identification of the individual device.

The catalog number **prefix** will generally remain unchanged throughout a busway run while the **suffix** will vary with each individual length or fitting selected.





UUT Product Information												
Manufacturer	Р	roduct Category	Product Line	e Model	Identification Number							
Square D by Schneider Electric	Busway	– Low Voltage	I-Line	I	25960837							
Test Lab		Report No.	Report Date	Test Run No.	UUT Designation							
Wyle Laboratories		56276R08	01/07/2009	6	UUT-1A							
					-							
UUT Notes / Description												
<ol> <li>The UUT is a suspended hanger packaged in a NEMA Type 1 enc</li> <li>The NEMA Type 1 enclosure is c</li> <li>5000A Copper Plug-In Busway is and Hangers.</li> <li>Busway is supported with HF25S channels (24 inches from center and Plug-in Units 400A and large Busway supports.</li> <li>UUT full of contents during testion</li> </ol>	mounted, l osure. onstructed 25.1" wide h hangers line of perj r had addi ng.	horizontal, low voltage I-Lir of carbon steel sheet, with e x 5.9" high and weighs 92 at 10 ft intervals, with fron pendicular run). Hangers a tional support via drop rod	ne II busway run, 5000A, n powder-coated finish .7lbs/ft,. UUT listed weig t hangers located adjace re attached to busway an s. UUT listed shake-table	600V system rating th includes Busway ant to one side of th nd horizontal struct attachments inclu	s with copper conductors , Fittings, Tap Box, Plug-In Unit le flatwise elbows' joints/tie ure with ½" dia. rods. Tap Box des both Tap Box supports and							
		UUT Proper	ties (As Tested)									
		Lowest Natural			_							

Weight	Dimensions (in.)			Lov Fre	vest Nati quency (	ural Hz)	Shake-Table Attachment		
(.201)	Height	Width	Depth	F-B	S-S	V	Туре	Anchorage	
1555	27	180	204			Suspended	Suspended with (14) 1/2-13 Grade 8 threaded		
4333	52	180	204	N/A	IN/A	N/A	hanger mount	rods.	

UUT Seismic Test Parameters										
Building Codes	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	А <sub>FLX-Н</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)		
CBC 2016	ICC-ES AC156	3.66	0	1.5			2.45	0.99		
		2.29	1	1.5	3.66	2.75				

### **UUT Seismic Test Results**



UUT Major Components										
Description	Manufacturer	Part No. / Identifier								
5000A Copper Plug-In Duct Busway	Square D	CP2550G10STM54								
5000A Copper Flatwise Elbow	Square D	CP2550G72LFS36B36 M54								
5000A Copper Tap Box	Square D	CF2550GCTB								
5000A Copper End Cap (2)	Square D	ACF25EC								
200A PQ Fusible Plug-In Unit	Square D	PQ4620G								
250A J Frame Breaker Plug- In Unit	Square D	PJJ36250GN								
600A L Frame Breaker Plug- In Unit	Square D	PBLI34600GN								
Hangers, 5000A, Carbon Steel (4)	Square D	HF25SH								



UUT Product Information										
Manufacturer	Product Category	Product Line	e Model	Identification Number						
Square D by Schneider Electric	Busway – Low Voltage	I-Line	II	25960837						
	UUT Test Re	port Association								
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation						
Wyle Laboratories	56276R08	01/07/2009	4	UUT-1A						
		1								
	UUT Notes / Description									
1. The UUT is a suspended hanger	mounted, horizontal, low voltage I-Li	ne II busway run, 5000A,	600V system rating	s with copper conductors						
packaged in a NEMA Type 1 encl	osure.									
2. The NEMA Type 1 enclosure is co	onstructed of carbon steel sheet, with	n powder-coated finish								
3. 5000A Copper Plug-In Busway is	25.1" wide x 5.9" high and weighs 92	2.7lbs/ft,.UUT listed weig	ht includes Busway,	Fittings, Tap Box, Plug-In Unit and						
Hangers.										
4. Busway is supported with HF25S	H hangers at 10 ft intervals, with from	nt hangers located adjace	ent to one side of th	e flatwise elbows' joints/tie						
channels (24 inches from center	ine of perpendicular run). Hangers a	re attached to busway a	nd horizontal struct	ure with ½" dia. rods. Tap Box						
and Plug-in Units 400A and large	r had additional support via drop roc	ls. UUT listed shake-table	e attachments includ	les both Tap Box supports and						
Busway supports.										
5. UUT full of contents during testi	ng.									

	UUT Properties (As Tested)									
Weight Dimensions (in.)		Lowest Natural Frequency (Hz)			Shake-Table Attachment					
(lbs.)	Height	Width	Depth	F-B	S-S	v	Туре	Anchorage		
1555	27	100	204	NI/A	NI/A	NI / A	Suspended	Suspended with (14) ½-13 Grade 8 threaded		
4555	52	190	204	N/A	N/A	N/A	hanger mount	rods.		

UUT Seismic Test Parameters								
Building Codes	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	А <sub>FLX-Н</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CDC 201C		2.34	0	1.5			1.56	0.63
CBC 2010	ICC-ES AC156	1.23	1	1.5	1.97	1.48		

#### **UUT Seismic Test Results**



UUT I	Major Componen	ts
Description	Manufacturer	Part No. / Identifier
5000A Copper Plug-In Duct	Square D	CP2550G10STM54
5000A Copper Flatwise Elbow	Square D	CP2550G72LFS36B36 M54
5000A Copper Tap Box	Square D	CF2550GCTB
5000A Copper End Cap (2)	Square D	ACF25EC
200A PQ Fusible Plug-In Unit	Square D	PQ4620G
1600A R-Frame Breaker Plug-In Unit	Square D	PTRL36160GNHU31A
250A J Frame Breaker Plug- In Unit	Square D	PJJ36250GN
600A L Frame Breaker Plug- In Unit	Square D	PBLI34600GN
400A PBQA Fusible Plug-In Unit	Square D	PBQA3640G
Hangers, 5000A, Carbon Steel (4)	Square D	HF25SH



1008

28

147

214

N/A

### UUT Summary Low Voltage Busway

	UUT Product Information										
	Manufactur	er	F	Product C	ategory		Product Li	ne Model	Identification Number		
Square D	) by Schneid	er Electric	Busway	/ – Low Vo	oltage		I-Line II		38092699		
	UUT Test Report Association										
	Test La	b		Repor	rt No.		Report Date	Test Run No.	UUT Designation		
NTS – Hu	untsville			PR04888	81-TR-16		12/22/2016	4	UUT-1		
1 The LI	UUT Notes / Description										
<ol> <li>The o condu</li> <li>The N</li> <li>The N</li> <li>800A</li> <li>1000A</li> <li>Hange</li> <li>Buswa</li> </ol>	<ol> <li>The UUT is a suspended hanger mounted, horizontal, low voltage I-Line II busway run, 1000A and 800A, 600V system ratings with copper conductors packaged in a NEMA Type 1 enclosure.</li> <li>The NEMA Type 1 enclosure is constructed of carbon steel sheet, with powder-coated finish</li> <li>800A Copper Feeder Busway 3.8" wide x 5.9" high and weighs 14.6 lbs/ft, 800A Copper Plug-In Busway 3.8" wide x 5.9" high and weighs 16.7 lbs/ft. UUT listed weight includes Busway, Fittings, Tap Box, Plug-In Unit and Hangers.</li> </ol>										
joints, Tap B 5. UUT f	/tie channels ox has addition full of content	(18 inches f onal support ts during tes	from centerl t via drop ro ting.	ine of perp ds. UUT lis	pendicular sted shake	run). Hai e-table atta	achments includes b	o busway and horizon ooth Tap Box supports	and Busway supports.		
					UUT P	ropertie	s (As Tested)				
Weight	Din	nensions (i	n.)	Lov Fre	west Nati equency (	ural (Hz)		Shake-Table At	tachment		
(105.)	Height	Width	Depth	F-B	S-S	V	Type Anchorage				
1000	20	4.47	24.4				Suspended	Suspended with (8	3) 1/2-13 Grade 8 threaded		

UUT Seismic Test Parameters								
Building Codes	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	<b>А</b> <sub>FLX-Н</sub> (g)	A <sub>rig-н</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.26	1	1.5	3.62	2.71	1.51	0.61

hanger mount

rod

N/A

N/A

#### **UUT Seismic Test Results**



UUT Major Components									
Description	Manufacturer	Part No. / Identifier							
Busway, Feeder, 10', 800A, Cu	Square D	CF2508G10ST							
Busway, Plug In,6', 800A, Cu	Square D	CP2508G6ST							
Busway, Plug In,4', 800A, Cu	Square D	CP2508G4ST							
Tap Box, 800A, Cu	Square D	CF2508GCTB							
Tee, 800A, Cu	Square D	CF2508G33TFS11B11 S11							
Elbow, Edge, 800A, Cu	Square D	CF2508GLEM11							
Elbow, Flat, 800A, Cu (2)	Square D	CF2508GLFM11							
Reducer, 1000A to 800A, Cu	Square D	CF2510GR08							
Busway, Feeder, 2', 1000A, Cu	Square D	CF2510G2ST							
Busway, Feeder, 32", 800A, Cu (2)	Square D	CF2508G32ST							
End Cap, 1000A, Cu	Square D	ACF43EC							
End Cap, 800A, Cu	Square D	ACF38EC							
Surge Suppressor, 240KA	Square D	PIU8IMA24							
Hangers, 800A, Carbon Steel (3)	Square D	HF38SH							
Hanger, 1000A, Carbon Steel	Square D	HF43SH							



	UUT Product Information									
	Manufactu	rer	P	roduct C	ategory		Product Li	ne Model	Identification Number	
Square D	) by Schneic	ler Electric	Busway	– Low Vo	oltage		I-Lin	e ll	38092699	
	LILIT Test Report Association									
Test Lab Report No							Report Date	Test Run No.	UUT Designation	
NTS – Hu	intsville			PR04888	1-TR-16		12/22/2016	9	UUT-2	
							• •		·	
					UUT	Notes /	Description			
1. The U 1 enc	1. The UUT is spring mounted, vertical, low voltage I-Line II busway run, 800A, 600V system ratings with copper conductors packaged in a NEMA Type									
2. The N	IEMA Type 1	enclosure is	constructed	l of carbor	n steel she	et, with p	owder-coated finish			
3. 800A	Copper Plug	-In Bus way i	s 3.8" wide :	x 5.8" high	and weig	hs 16.7lbs	/ft. UUT listed weig	ght included busway, f	ittings and hangers.	
4. Buswa	ay is support	ed with HFV	S2 spring mo	ountings a	t 8 ft spac	ing. Spring	g mounts are connee	cted to floor structure	with ½' dia. bolts.	
5. UUT f	ull of conten	ts during tes	ting.							
					UUT P	ropertie	s (As Tested)			
Weight	Dir	nensions (i	n.)	Lov Fre	vest Nati quency (	ural (Hz)		Shake-Table At	tachment	
(105.)	Height	Width	Depth	F-B	S-S	V	Туре		Anchorage	
23/	13/	Л	6	82	77	12	Vertical Spring	Spring mounted w	ith (8) 1/2-13 grade 5 bolts	
234	134	+	0	0.2	/./	12	Mount	and washers at 65	ft-lbs torque.	

UUT Seismic Test Parameters								
Building Codes	Test Criteria	<i>S</i> <sub>DS</sub> (g)	z/h	Ι <sub>p</sub>	А <sub>FLX-Н</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.26	1	1.5	3.62	2.71	1.51	0.61

#### **UUT Seismic Test Results**



UUT Major Components									
Description	Manufacturer	Part No. / Identifier							
Busway, Plug In, 800A, Cu	Square D	CP2508G10ST							
Edgewise Elbow, 800A, Cu	Square D	CF2508GLEM11							
Spring Mounts, Carbon Steel (2)	Square D	HFVS2							



	UUT Product Information										
	Manufactu	rer	F	Product C	ategory		Product Li	ne Model	Identification Number		
Square D	by Schneic	ler Electric	Busway	/ – Low Vo	oltage		I-Lin	e II	38092699		
					UUT Te	est Repo	rt Association				
	Test La	ab		Repor	rt No.		Report Date	Test Run No.	UUT Designation		
NTS – Hu	Intsville			PR04888	31-TR-16		12/22/2016	14	UUT-3		
								•			
	UUT Notes / Description										
1. The U	UT is spring	mounted, ve	ertical, low v	oltage I-Li	ne II busw	ay run, 80	0A, 600V system rat	tings with copper cond	Juctors packaged in a NEMA Type		
1 encl	1 enclosure.										
2. The N	EMA Type 1	enclosure is	constructed	d of carbor	n steel she	et, with p	owder-coated finish	1			
3. 800A	Copper Plug	-In Busway is	5 3.8" wide	x 5.9″ high	n and 16.7	lbs/ft. 800	A Copper Feeder B	usway is 3.8" wide x 5	5.9" high and weighs 14.6lbs/ft.		
UUT li	isted weight	included Bu	sway and m	ounting.							
4. Buswa	ay is support	ed with HFV	S2 spring m	ountings a	t 14 ft spa	cing and la	ateral support at 8 f	t. Spring mounts are c	onnected to floor structure with		
½' dia	. bolts.										
5. UUT f	ull of conten	ts during tes	ting.								
					UUT P	ropertie	es (As Tested)				
Mainh+	D:		- 1	Lov	west Nati	ural		Chales Table At	• h •		
weight	Dir	nensions (i	n.)	Fre	quency (	(Hz)		Shake-Table Attachment			
(.201)	Height	Width	Depth	F-B	S-S	V	Туре	Anchorage			
206	102	Λ	6	7	6 5	12	Vertical Spring	Spring mounted w	ith (8) 1/2-13 grade 5 bolts		
290	192	4	0		6.5 12	Mount	and washers at 65 ft-lbs torque.				

UUT Seismic Test Parameters								
Building Codes	Test Criteria	<b>S</b> <sub>DS</sub> (g)	z/h	Ip	А <sub>FLX-Н</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.05	1	1.5	3.28	2.46	1.37	0.55

#### **UUT Seismic Test Results**



UUT Major Components									
Description	Manufacturer	Part No. / Identifier							
Busway, Plug In, 800A, 10', Cu	Square D	CP2508G10ST							
Busway, feeder, 800A, 6', Cu	Square D	CF2508G6ST							
Spring Hangers, Carbon Steel (2)	Square D	HFVS2							



					UUT	Prod	luct	Inform	nation						
Manufacturer				Product Category			Product Line Moc					Identification Number			
Square D by Schneider Electric Bu				isway – Low Voltage			I-Line II					38092699			
Test Lab Report N						Report Date Test Run (					un No				
NTS – Huntsville				PR048881-TR-16				12/22/2016		1	8		UUT-4		
UUT Notes / Description															
1. The UUT is spring mounted, vertical, low voltage I-Line II busway run, 5000A, 600V system ratings with copper conductors packaged in a NEMA															
2. The NEMA Type 1 enclosure is constructed of carbon steel sheet, with powder-coated finish															
3. 5000A Feeder Busway is 25.1" wide x 5.9" high and weighs 90.6lbs/ft. UUT listed weight included Busway, Fittings and Hangers.															
4. Busway is supported with HFVS8 spring mountings at 14 ft spacing and lateral support at 8 ft. Spring mounts are connected to floor structure with															
½' dia. bolts.															
5. UUT full of contents during testing.															
UUT Properties (As Tested)															
	Lowest Natural														
Weight	Dir	nensions (i	n.)	Frequency				Shake-Table Attachment							
(.201)	Height Width		Depth	Pepth F-B		V		Туре		Anchorage					
1557	206	25	14	64	3.8	5.5		Vertical Spring		Spring mounted with (8) 1/2-13 grade 5 bolts					
				011	0.0	0.0		Mount		and washers at 65 ft-lbs torque.					
					UUT Se	eismi	c Te	st Par	ameters						
Building Codes			Test Crite	eria	S <sub>DS</sub> (	g)	z	:/h	Ip	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (	g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)	
CBC 2016		I	CC-ES AC	156	2.00			1	1.5	3.20	2.40		1.34	0.54	
LILIT Seismic Test Results															
The III T maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks															
The oor maintained structural integrity and functionality as commed in post test inspection and active operation validation checks															
	UUT Major Components														
							Description Manufa					rer	er Part No. / Identifier		
							Busway, feeder, 5000A, Cu Squa					CF2550G10ST			
							Busway feeder 5000A Cu					D CE2550G6ST			



UUT Major Components										
Description	Manufacturer	Part No. / Identifier								
Busway, feeder, 5000A, Cu	Square D	CF2550G10ST								
Busway, feeder, 5000A, Cu	Square D	CF2550G6ST								
5000A CU Elbow, Edge	Square D	CF2550GLEM11HFV								
End Cap, 5000A, Carbon Steel	Square D	ACF25EC								
Spring Hangers, Carbon Steel (2)	Square D	HFVS8								