



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

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

OFFICE USE ONLY

APPLICATION #: **OSP – 0058 – 10**

**OSHPD Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Square D by Schneider Electric

Manufacturer's Technical Representative: Jeffrey A. Gatscher, Fellow Engineer

Mailing Address: 330 Weakley Lane, Smyrna, TN 37167

Telephone: 615-459-8466 Email: jeff.gatscher@schneider-electric.com

**Product Information**

Product Name: Modular Panelboard System (MPS)

Product Type: Integrated Power and Control Solutions (IPaCS) – Low Voltage (600 Volts and Below)

Product Model Number: MPS units include Square D NQ, NF, and I-LINE panelboards and may include optional power and control wiring, terminal blocks, and SPDs (see Certified Major Sub-Component tables).  
(List all unique product identification numbers and/or part numbers)

General Description: MPS units are integrated, low voltage, power and control prewired systems consisting of a mix of NQ, NF, and I-LINE panelboards and may include PowerLink interiors, as well as optional power and control cable wiring, contactors, terminal blocks, and SPDs (see Certified Major Sub-Component tables) packaged in NEMA Type 1 sheet metal framed enclosures. Seismic enhancements made to the test units and modifications required to address anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid wall mount.

**Applicant Information**

Applicant Company Name: Square D by Schneider Electric

Contact Person: David E. Childers

Mailing Address: 105 Summit Park Drive, Salisbury, NC 28146

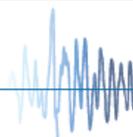
Telephone: 704-645-2627 Email: david.childers@schneider-electric.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: *David Childers* Date: May 23, 2014

Title: Product Marketing Specialist Company Name: Schneider Electric

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
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**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 Street, 6<sup>th</sup> Floor, San Francisco, CA 94111

Telephone: 415-837-0700 Email: m.scanu@forell.com

**Supports and Attachments Preapproval**

- Supports and attachments are preapproved under OPM- \_\_\_\_\_  
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Special Seismic Certification is not preapproved

**Certification Method**

- Testing in accordance with:  ICC-ES AC156
- Other (Please Specify): \_\_\_\_\_

**Testing Laboratory 1**

Company Name: Wyle Laboratories

Contact Name: Don Smith – Manager, Commercial Test Services

Mailing Address: 7800 Highway 20 West, Huntsville, AL 35806

Telephone: 256-716-4221 Email: don.smith@wyle.com

**Testing Laboratory 2**

Company Name: Applied Technical Services, Inc.

Contact Name: David N. Common – Senior Test Engineer, Dynamics Testing

Mailing Address: 1049 Triad Court, Marietta, GA 30062

Telephone: 678-444-2905 Email: dcommon@atslab.com

**Testing Laboratory 3**

Company Name: Trentec, Inc. (QualTech NP)

Contact Name: Garry V. Chapman

Mailing Address: 4600 East Tech Drive, Cincinnati, OH 45245

Telephone: 513-528-7900 Email: \_\_\_\_\_





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
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**Seismic Parameters**

Design in accordance with ASCE 7-10 Chapter 13:  Yes  No

Design Basis of Equipment or Components ( $F_p/W_p$ ) = See Certified Product Listing Tables

$S_{DS}$  (Design spectral response acceleration at short period, g) = See Certified Product Listing Tables

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

$R_p$  (Equipment or component response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.5

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0 (also evaluated at grade elevation  $z/h = 0$ )

Equipment or Component Natural Frequencies (Hz) = See UUT Summary tables

Overall dimensions and weight (or range thereof) = See Certified Product Listing tables

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15:  Yes  No

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

$S_{DS}$  (Design spectral response acceleration at short period, g) = \_\_\_\_\_

$S_{D1}$  (Design spectral response acceleration at 1 second period, g) = \_\_\_\_\_

R (Response modification coefficient) = \_\_\_\_\_

$\Omega_0$  (System overstrength factor) = \_\_\_\_\_

$C_d$  (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, 2010:  Yes  No

**List of Attachments Supporting Special Seismic Certification**

Test Report(s)  Drawings  Calculations  Manufacturer's Catalog

Other(s) (Please Specify): Certified Product Listing Tables, Certified Major Sub-Components Listing Table, UUT Summary Tables

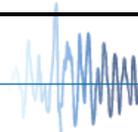
**OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019**

Signature:  Date: June 17, 2014

Print Name: Timothy J. Piland Title: SSE

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

Condition of Approval (if applicable): \_\_\_\_\_





## Certified Product Listing Modular Panelboard System (MPS)

- Manufacturer:** Square D by Schneider Electric
- Product Category:** Integrated Power and Control Solutions (IPaCS) – Low Voltage (600 Volts and Below)
- Product Line Models:** Modular Panelboard System (MPS)
- Product Options:** MPS sections consists of a mix of NQ, NF, and I-LINE panelboards and may include PowerLink interiors, as well as optional power and control cable wiring, contactors, terminal blocks, and SPDs (see Certified Major Sub-Components tables) packaged within a limited range of enclosure sizes. Sheet metal framed enclosures come in a NEMA Type 1 rating.
- Product Mounting:** Rigid Wall Mount

Modular Panelboard System (MPS)													
Voltage Rating (V)	Ampacity Rating (A)	Section Type <sup>1</sup>	Width (in.)	Depth (in.)	Height (in.)	Weight (lbs)	NEMA Type <sup>2</sup>	Notes	Test Status	Certification Level <sup>3</sup>			
										Grade (z/h = 0)		Roof (z/h = 1)	
										S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
208 – 600	Up to 1200	Distribution and Control	10	9.5	86	200	1		Extrapolated	1.96	0.88	1.91	1.43
			14	9.5	86	250	1		Extrapolated	1.96	0.88	1.91	1.43
			20	6	44	97	1		ATS D202932, UUT-1	1.96	0.88	1.91	1.43
				9.5	43	191	1		Interpolated	1.96	0.88	1.91	1.43
			26		9.5	86	382	1		Interpolated	1.96	0.88	1.91
				748		748	1		Interpolated	1.96	0.88	1.91	1.43
			42	9.5	86	875	1		Interpolated	1.96	0.88	1.91	1.43
			44	9.5	86	826	1		Wyle 51551-4, UUT-1	3.59	1.62	2.11	1.58

**Notes:**

- Dimensions and weights are for individual sections. Section types may be installed alone or bayed together.
- Enclosure NEMA Type 1 is constructed of carbon steel sheet with baked enamel or powder-coated trim finish.
- Certification level is limited to the lower rating of either the product section, as listed here, or the internal components, as listed on the Certified Major Sub-Components table.



## Certified Major Sub-Components Listing Modular Panelboard System (MPS)

Molded Case Circuit Breakers (2 Pole and 3 Pole)										
Frame Type	Rated Voltage (Volts)	Rated Current (Amps)	Manufacturer	Part No. / Identifier	Notes	Test Status <sup>1</sup>	Certification Level <sup>2</sup>			
							Grade (z/h = 0)		Roof (z/h = 1)	
							S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
F	600	100	Square D	FA36100		Wyle 51551-4, UUT-1	3.59	1.62	2.11	1.58
	208 – 600	15 – 150	Square D	F*		Interpolated	3.59	1.62	2.11	1.58
H	208 – 600	15 – 150	Square D	H*		Interpolated	3.59	1.62	2.11	1.58
Q	120 – 240	70 – 250	Square D	Q*		Interpolated	3.59	1.62	2.11	1.58
J	208 – 600	150 – 250	Square D	J*		Interpolated	3.59	1.62	2.11	1.58
L	208 – 600	250 – 600	Square D	L*		Interpolated	3.59	1.62	2.11	1.58
M	208 – 600	300 – 800	Square D	M*		Interpolated	3.59	1.62	2.11	1.58
P	208 – 600	250 – 1200	Square D	P*		Interpolated	3.59	1.62	2.11	1.58
	600	1200	Square D	PGA36120		Wyle 51551-4, UUT-1	3.59	1.62	2.11	1.58
R	208 – 600	1000 – 1200	Square D	R*		Extrapolated	3.59	1.62	2.11	1.58

**Notes:**

- The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated/extrapolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.
- Certification level is limited to the lower rating of either the internal components, as listed here, or the product section, as listed on the Certified Product table.

Miniature Circuit Breakers (2 Pole and 3 Pole)										
Frame Type	Rated Voltage (Volts)	Rated Current (Amps)	Manufacturer	Part No. / Identifier	Notes	Test Status <sup>1</sup>	Certification Level <sup>2</sup>			
							Grade (z/h = 0)		Roof (z/h = 1)	
							S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
QO	120 – 240	15 – 20	Square D	QO*		Extrapolated	1.96	0.88	1.91	1.43
	120	30	Square D	QOB130		ATS D202932, UUT-1	1.96	0.88	1.91	1.43
	120 – 240	20 – 150	Square D	QO*		Interpolated	1.96	0.88	1.91	1.43
E	120 – 480	15	Square D	E*		Interpolated	1.96	0.88	1.91	1.43
	480	20	Square D	EDB14020		Trentec 0Q016.0, UUT 0Q016-02-01-01	2.70	1.22	2.34	1.76
	120 – 480	20 – 125	Square D	E*		Interpolated	2.70	1.22	2.34	1.76
	480	125	Square D	EDB34125		Trentec 0Q016.0, UUT 0Q016-02-01-01	2.70	1.22	2.34	1.76

**Notes:**

- The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated/extrapolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.
- Certification level is limited to the lower rating of either the internal components, as listed here, or the product section, as listed on the Certified Product table.



## Certified Major Sub-Components Listing Modular Panelboard System (MPS)

Panelboards										
Family Name / Type	Rated Voltage (Volts)	Rated Current (Amps)	Manufacturer	Part No. / Identifier	Notes	Test Status <sup>1</sup>	Certification Level <sup>2</sup>			
							Grade (z/h = 0)		Roof (z/h = 1)	
							S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
NQ	240	225	Square D	NQ430L2		ATS D202932, UUT-1	1.96	0.88	1.91	1.43
		100 – 800	Square D	NQ*	3	Interpolated	1.96	0.88	1.91	1.43
NF	600	100 – 800	Square D	NF*	3	Interpolated	1.96	0.88	1.91	1.43
		800	Square D	NF442L8C		Trentec 2Q007.0, UUT 2Q007-02-01-01	3.43	1.55	2.33	1.75
I-Line	600	400	Square D	HCP50864		Wyle 71437R13, UUT-2	2.55	1.15	2.25	1.69
		400 – 1200	Square D	HC*		Interpolated	2.55	1.15	2.11	1.58
		1200	Square D	HCRU548612U		Wyle 51551-4, UUT-1	3.59	1.62	2.11	1.58

**Notes:**

- The sub-components listed here include part numbers which provided 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.
- Certification level is limited to the lower rating of either the internal components, as listed here, or the product section, as listed on the Certified Product table.
- NQ and NF type panels are the same material, same manufacture and of similar construction.

Surge Protective Devices (SPD)										
Family Name / Type	Rated Voltage (Volts)	Surge Current (Amps)	Manufacturer	Part No. / Identifier	Notes	Test Status	Certification Level <sup>1</sup>			
							Grade (z/h = 0)		Roof (z/h = 1)	
							S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>	S <sub>DS</sub>	F <sub>p</sub> /W <sub>p</sub>
SurgeLoc	208Y/120V	80kA – 240kA	Square D	SSP02BIA24PBQ1		ATS D202932, UUT-1	1.96	0.88	1.91	1.43

**Notes:**

- Certification level is limited to the lower rating of either the internal components, as listed here, or the product section, as listed on the Certified Product table.



## UUT Summary Integrated Equipment – MPS

UUT Product Information			
Manufacturer	Product Category	Product Line Model	Model Number
Square D by Schneider Electric	Panelboards – Low Voltage	Panelboard – I-Line	FO # 12196293900010001, Q2C # 19629390

UUT Test Report Association				
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation
Wyle Laboratories	51551-4	02/16/2005	5a	UUT-1

UUT Notes / Description
<ol style="list-style-type: none"> <li>1. The UUT is a low voltage, three phase I-Line panelboard with a 1200A main breaker, with branch breakers packaged in a NEMA Type 3R/5/12 enclosure</li> <li>2. NEMA Type 3R/5/12 enclosure is constructed of carbon steel sheet with powder-coated finish</li> <li>3. UUT full of contents.</li> </ol>

UUT Properties (As Tested)								
Weight (lbs.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			Shake-Table Attachment	
	Height	Width	Depth	F-B	S-S	V	Type	Anchorage
826	86	44	9.5	N/A	N/A	N/A	Rigid wall mount	(2) 3/8-16 grade 5 bolts and flat washers at 30 ft-lbs torque located at bottom and standard wall mount at top using (4) 3/8-16 grade 5 bolts at 30 ft-lb torque

UUT Seismic Test Parameters								
Building Codes	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2013	ICC-ES AC156	3.59	0	1.5	3.59	1.44	2.41	0.97
		2.11	1	1.5	3.38	2.53	1.41	0.57

UUT Seismic Test Results
✓ The UUT maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks



UUT Major Components		
Description	Manufacturer	Part No. / Identifier
Enclosure – NEMA Type 3R/5/12, Carbon Steel Sheet	Square D	44W x 9.5D x 86H
Panelboard Interior, I-LINE, 1200A, 3-phase	Square D	HCRU548612U
Molded Case Circuit Breaker, R-frame, 600V 1200A	Square D	RGA36120CU31A
Molded Case Circuit Breaker, P-frame, 600V 1200A	Square D	PGA36120
Molded Case Circuit Breaker, K-frame, 600V 250A	Square D	KCA36250
Molded Case Circuit Breaker, F-frame, 600V 100A	Square D	FA36100





## UUT Summary Integrated Equipment – MPS

UUT Product Information			
Manufacturer	Product Category	Product Line Model	Model Number
Square D by Schneider Electric	Panelboards – Low Voltage	Modular Panelboard System – I-Line	FO # 2013SEISMIC002

UUT Test Report Association				
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation
Wyle Laboratories	71437R13	02/04/2014	6	UUT-2

UUT Notes / Description
<ol style="list-style-type: none"> <li>1. The UUT is a low voltage, three phase MPS section with an I-LINE panelboard interior with P-frame, L-frame, J-frame, H-frame and Q frame molded case circuit breakers packaged into a NEMA Type 1 enclosure.</li> <li>2. NEMA Type 1 enclosure is constructed of carbon steel sheet, with powder-coated finish.</li> <li>3. UUT full of contents.</li> </ol>

UUT Properties (As Tested)								
Weight (lbs.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			Shake-Table Attachment	
	Height	Width	Depth	F-B	S-S	V	Type	Anchorage
540	86	42	9.5	N/A	N/A	N/A	Rigid wall mount	(8) 3/8-16 grade 5 bolts and flat washers at 25 ft-lbs torque

UUT Seismic Test Parameters								
Building Codes	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2013	ICC-ES AC156	2.55	0	1.5	2.55	1.02	1.71	0.69
		2.25	1	1.5	3.60	2.70	1.51	0.61

UUT Seismic Test Results
✓ The UUT maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks



UUT Major Components		
Description	Manufacturer	Part No. / Identifier
Enclosure – NEMA Type 1, Carbon Steel Sheet	Square D	42W x 9.5D x 86H
Panelboard Interior, I-LINE, 400A, 3-phase	Square D	HCP50864
Molded Case Circuit Breaker, Q-frame, 240V 100A	Square D	QDA221004
Molded Case Circuit Breaker, Q-frame, 240V 200A	Square D	QDA32200
Molded Case Circuit Breaker, H-frame, 600V 30A	Square D	HDA36030
Molded Case Circuit Breaker, J-frame, 600V 200A	Square D	JDA36200
Molded Case Circuit Breaker, J-frame, 600V 250A	Square D	JDA36250U31X
Molded Case Circuit Breaker, L-frame, 600V 400A	Square D	LA36400
Molded Case Circuit Breaker, P-frame, 600V 800A	Square D	PGA36080CU31A
Molded Case Circuit Breaker, P-frame, 600V 1000A	Square D	PGA36100