



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

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

OFFICE USE ONLY

APPLICATION #: **OSP – 0191 – 10**

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

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: ElectroDesign

Manufacturer's Technical Representative: Phil Mitchell

Mailing Address: 1333 N. McDowell Blvd., Petaluma, CA 94954

Telephone: (707) 775-2840 Email: [phil@electrodesign.to](mailto:phil@electrodesign.to)

**Product Information**

Product Name: Fuel Oil Control Panels

Product Type: Control Panels

Product Model Number: Custom Fuel Oil Control Panels (See Tables 1-3)

(List all unique product identification numbers and/or part numbers)

General Description: Fuel oil control panel family. Indoor and outdoor panels listed in Table 1. Internal components and features are listed in Tables 2 and 3.

Mounting Description: Wall mounted panels

**Applicant Information**

Applicant Company Name: Tobolski Watkins Engineering, Inc.

Contact Person: Matthew Tobolski, PhD, SE

Mailing Address: 9246 Lightwave Ave., Suite 140, San Diego, CA 92123

Telephone: (858) 381-5843 Email: [mtobolski@tobolskiwatkins.com](mailto:mtobolski@tobolskiwatkins.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:  Date: 10/15/2013

Title: President and CEO Company Name: Tobolski Watkins Engineering, Inc.

"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 6/14/13)





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

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

Company Name: Tobolski Watkins Engineering, Inc.

Name: Matthew Tobolski, PhD, SE California License Number: S5648

Mailing Address: 9246 Lightwave Ave., Suite 140, San Diego, CA 92123

Telephone: (858) 381-5843 Email: [mtobolski@tobolskiwatkins.com](mailto:mtobolski@tobolskiwatkins.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)
- Supports and attachments are not preapproved

**Certification Method**

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

**Testing Laboratory**

Company Name: NTS

Contact Name: Deepa Shetty

Mailing Address: 38995 Cherry St., Newark, CA 94560

Telephone: (510) 578-3500 Email: [deepa.shetty@nts.com](mailto:deepa.shetty@nts.com)

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FACILITIES DEVELOPMENT DIVISION**

**Seismic Parameters**

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.79

$S_{DS}$  (Design spectral response acceleration at short period, g) = 2.49g

$a_p$  (In-structure equipment or component amplification factor) = 1.0

$R_p$  (Equipment or component response modification factor) = 2.5

$\Omega_0$  (System overstrength factor) = 2.5

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = N/A

Overall dimensions and weight (or range thereof) = See Table 1

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): UUT Summaries and Product Matrices

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

Signature:  Date: January 21, 2014

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to :  $S_{DS}$  (g) = 2.49  $z/h$  = 1.0

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







# Table 2

## Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP) – Internal Components

**Certified Product Construction Summary:**  
Specific internal component models listed below.

**Certified Options Summary:**  
None.

**Certified Mounting Summary:**  
Mounted on cabinets listed in Table 1

**Building Code:** CBC 2013      **Seismic Certification Limits:**  $S_{Ds} = 2.49g$        $z/h = 1.0$        $I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Relays	Automation Direct 750-3C-120A						1,5,6
	Finder 60.13.8.012.00540						2-6
	Allen Bradley 700HC1A1-3-4						7
	Phoenix Contact 60.13.8.012.00540						8
	Macromatic ARP120AGR						1,2
	Square D 8501-KA91-V20						3,4
	Square D 9050-JCK11-V20						5,6

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**Table 2**

**Special Seismic Certification  
Certified Product Matrix**

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP) – Internal Components

**Certified Product Construction Summary:**  
Specific internal component models listed below.

**Certified Options Summary:**  
None.

**Certified Mounting Summary:**  
Mounted on cabinets listed in Table 1

**Building Code:** CBC 2013      **Seismic Certification Limits:**  $S_{DS} = 2.49g$        $z/h = 1.0$        $I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Circuit Breakers	Siemens 5SJ4111-7HG41						1-6
	Siemens 5SJ44218-7HG41						5,6
	Allen Bradley 1492-SP2C150						8
	Allen Bradley 1492-SP1C050						7,8
Motor Starter	Square D GV2-P14H7/6-10A						5-6
	Allen Bradley 140M-D8E						8
Contactors	Allen Bradley 100-C23D10						8
Audible Alarm	Floyd Bell UO-09-628-Q						7-8

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# Table 2

## Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP) – Internal Components

**Certified Product Construction Summary:**  
Specific internal component models listed below.

**Certified Options Summary:**  
None.

**Certified Mounting Summary:**  
Mounted on cabinets listed in Table 1

**Building Code:** CBC 2013      **Seismic Certification Limits:**  $S_{DS} = 2.49g$        $z/h = 1.0$        $I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Pilot Lights	Square D 9001-KT38LGG31						1-6,8
	Square D 9001-KT38LYA31						1-6
	Square D 9001-KT38LRR31						1-6,8
	Allen Bradley 800T-QTH2G						7
	Allen Bradley 800T-QTH2Y						
	Allen Bradley 800T-QTH2R						7
Switches	Square D 9001-KS63FBH2						1-6,8
	Allen Bradley 800T-J17						7
	Allen Bradley 800T-H17D1						7

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# Table 3

## Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP) – Control Components

**Certified Product Construction Summary:**  
Specific internal component models listed below.

**Certified Options Summary:**  
None.

**Certified Mounting Summary:**  
Mounted on cabinets listed in Table 1

**Building Code:** CBC 2013      **Seismic Certification Limits:**  $S_{DS} = 2.49g$        $z/h = 1.0$        $I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Siemens Controllers	6ES7 212-1BD30-0XB0					CPU	3-6
	KTP-600					6" Touchscreen	4
	KTP-1000					10" Touchscreen	3,5,6
	6EP1-332-1SH71					Power Supply	3-6
	6GK7 277-1AA00-0AA0					Ethernet Switch	3-6
	6ES7 241-1AH30-0XB0					Serial Data	3-6
	6ES7 221-1BH30-0XB0					Input Module	3-6
	6ES7 222-1BH30-0XB0					Output Module	3-6
Allen Bradley Controllers	1763-L16BWA					CPU	7-8
	2711PC-T6C20D					6" Touchscreen	7
	2711PC-T10C4D1					10" Touchscreen	8
	1606-XLE80E					Power Supply	7-8
	1783-US05T					Ethernet Switch	7-8
	4983-DC120-5					Power Filter	7-8
	1492-IQ16					Input Module	7-8
	1762-OWB					Output Module	7-8
Red Lion Controllers	DSPX00U					Data Station	7,8
Fieldserver Controllers	FS-QS					Gateway Protocol Converter	7,8

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**UUT - 1**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-1: Day tank control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Interior FOCP cabinet: Hoffman

**Options/Subcomponent Summary:**  
**Relays:** (13) Automation Direct, (1) Macromatic; **Circuit Breakers:** (1) Siemens 5SJ4111; **Pilot Lights:** (11) Square D; **Switches:** (2) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (32) Weidmueller WDU-4

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
43	8	16	20	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT - 2**

**UNIT UNDER TEST (UUT)  
Summary Sheet**

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-1X: Day tank control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Outer cabinet: Saginaw. Inner cabinet: Hoffman

**Options/Subcomponent Summary:**  
**Relays:** (13) Finder, (1) Macromatic; **Circuit Breakers:** (1) Siemens 5SJ4111; **Pilot Lights:** (11) Square D; **Switches:** (2) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (32) Weidmueller WDU-4

**UUT Properties**

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
112	12	24	30	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT - 3**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-2: Day tank control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Interior FOCP cabinet: Saginaw

**Options/Subcomponent Summary:**  
**Relays:** (13) Finder, (1) Square D 8501; **Circuit Breakers:** (1) Siemens 5SJ4111; **Pilot Lights:** (11) Square D; **Switches:** (2) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (64) Weidmueller WDU-4; **Siemens Controls:** (1) 6ES7 212 CPU, (1) 10" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Serial Data, (1) Input Module, (1) Output Module

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
75	8	20	24	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT – 4**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-2X: Day tank control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Outer cabinet: Saginaw. Inner cabinet: Saginaw

**Options/Subcomponent Summary:**  
**Relays:** (13) Finder, (1) Square D 8501; **Circuit Breakers:** (1) Siemens 5SJ4111; **Pilot Lights:** (11) Square D; **Switches:** (2) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (64) Weidmueller WDU-4; **Siemens Controls:** (1) 6ES7 212 CPU, (1) 6" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Serial Data, (1) Input Module, (1) Output Module

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
164	12	30	30	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.



**UUT – 5**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-6: Master controller control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Interior FOCP cabinet: Saginaw

**Options/Subcomponent Summary:**  
**Relays:** (11) Automation Direct, (10) Finder, (3) Square D 9050; **Circuit Breakers:** (1) Siemens 5SJ4111, (3) Siemens 5SJ44218; **Pilot Lights:** (24) Square D; **Switches:** (3) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (80) Weidmueller WDU-4; **Motor Starters:** (3) Square D w/ LCID12G7; **Siemens Controls:** (1) 6ES7 212 CPU, (1) 10" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Serial Data, (1) Input Module, (1) Output Module

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
143	8	30	36	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT - 6**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-5X: Master controller control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Outer cabinet: Saginaw. Inner cabinet: Saginaw

**Options/Subcomponent Summary:**  
**Relays:** (11) Automation Direct, (10) Finder, (3) Square D 9050; **Circuit Breakers:** (1) Siemens 5SJ4111, (3) Siemens 5SJ44218; **Pilot Lights:** (24) Square D; **Switches:** (3) Square D; **Pushbuttons:** (1) Square D; **Terminal Blocks:** (80) Weidmueller WDU-4; **Motor Starters:** (3) Square D w/ LCID12G7; **Siemens Controls:** (1) 6ES7 212 CPU, (1) 10" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Serial Data, (1) Input Module, (1) Output Module

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
267	12	36	42	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.49g	1.0	1.5	3.98g	2.99g	1.67g	0.67g

**Test Mounting Details:**



Overall



Mounting (TYP)

FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT - 7**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-1: Generator fuel system remote display configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Interior FOCP cabinet: Hoffman

**Options/Subcomponent Summary:**  
**Relays:** (5) Allen Bradley; **Circuit Breakers:** (1) Allen Bradley SP1C050; **Audible Alarm:** (1) Floyd Bell; **Pilot Lights:** (6) Allen Bradley;  
**Switches:** (2) Allen Bradley 800T-J17, (2) Allen Bradley 800T-H17D1; **Pushbuttons:** (2) Allen Bradley; **Terminal Blocks:** (4) Allen  
 Bradley; **Allen Bradley Controls:** (1) CPU, (1) 6" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Power Filter, (1) Input  
 Module, (1) Output Module; **Other Controls:** (1) Red Lion Data Station, (1) FieldServer Converter, (1) Meanwell Power Supply D2-15-  
 24

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
52	9	16	20	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.50g	1.0	1.5	4.00g	3.00g	1.68g	0.67g

**Test Mounting Details:**



FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.

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**UUT - 8**

## UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2013-0696-CO-001, rev. 0

**Manufacturer:** Electrodesign

**Model Line:** Fuel Oil Control Panels (FOCP)

**Model Number:** C-5X: Master controller control panel configuration

**Product Construction Summary:**  
NEMA 4X 304 stainless steel cabinets. Outer cabinet: Saginaw. Inner cabinet: Hoffman

**Options/Subcomponent Summary:**  
**Relays:** (36) Phoenix Contact; **Circuit Breakers:** (3) Allen Bradley SP2C150, (8) Allen Bradley SP1C050; **Motors Starter:** (3) Allen Bradley; **Contactors:** (3) Allen Bradley; **Audible Alarm:** (1) Floyd Bell; **Pilot Lights:** (13) Square D; **Switches:** (5) Square D; **Pushbuttons:** (2) Square D; **Terminal Blocks:** Phoenix Contact (80) UT4, (8) UT4-HESI, (12) UTB2.4; **Allen Bradley Controls:** (1) CPU, (1) 10" Touchscreen, (1) Power Supply, (1) Ethernet Switch, (1) Power Filter, (1) Input Module, (1) Output Module, (1) Protection Module 1692-ZG4444; **Other Controls:** (1) Red Lion Data Station, (1) FieldServer Converter, (1) Meanwell Power Supply D2-15-24

### UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
324	13	36	42	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	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 AC 156	2.50g	1.0	1.5	4.00g	3.00g	1.68g	0.67g

**Test Mounting Details:**



FOCP mounted to strut rails using (4) 3/8" x 1" spring nuts and bolts. Strut rails mounted to supporting wood boards using (3) 3/8" x 2" lag bolts per rail. Unit maintained structural integrity and remained functional per manufacturer requirement.