APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0645

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [X] New [ ] Renewal

Manufacturer Information

Manufacturer: Schneider Electric

Manufacturer's Technical Representative: Scott R

Mailing Address: 330 Weakley Lane, Smyrna, TN 37167-2062

Telephone: (615) 267-9407 Email: scott.littler@schneider-electric.com

Product Information

Product Name: Power Isolation and Correction Systems

Product Type: Power Isolation and Correction Systems

Product Model Number: Various (See attachment)

General Description: Panels provide isolated power to electrical systems in critical care areas.

Mounting Description: Rigid, 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: Junker Engineering Group

Contact Person: Daniel Junker

Mailing Address: 8950 Jefferson Ave, La Mesa, CA 91941

Telephone: (619) 606-5058 Email: dan@junkereng.com

Title: Principal Engineer

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

Company Name: JUNKER ENGINEERING GROUP

Name: Dan Junker California License Number: S6178

Mailing Address: 8950 Jefferson Ave, La Mesa, CA 91941

Telephone: (619) 606-5058 Email: dan@junkereng.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: Zachary E. Fischer

Mailing Address: 1801 Route 51 South, Jefferson Hills PA 15025

Telephone: (412) 387-1676 Email: zfischer@clarktesting.com

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.5

S_{DS} (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) = Varies, See attachment

Overall dimensions and weight = Varies, See attachment

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

Date: 4/6/2021

Name: Mohammad Aliaari Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: S_{DS} (g) = 2.0 z/h = 1

Condition of Approval (if applicable):

SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-02**
Manufacturer Schneider Electric
Model Line SMIP, SMIX, SMIE, SMIC, SMID
Table Description Modular Isolation Power Panels

Table 1

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim. Certified component construction shall be identical to construction of UUT's.

Options Summary:

See Table 2 for certified subcomponent and options.

Certification Parameters:

Building Code: CBC 2019
Component Importance Factor: $I_p = 1.5$
S_{DS} = 2.0g at z/h = 1.0

Mounting Summary:

Rigid Surface or flush wall mounted per below table. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Notes:

Model Line	kVA	Back Box Dimensions (in)			Max Weight (lb)	Mounting	Description	UUT
		Height	Width	Depth				
SMIP	3	66	24	6	236	Flush	Modular Isolation Power Panels	1B
	5	66	24	6	305	Flush		
	7.5	66	24	8	345	Flush		
	10	66	24	8	395	Flush		
SMIX	3	80	36	8	542	Flush	Modular Dual System Isolation Power Panels	
	5	80	36	8	582	Flush		
	7.5	80	36	8	654	Flush		
	10	80	36	8	654	Flush		
SMIE	15	72	30	12	543	Flush	Modular Isolation Power Panels	
	25	72	30	14	648	Flush		
SMIC	15	72	30	12	538	Flush	Modular Portable X-Ray/Laser Control Isolation Power Panels	
	25	72	30	14	643	Flush		
SMID	15	72	30	12	545	Flush	Modular Dual Voltage Isolation Power Panels	
	25	72	30	14	654	Flush		2, 2B
SMIP	3	66	24	6	235	Surface	Modular Isolation Power Panels	3
	5	66	24	6	305	Surface		
	7.5	66	24	8	345	Surface		
	10	66	24	8	395	Surface		
SMIX	3	80	36	8	542	Surface	Modular Dual System Isolation Power Panels	
	5	80	36	8	582	Surface		
	7.5	80	36	8	654	Surface		
	10	80	36	8	654	Surface		
SMIE	15	72	30	12	543	Surface	Modular Isolation Power Panels	
	25	72	30	14	648	Surface		
SMIC	15	72	30	12	538	Surface	Modular Portable X-Ray/Laser Control Isolation Power Panels	
	25	72	30	14	643	Surface		
SMID	15	72	30	12	545	Surface	Modular Dual Voltage Isolation Power Panels	
	25	72	30	14	654	Surface		4

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUB-COMPONENT SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-01**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Table Description Modular Isolation Power Panels

Table 2

Construction Summary:

Construction is specific to individual models listed below. Certified sub-component construction shall be identical to construction of UUT's.

Options Summary:

Certification Parameters:

Building Code: CBC 2019

Component Importance Factor: I_p = 1.5

$\mathbf{S_{DS}}$ **= 2.0g at z/h = 1.0**

Mounting Summary:

Mounted in component. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Notes:

Subcomponent	Manufacturer	Model	Description		UUT
Isolation Transformer	Control Magnetics	3kVA Hospital Isolation Transfomer (480V-120V)	Open Copper Coil	120V Tested	
		3kVA Hospital Isolation Transfomer (480V-120V)		480V Tested	3
		5kVA Hospital Isolation Transfomer (480V-120V)			
		7.5kVA Hospital Isolation Transfomer (480V-120V)			
		10kVA Hospital Isolation Transfomer (480V-120V)			
		15kVA Hospital Isolation Transfomer (480V-120V)			
		20kVA Hospital Isolation Transfomer (480V-120V)			
		22.5kVA Hospital Isolation Transfomer (480V-120V)			
		25kVA Hospital Isolation Transfomer (480V-120V)		240V Tested	2
		25kVA Hospital Isolation Transfomer (480V-120V)		480V Tested	4
	V&F	3kVA Hospital Isolation Transfomer (480V-120V)	Open Copper Coil	120V Tested	1B
		5kVA Hospital Isolation Transfomer (480V-120V)			
		7.5kVA Hospital Isolation Transfomer (480V-120V)			
		10kVA Hospital Isolation Transfomer (480V-120V)			
		15kVA Hospital Isolation Transfomer (480V-120V)			
		20kVA Hospital Isolation Transfomer (480V-120V)			
		22.5kVA Hospital Isolation Transfomer (480V-120V)			
		25kVA Hospital Isolation Transfomer (480V-120V)		480V Tested	2B
Line Isolation Monitor	Bender	LIM2010	100-240 V/1-Phase		1B,2B,3,4
Molded Case Circuit Breakers	GE	THQB (10A-125A), Bolt-On, 100A Frame	10A, 125A Tested		3
		THQP (10A-125A), Plug-on, 100A Frame	10A, 125A Tested		3
		TEY (10A-150A), Bolt-On, 125A Frame	10A, 150A Tested		3
		F-Frame TEY (10A-150A), Bolt-On, 250A Frame	10A, 150A Tested		3
	Eaton	BAB (10A-125A), Bolt-On, 125A Frame	10A, 125A Tested		4
		CH (10A-125A), Plug-on, 125A Frame	10A, 125A Tested		1B
		GHC (10A-125A), Bolt-On, 125A Frame	10A, 125A Tested		1B
		FD (10A-150A), Bolt-On, 250A Frame	10A, 150A Tested		4
	SQD	QOB (10A-125A), Bolt-On, 125A Frame	10A, 125A Tested		2,2B
		QO (10A-125A), Plug-on, 125A Frame	10A, 125A Tested		2,2B
		HDL (10A-150A), Bolt-On, 250A Frame	10A, 150A Tested		2,2B
Current Transformers	Bender	STW3	100A CT		2,2B
		STW4	200A CT		4
		CTAC-10	8-channel CT strip		4
		CTAC-99	8-channel CT strip		1B

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUB-COMPONENT SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-01**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Table Description Modular Isolation Power Panels

Table 2

Construction Summary:

Construction is specific to individual models listed below. Certified sub-component construction shall be identical to construction of UUT's.

Options Summary:

Certification Parameters:

Building Code: CBC 2019

Component Importance Factor: I_p = 1.5

S_{DS} = 2.0g at z/h = 1.0

Mounting Summary:

Mounted in component. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Notes:

Subcomponent	Manufacturer	Model	Description	UUT
Hospital Grade Receptacles	Hubbell	NEMA 5-20R, 20A		2
		IN16494, 60A		2
		NEMA 6-15R, 15A		2
		NEMA 6-20R, 20A		2
		NEMA 6-30R, 30A		2
		NEMA 6-50R, 50A		4
		NEMA L6-15R, 15A		2
		NEMA L6-20R, 20A		2
		NEMA L6-30R, 30A		4
		CS8269, 50A		4
		23000HG, 20A		2
Twist Lock Ground Jack	Bender	HGJ-1R, 30A		4
Definite Purpose Contactor	SQD	8910DPA32v02, 30A-60A	30A, 60A Tested	2
	Eaton	C25DND230A, 30A-60A	30A, 60A Tested	2B
Programmable Logic Controller	Mitsubishi	FX3S-30MR		2
		FX3S-30ES		2B
Communication Module	Bender	COM460		4
		COM465		4
12 Channel Fault Location Evaluator	Bender	EDS441-I-4		4
		EDS461-D-1		1B
12 Channel Load Monitoring Evaluator	Bender	CMS460-D-A-1		4

SPECIAL SEISMIC CERTIFICATION
UNIT UNDER TEST (UUT) SUMMARY

junker engineering group

Document Number	**2019-030-CCS-02-02**
Manufacturer	Schneider Electric
Model Line	SMIP, SMIX, SMIE, SMIC, SMID
Model Number	25kVA SMID

UUT 2

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim.

Options Summary:

Control Magnetics 25kVA Hospital Isolation Transfomer (480V), Bender LIM2010 Line Isolation Monitor, SQD 10A & 125A,150A QOB & QO & HDL Molded Case Circuit Breakers, Bender STW3 Current Transformer, Hubbell NEMA 5-20R & IN16494 & NEMA 6-15R to 30R & NEMA L6-15R to 20R & 23000HG Receptacles, SQD 8910DPA32v02 30A & 60A Definite Purpose Contactor, Mitsubishi FX3S-30MR Programmable Logic Controller.

Test Parameters:

Building Code: CBC 2019

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Rigid Flush Wall Mount. Attached to the wall mount fixture using eight (8) 5/16"-18 grade 5 hex head bolts, washers and lock washers torqued to 18ft./lbs.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in)			Weight (lb)	Min. First Natural Frequency (Hz)		
Height	Width	Depth		F-B	S-S	Vert
72	30	14	654	N/A	N/A	N/A

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
UNIT UNDER TEST (UUT) SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-02**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Model Number 3kVA SMIP

UUT 3

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim.

Options Summary:

Control Magnetics 3kVA Hospital Isolation Transfomer (120V), Bender LIM2010 Line Isolation Monitor, GE 10A & 125A/150A THQB & THQP & TEY & F Freame TEY Molded Case Circuit Breakers.

Test Parameters:

Building Code: CBC 2019

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

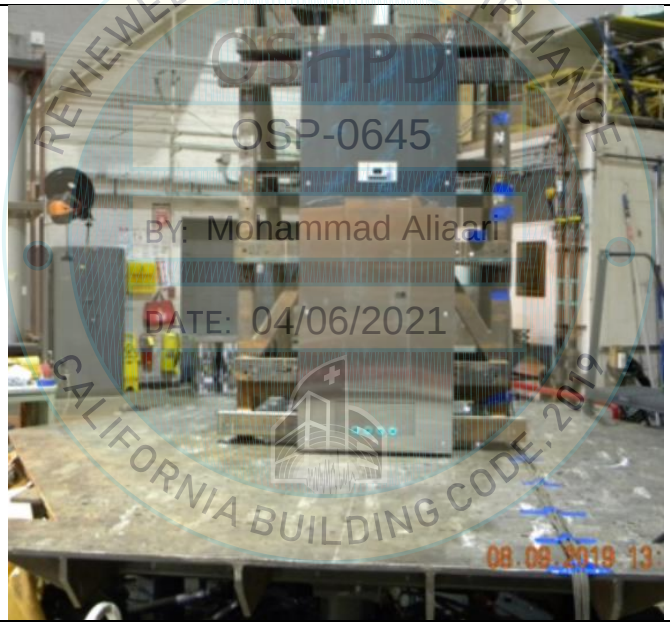
Mounting Summary:

Rigid Surface Wall Mount. Attached to the wall mount fixture using eight (8) 5/16”-18 grade 5 hex head bolts, washers and lock washers torqued to 18ft./lbs.

Notes:

Contents were included in testing per operating conditions.

UUT Image



UUT Properties

Dimensions (in)			Weight (lb)	Min. First Natural Frequency (Hz)		
Height	Width	Depth		F-B	S-S	Vert
66	24	6	236	N/A	N/A	N/A

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
UNIT UNDER TEST (UUT) SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-02**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Model Number 25kVA SMID

UUT 4

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim.

Options Summary:

Control Magnetics 25kVA Hospital Isolation Transformer (480V), Bender LIM2010 Line Isolation Monitor, Eaton 10A & 125A/150A BAB & FD Molded Case Circuit Breakers, Bender STW4 & CTAC-10 Current Transformer, Hubbell N NEMA 6-50R & NEMA L6-30R & CS8269 Receptacles, Bender HGJ-1R Twist Lock Ground Jack, Bender COM460 & COM465 Communication Modules, Bender EDS441-I-4 12 Channel Fault Location Evaluator, Bender CMS460-D-A-1 12 Channel Load Monitoring Evaluator.

Test Parameters:

Building Code: CBC 2019

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Rigid Surface Wall Mount. Attached to the wall mount fixture using eight (8) 5/16”-18 grade 5 hex head bolts, washers and lock washers torqued to 18ft./lbs.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in)			Weight (lb)	Min. First Natural Frequency (Hz)		
Height	Width	Depth		F-B	S-S	Vert
72	30	14	654	N/A	N/A	N/A

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
UNIT UNDER TEST (UUT) SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-02**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Model Number 3kVA SMIP

UUT 1B

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim.

Options Summary:

V&F 3kVA Hospital Isolation Transfomer (120V), Bender LIM2010 Line Isolation Monitor, Eaton 10A & 125A CH & GHC Molded Case Circuit Breakers, Bender CTAC-99 Current Transformers, Bender EDS461-D-1 12 Channel Fault Location Evaluator.

Test Parameters:

Building Code: CBC 2019

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Rigid Flush Wall Mount. Attached to the wall mount fixture using eight (8) 5/16"-18 grade 5 hex head bolts, washers and lock washers torqued to 18ft./lbs.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in)			Weight (lb)	Min. First Natural Frequency (Hz)		
Height	Width	Depth		F-B	S-S	Vert
66	24	6	236	N/A	N/A	N/A

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
UNIT UNDER TEST (UUT) SUMMARY

junker engineering group

Document Number **2019-030-CCS-02-02**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Model Number 25kVA SMID

UUT 2B

Construction Summary:

14ga A653 galvanized steel back box, 14ga 304 stainless steel trim.

Options Summary:

V&F 25kVA Hospital Isolation Transfomer (480V), Bender LIM2010 Line Isolation Monitor, SQD 10A & 125A,150A QOB & QO & HDL Molded Case Circuit Breakers, Bender STW3 Current Transformer, SQD 8910DPA32v02 30A & 60A Definite Purpose Contactor, Mitsubishi FX3S-30MR Programmable Logic Controller.

Test Parameters:

Building Code: CBC 2019

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Rigid Flush Wall Mount. Attached to the wall mount fixture using eight (8) 5/16"-18 grade 5 hex head bolts, washers and lock washers torqued to 18ft./lbs.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in)			Weight (lb)	Min. First Natural Frequency (Hz)		
Height	Width	Depth		F-B	S-S	Vert
72	30	14	598	N/A	N/A	N/A

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

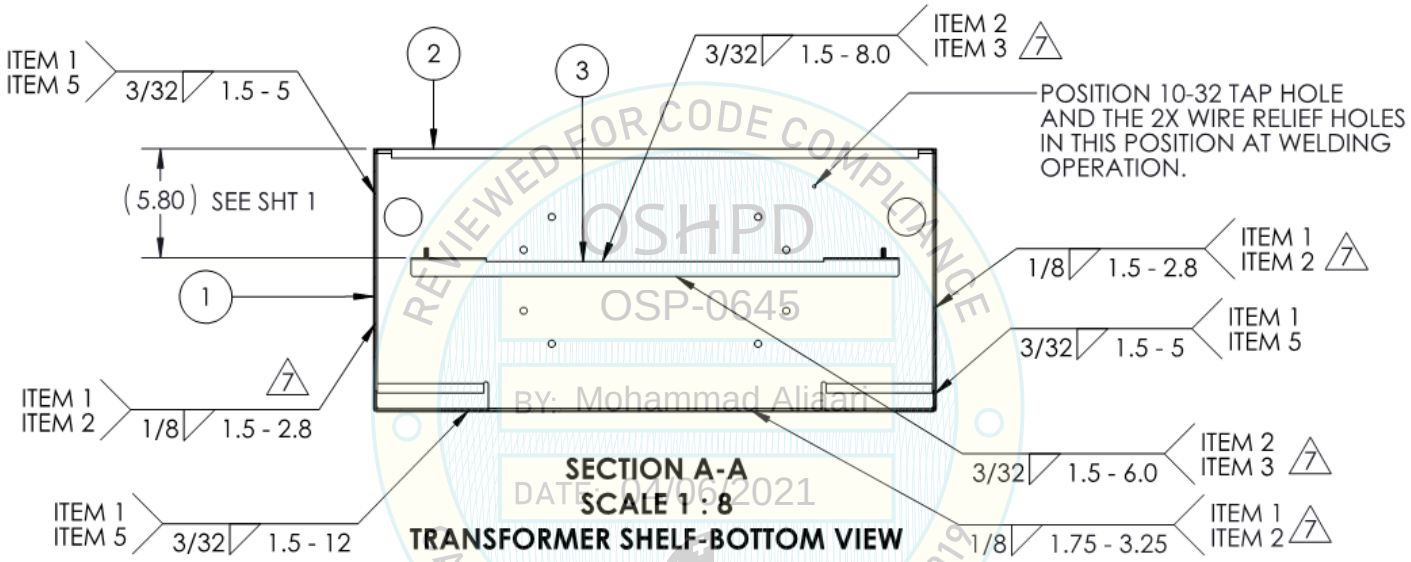
junker engineering group

Document Number **2019-030-CCS-02-02**

Manufacturer Schneider Electric

Model Line SMIP, SMIX, SMIE, SMIC, SMID

Transformer Shelf Reinforcement Detail



ITEM NO.	DWG NUMBER	DESCRIPTION	QTY.
6	445 1671-6 R6	STRENGTHENER	1
5	445 1671-5 R6	BACKBOX ENDCAP	2
4	445 1671-4 R6	LOWER SUPPORT ANGLE	1
3	445 1671-3 R6	UPPER SUPPORT ANGLE	1
2	445 1671-2 R6	BACKBOX TRANSFORMER SHELF	1
1	445 1671-1 R6	BACKBOX SHELL	1

Notes:

Stitch welds at transformer shelf shown shall be implemented for all seismically certified models listed within this OSP.