APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0059

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Square D by Schneider Electric

Manufacturer's Technical Representative: Scott Littler

Mailing Address: 6700 Tower Circle, Suite 700, Franklin, TN 37067

Telephone: (615) 267-9407 Email: Scott.Littler@se.com

Product Information

Product Name: Electrical Substations

Product Type: NA

Product Model Number: IPC2 units are custom-built and may include Square D NQ, NF, and I-Line panelboard interiors and Powerlink, PowerLogic, or other interior components (see Certified Product Listing tables).

General Description: IPC2 units are integrated, low voltage, power and control prewired systems containing stacked components with different functionalities within a limited range of enclosure sizes. Sheet metal framed enclosures come in NEMA Type 1 and Type 3R ratings.

Mounting Description: Rigid, Floor 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.

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BY: Mohammad Karim
DATE: 05/04/2023
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Applicant Information

Applicant Company Name: Pre Compliance

Contact Person: Galen Reid

Mailing Address: 36 Southwest Wall Street, Bend, OR 97702-3425

Telephone: (541) 241-2310 Email: galen@go-pre.com

Title: Principal

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

Company Name: PRE COMPLIANCE

Name: Andrew Coughlin California License Number: S6082

Mailing Address: 36 SW Wall Street, Bend, OR 97702

Telephone: (415) 635-8461 Email: Andy@go-pre.com

Certification Method

- [ ] GR-63-Core
- [x] ICC-ES AC156
- [ ] IEEE 344
- [ ] IEEE 693
- [ ] NEBS 3
- [ ] Other (Please Specify):

Testing Laboratory

Company Name: WYLE LABORATIORIES

Contact Person: Don Smith

Mailing Address: 7800 Highway 20 West, Huntsville AL 35806

Telephone: (256) 837-4411 Email: Don.Smith@wyle.com

Company Name: UNIVERSITY OF BUFFALO (SEESL)

Contact Person: Yushan Yu

Mailing Address: 212 Ketter Hall, Buffalo NY 14260

Telephone: (716) 645-3491 Email: yushanfu@buffalo.edu

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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.32 (z/h = 1); 0.99 (z/h = 0)

S_{DS} (Design spectral response acceleration at short period, g) = 1.76 (z/h = 1); 2.20 (z/h = 0)

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - **Approval Expires on 05/04/2029**

Date: 5/4/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

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

Condition of Approval (if applicable):

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENTS

Manufacturer: Square D by Schneider Electric
Product Type: Integrated Power & Control Solutions
Model Line: Integrated Power Center 2 (IPC2)

Seismic Parameters
S_{DS} = 1.76g for z/h=1
S_{DS} = 2.20g for z/h=0
I_p = 1.5

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TABLE 1

Mounting Configuration: Base Mounted - Rigid

Construction Summary

Carbon steel sheet metal framed enclosures. IPC2 sections are integrated, low voltage, power and control prewired systems and may include Square D NQ, NF, and I-Line panelboard interiors and Powerlink, PowerLogic, and other interior components (see Certified Major Sub-Component tables) packaged within a limited range of enclosure sizes.

Options Summary

Low Voltage Integrated Power and Control Solutions (IPaCS); 208V - 600V; <1200A
NEMA 1 or 3R. Dimensions listed in this Table represent NEMA 1 construction. 3R option includes an additional cover that is bolted to the front of the NEMA 1 enclosure and adds 11" to the depth dimension.

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Model Line	Model	Max. Dimensions (in) D	W	H	Wt. (lb)	Notes	UUT
IPaCS	IPC2 24" W	24.0	24.0	91.5	680	NEMA Type 1	1
		24.0	24.0	91.5	900		Interp.
		36.0	24.0	91.5	1150		Interp.
		48.0	24.0	91.5	1400		Interp.
	IPC2 30" W	24.0	30.0	91.5	749	NEMA Type 1	8
		24.0	30.0	91.5	771	NEMA Type 1	9
		24.0	30.0	91.5	1050		Interp.
		36.0	30.0	91.5	1400		Interp.
		48.0	30.0	91.5	1500		Interp.
	IPC2 36" W	24.0	36.0	91.5	1150		Interp.
		36.0	36.0	91.5	1550		Interp.
		48.0	36.0	91.5	1800		Interp.
	IPC2 42" W	24.0	42.0	91.5	1200		Interp.
		36.0	42.0	91.5	1700		Interp.
		48.0	42.0	91.5	2000		Interp.
	IPC2 48" W	24.0	48.0	91.5	1010	NEMA Type 1	5
		24.0	48.0	91.5	1400		Interp.
		36.0	48.0	91.5	1930		Interp.
		36.0	48.0	91.5	1930	NEMA Type 1	2
		36.0	48.0	71.0	1942	NEMA Type 1	7
		36.0	48.0	91.5	2434	NEMA Type 1	10
		36.0	48.0	91.5	2616	NEMA Type 1	11
		36.0	48.0	91.5	2616		Interp.
		48.0	48.0	91.5	1900		Interp.
		48.0	48.0	91.5	1026	NEMA Type 3R	3

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Square D by Schneider Electric
Product Type: Integrated Power & Control Solutions
Model Line: Integrated Power Center 2 (IPC2)

Seismic Parameters
S_{DS} = 1.76g for z/h=1
S_{DS} = 2.20g for z/h=0
I_p = 1.5

Building Codes
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TABLE 2

Table Description: Electrical Components

Component (Square D)	Model	Description	Notes	UUT
Molded Case Circuit Breakers (MCCB) - 2 Pole & 3 Pole	HDA36015	600V, 15A		3
	H*	208-600V, 15-150A		Interp.
	Q*	240V, 70-250A		Interp.
	J*	208-600V, 150-250A		Interp.
	L*	208-600V, 250-600A		Interp.
	M*	208-600V, 300-800A		Interp.
	P*	208-600V, 250-1200A		Interp.
	R*	208-600V, 1000-1200A		Interp.
	RJA36120CU31A	600V, 1200A		4
Miniature Circuit Breakers - 2 Pole & 3 Pole	E*	120-480V, 15A		Interp.
	EDB14020	480V, 20A		1,5
	E*	120-480V, 20-125A		Interp.
	QOB330	240V, 30A		3
	QO*	120-240V, 20-150A		Interp.
	QOB3150VH	240V, 150A		3
Surge Protective Device (SPD)	SSP02BIA24PBQ1	SurgeLoc Type, 120V, 80-240kA		3
Control Power Transformers (CPT)	9070T50D31	50 VA		3
	...	...		Interp.
	9070T500D1	500 VA		3
Contactors and Relays	8501RS42P14V14	R Type, 600V, 10A, 2 Poles		3
	8501RS*	R Type, 600V, 10A, 2-4 Poles		Interp.
	8501NR34	R Type, 600V, 30A, 4 Poles		3
	8501RS44P14V20	R Type, 600V, 10A, 4 Poles		3
	8903LO20V02	L & LX Type, 600V, 30A, 2 Poles		3
	8903L*	L & LX Type, 600V, 30A, 2-12 Poles		Interp.
	8903LXO1200V02	L & LX Type, 600V, 30A, 12 Poles		3
	8903SMO10V02	S Type, 600 V, 30A, 2 Poles		3
	8903S*	S Type, 600 V, 30-200A, 2-3 Poles		Interp.
	8903SVO2V02	S Type, 600 V, 200A, 3 Poles		3
	8910DPA32V02	DPA Type, 600V, 30A, 2 Poles		3
	8910DPA*	DPA Type, 600V, 30A, 2-4 Poles		Interp.
	8910DPA34V02	DPA Type, 600V, 30A, 4 Poles		3

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Square D by Schneider Electric
Product Type: Integrated Power & Control Solutions
Model Line: Integrated Power Center 2 (IPC2)

Seismic Parameters
S_{DS} = 1.76g for z/h=1
S_{DS} = 2.20g for z/h=0
I_p = 1.5

Building Codes
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TABLE 2

Table Description: Electrical Components

Component (Square D)	Model	Description	Notes	UUT
Panelboards	NQ430L2C	NQ Type, 240V, 225A		3
	NQ* [1]	NQ Type, 240V, 100-800A		Interp.
	NF* [1]	NF Type, 600V, 100-800A		Interp.
	NF442L4	NF Type, 600V, 400A		5
	NF454L2C	NF Type, 600V, 500A		8,9
	HCP14504	I-Line Type, 600V, 400A		3
	HC*	I-Line Type, 600V, 400-1200A		Interp.
	HCP14508	I-Line Type, 600V, 800A		10,11
	SWBD I-LINE	I-Line Type, 600V, 1200A		Interp.
	SWBD I-LINE	I-Line Type, 600V, 3000A		6
Dry Type Transformers	EE*, EP*, HM* [2]	1Ø Phase, Aluminum, 15-37.5kVA		Interp.
	EE*, EP*, HM* [2]	1Ø Phase, Copper, 15-37.5kVA		Interp.
	EE*, EP*, HM* [2]	1Ø Phase, Aluminum, 50-167kVA		Interp.
	EE*, EP*, HM* [2]	1Ø Phase, Copper, 50-167kVA		Interp.
	EE*, EP*, HM* [2]	3Ø Phase, Aluminum, 15kVA		Interp.
	EE*, EP*, HM* [2]	3Ø Phase, Copper, 15kVA		Interp.
	EE*, EP*, HM* [2]	3Ø Phase, Aluminum, 30-300kVA		Interp.
	EE*, EP*, HM* [2]	3Ø Phase, Copper, 30-300kVA		Interp.
	EE300T3H	3Ø Phase, Aluminum, 300kVA		2
	EE300T68HISCUNL	3Ø Phase, Copper, 300kVA		7
Dry Type Transformers - DOE2016	EX* [2]	3Ø Phase, Aluminum, 15-30kVA		Interp.
	EX* [2]	3Ø Phase, Copper, 15-30kVA		Interp.
	EX30T3H	3Ø Phase, Aluminum, 30kVA		8
	EX30T3HCU	3Ø Phase, Copper, 30kVA		9
	EX* [2]	3Ø Phase, Aluminum, 45-300kVA		Interp.
	EX* [2]	3Ø Phase, Copper, 45-300kVA		Interp.
	EX300T3H	3Ø Phase, Aluminum, 300kVA		10
	EX300T3HCU	3Ø Phase, Copper, 300kVA		11

[1] NQ and NF type panels are the same material, same manufacturer, and of similar construction.
[2] Energy Efficient (EE) dry type transformers, NEMA Premium (EP) dry type transformers and Harmonic Mitigating (HM) dry type transformers have similar configuration and construction as the tested units.

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SPECIAL SEISMIC CERTIFICATION TESTING SUMMARY

UUT	Model	Test Report	Test Laboratory	S_{DS}	z/h	I_p
1	Low Voltage IPaCS - IPC2	54550R07 (UUT1)	NTS-Huntsville (formerly Wyle)	1.96 3.24	1 0	1.5
2	Low Voltage IPaCS - IPC2	54550R07 (UUT2)	NTS-Huntsville (formerly Wyle)	1.96 3.04	1 0	1.5
3	Low Voltage IPaCS - IPC2	71437R13 (UUT1)	NTS-Huntsville (formerly Wyle)	2.24 2.54	1 0	1.5
4	Low Voltage Switchboard - Power-Style QED-2	58514R11-2 (UUT1)	NTS-Huntsville (formerly Wyle)	2.17 3.43	1 0	1.5
5	Low Voltage IPaCS - IPC2	53533-1 (UUT-1C)	NTS-Huntsville (formerly Wyle)	1.76 2.97	1 0	1.5
6	Low Voltage Switchboard - QED-2	2200538-TR-001 (UUT1a)	SEESL	2.05 2.73	1 0	1.5
7	Low Voltage IPaCS - IPC2	71437R13 (UUT5)	NTS-Huntsville (formerly Wyle)	2.27 2.57	1 0	1.5
8	Low Voltage IPaCS - IPC2	PR042387-TR-16 (UUT2)	NTS-Huntsville	2.19 2.20	1 0	1.5
9	Low Voltage IPaCS - IPC2	PR042387-TR-16 (UUT3)	NTS-Huntsville	2.14 2.22	1 0	1.5
10	Low Voltage IPaCS - IPC2	PR042387-TR-16 (UUT4)	NTS-Huntsville	2.19 2.20	1 0	1.5
11	Low Voltage IPaCS - IPC2	PR042387-TR-16 (UUT5)	NTS-Huntsville	2.14 2.22	1 0	1.5

Notes:

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1

Test Report# 54550R07 (UUT1)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: IPC224X2445KVA, E-979867

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
1.96	1	1.5	3.14	2.35	2.17	0.87
3.24	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
24.0	24.0	91.5	680

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
8.0	14.0	11.0

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Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

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UUT Mounting Details:

UUT was rigid base mounted using (4) 1/2"-13 Grade 5 bolts and Belleville washers secured at 70 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Panelboard Interior NF 400A 3Ø 42 Circuit	NF442L4C
Miniature Circuit Breaker E-frame 480Y/277V 20A	EDB14020
Transformer Dry Type 3Ø 45KVA Aluminum	EE45T3H

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 2

Test Report# 54550R07 (UUT2)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: IPC236X48300KVA, E-979869

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
1.96	1	1.5	3.14	2.35	2.03	0.81
3.04	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36.0	48.0	91.5	1930

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
5.3	14.0	16.0

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 70 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Panelboard Interior NF 250A 3Ø 54 Circuit	NF454L2C
Miniature Circuit Breaker E-frame 277V 20A	EDB14020
Transformer Dry Type 3Ø 300KVA Aluminum	EE300T3H

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 3

Test Report# 71437R13 (UUT1)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: FO# 2013SEISMIC001

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.24	1	1.5	3.58	2.69	1.70	0.69
2.54	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
48.0	48.0	91.5	1026

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
16.0	8.6	>33.3

Building Code

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Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 3R enclosure constructed of carbon steel sheet, with powder-coated finish.

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UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and flat washers secured at 65 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
I-Line Panelboard Interior 400A 3Ø	HCP14504
H-Frame MCCB 600V 15A	HDA36015
NQ Panelboard Interior 225A 3ø 30 Circuit	NQ430L2C
Q-frame Miniature Breaker 120/240V 15A	QOB115
Q-frame Miniature Breaker 240V 30A	QOB330
Q-frame Miniature Breaker 240V 150A	QOB3150VH
Surge Protective Device	SSP02BIA24PBQ1
Control Power Transformer 50 VA	9070T50D31
Control Power Transformer 500 VA	9070T500D1
Lighting Contactor 600VAC 30A L	8903LO20V02
Lighting Contactor 600VAC 30A LX	8903LXO1200V02
Lighting Contactor 600VAC 30A NEMA	8903SMO10V02
Lighting Contactor 600VAC 200A NEMA	8903SVO2V02
Definite Purpose Contactor Type DPA 30A 2-Pole 120VAC@60Hz- 110VAC@50Hz	8910DPA32V02
Definite Purpose Contactor Type DPA 30A 4-Pole, 120VAC@60Hz - 110VAC@50Hz	8910DPA34V02
Relay 250VAC 10A Type R	8501RS44P14V20
Relay Socket 300VAC 10A Type R	8501NR34
Relay 240VAC 10A Type R	8501RS42P14V14
Relay Socket 300VAC 10A Type R	8501NR42

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 4

Test Report# 58514R11-2 (UUT1)

Manufacturer: Square D by Schneider Electric
Model Line: QED-2 LV Switchboards
Model Number: LV Switchboard-Power-Style QED-2
Serial Number: F-787208

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.17	1	1.5	3.47	2.60	2.29	0.92
3.43	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
48.5	48.0	90	1586

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
7.8	5.7	>33.3

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Test Criteria

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Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 70 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
P-frame MCCB 600V 800A	PJA36080
R-frame MCCB 600V 1200A	RJA36120CU31A
H-frame MCCB 600V 150A	HJA261501
H-frame MCCB 600V 150A	HLA36150U54X
J-frame MCCB 600V 250A	JLA36250U54X
L-frame MCCB 600V 600A	LLA36600U54X
L-frame 600V 400A	LLA36400CU54X

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 5

Test Report# 53533-1 (UUT-1C)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: TR0221-4

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
1.76	1	1.5	2.97	2.11	1.98	0.79
2.97	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
24.0	48.0	91.5	1010

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
6.7	9.1	12.0

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Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (4) 1/2"-13 Grade 5 bolts and flat washers secured at 70 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
NF Panelboard Interior 400A 3Ø 42 Circuit	NF442L4
E-frame Mini Breaker 480Y/277V 20A	EDB14020

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 6

Test Report# 2200538-TR-001 (UUT1a)

Manufacturer: Square D by Schneider Electric
Model Line: QED-2 LV Switchboards
Model Number: 3kA I-Line Distribution Section
Serial Number: 44383040-001

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.05	1	1.5	3.28	2.46	1.82	0.73
2.73	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36.0	54.0	91.5	1421

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
10.1	8.0	20.9

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Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 65 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
I-Line Panelboard Interior 3000A 3Ø	SWBD I-LINE
FA MCCB – 20A, 1P	FY14020A
FA MCCB – 20A, 2P	FA26020AB
PowerPacT H MCCB – 15A, 2P	HDA260152
PowerPacT H MCCB – 110A, 2P	HDA261102
	HDA261104
FA MCCB – 20A, 3P	FA34020
PowerPacT H MCCB – 15A, 3P	HDA36015
	HDA360152
0.15kVA Control Power Transformer (Cu)	9070T150D1
PowerPacT Q MCCB – 225A, 3P	QBA32225
Smart Cell – 24V Power Supply	ICNL242XPWR
Smart Cell - PM5563 Power Meter	ICWL263X5563
Smart Cell – Com X210 Energy Server Data Logger	ICWR262XCMX2
PowerPact L MCCB – 300A, 3P	LC36300
SurgeLogic HL SPD – 120kA, 3Ph-4W	HL4IMA12C1

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OSP-0059
BY: Mohammad Rahim
DATE: 05/04/2023
CALIFORNIA BUILDING CODE, 2022

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 7

Test Report# 71437R13 (UUT5)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: FO# 32013SEISMIC003

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.27	1	1.5	3.63	2.72	1.72	0.69
2.57	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36.0	48.0	71	1942

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
32.0	16.0	>33.3

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 65 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Transformer Dry Type 3Ø 300 kVA Copper	EE300T68HISCUNL

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 8

Test Report# PR042387-TR-16 (UUT2)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: RF 10291501-1

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.19	1	1.5	3.50	2.63	1.47	0.59
2.20	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
24.0	30.0	91.5	749

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
10.0	9.2	19.9

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (4) 1/2"-13 Grade 5 bolts and Belleville washers secured at 60 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Transformer Dry Type 3Ø 30kVA Aluminum (DOE 2016)	EX30T3H
NF Panelboard Interior	NF454L2C

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 9

Test Report# PR042387-TR-16 (UUT3)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: RF 10291501-2

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.14	1	1.5	3.42	2.57	1.49	0.60
2.22	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
24.0	30.0	91.5	771

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
9.8	15.0	18.0

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (4) 1/2"-13 Grade 5 bolts and Belleville washers secured at 60 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Transformer Dry Type 3Ø 30kVA Copper (DOE 2016)	EX30T3HCU
NF Panelboard Interior	NF454L2C

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 10

Test Report# PR042387-TR-16 (UUT4)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: 8012302876

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.19	1	1.5	3.50	2.63	1.47	0.59
2.20	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36.0	48.0	91.5	2434

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
7.3	8.0	18.0

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 60 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Transformer Dry Type 3Ø 300kVA Aluminum (DOE 2016)	EX300T3H
Panelboard Interior	HCP14508

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SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 11

Test Report# PR042387-TR-16 (UUT5)

Manufacturer: Square D by Schneider Electric
Model Line: Integrated Power Center 2 (IPC2)
Model Number: Low Voltage IPaCS - IPC2
Serial Number: RF 10291503 A4545643

Highest Passed Test Level

S_{DS}	z/h	I_p	A_{flx-h}	A_{rig-h}	A_{flx-v}	A_{rig-v}
2.14	1	1.5	3.42	2.57	1.49	0.60
2.22	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36.0	48.0	91.5	2616

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
7.2	9.0	18.0

Building Code

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA Type 1 enclosure constructed of carbon steel sheet, with powder-coated finish.

UUT Mounting Details:

UUT was rigid base mounted using (6) 1/2"-13 Grade 5 bolts and Belleville washers secured at 60 lbf-ft torque. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model #
Transformer Dry Type 3Ø 300kVA Copper (DOE 2016)	EX300T3HCU
Panelboard Interior	HCP14508

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