sAPPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0405

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Eaton Corporation

Manufacturer's Technical Representative: Nick Baileys

Mailing Address: 3301 Spring Forest Road, Raleigh, NC 27616

Telephone: (919) 878-6081 Email: nickbaileys@eaton.com

Product Information

Product Name: 93PM and 93PM-L

Product Type: Uninterruptible Power Supply (UPS)

Product Model Number: Varies, see attachment.
(List all unique product identification numbers and/or part numbers)

General Description: 50-400 kVA UPS. 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 base mounted

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OSHPD
OSP-0405
By: Mohammad Aliaari
DATE: 06/16/2020
CALIFORNIA BUILDING CODE, 2019

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Contact Person: Galen Reid

Mailing Address: 5215 Hellyer Ave., Suite 210, San Jose, CA 95138

Telephone: 844-878-0200 Email: greid@structint.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 07/03/2019

Title: Program Manager Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

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

Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Name: Andrew M. Coughlin California License Number: S6082

Mailing Address: 5215 Hellyer Ave., Suite 210, San Jose, CA 95138

Telephone: 844-878-0200 Email: acoughlin@structint.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: Clark Testing

Contact Name: Devon Lohr

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

Telephone: (412) 387-1027 Email: dlohr@clarktesting.com

Company Name: Areva Inc.

Contact Name: James Wilcoski

Mailing Address: 1724 Mount Athos Rd.

Telephone: (217)373-6763 Email: james.wilcoski@usace.army.mil

Company Name: Wyle (now NTS- Huntsville)

Contact Name: Greg Mason

Mailing Address: 7800 Highway 20 West

Telephone: (256) 837-4411 Email: greg.mason@nts.com

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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) = Varies, See Product Matrices

S_{DS} (Design spectral response acceleration at short period, g) = Varies, See Product Matrices

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

R_p (Equipment or component response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

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

Equipment or Component Natural Frequencies (Hz) = See Product Matrices

Overall dimensions and weight (or range thereof) = See Product Matrices

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) =

Ω_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, 2015: ☐ Yes ☒ No

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List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☐ Manufacturer's Catalog

☒ Other(s) (Please Specify): Product Matrices

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025

Signature: M. Aliaari Date: June 16, 2020

Print Name: Mohammad Aliaari Title: SSE

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

Condition of Approval (if applicable):

SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton
Model Line: 93 PM & 93 PM-L Uninterruptible Power Supply

TABLE 1

Certified Product Construction Summary:
50kVA - 400 kVA, carbon steel frame and enclosure.

Certified Options Summary:
See model line numbering pages for the significance of "X";
Dimensions are Maximum Without Seismic Mounting/Bracing Kit; Weights are maximum.

Mounting Configuration:
Base mounted - rigid
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: *CBC 2019* ***Seismic Certification Limits:*** S_{DS}= *1.83 g* *z/h=1.0* I_P= *1.5*

Model Line	Model	Dimensions (in)			Weight (lb)	Vertical C.G. (in)	Notes	UUT
		Depth	Width	Height				
93PM UPS	9PA05D0220 A01R1	42	22	74	686	40		1
	9PXXXXXXXX XXXXX	…	…	…	…	..		Interp.
	9PXXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9PA05D6029 L00R1	42	30	74	2178	35		4
	9PXXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9PXXXXXXXX XXXXX	42	37	74	1540	39		Interp.
	9PXXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9PV20D0029 F20R1	42	47	74	1774	38		2
	9PV20C0029 F20R2	42	47	74	1795	38		12
	9PXXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9P640D0029A00R2	42	63.9	74	2628	35		15
93 PM - L UPS	9GCXXXXXXX XXXXX	42	22	74	570	38.3		Interp.
	9GCXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9GC312A700A02R0	42	22	74	1604	43.5		16
	9GCXXXXXXX XXXXX	42	30	74	742	37.1		Interp.
	9GCXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9GCXXXXXXX XXXXX	42	30	74	1765	42.5		Interp.
	9GCXXXXXXX XXXXX	42	34.5	74	892	37		Interp.
	9GCXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9GCXXXXXXX XXXXX	42	34.5	74	1992	41.9		Interp.
	9GFXXXXXXX XXXXX	42	22	74	702	37.4		Interp.
	9GFXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9GFXXXXXXX XXXXX	42	22	74	1047	43.9		Interp.
	9GFXXXXXXX XXXXX	42	34.5	74	940	36.9		Interp.

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SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer:	Eaton
Model Line:	93 PM & 93 PM-L Uninterruptible Power Supply

TABLE 1

Certified Product Construction Summary:

50kVA - 400 kVA, carbon steel frame and enclosure.

Certified Options Summary:

See model line numbering pages for the significance of "X";
Dimensions are Maximum Without Seismic Mounting/Bracing Kit; Weights are maximum.

Mounting Configuration:

Base mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: *CBC 2019* ***Seismic Certification Limits:*** S_{DS}= *1.83 g* *z/h=1.0* I_P= *1.5*

Model Line	Model	Dimensions (in)			Weight (lb)	Vertical C.G. (in)	Notes	UUT
		Depth	Width	Height				
93 PM - L UPS	9GFXXXXXXX XXXXX	…	…	…	…	…		Interp.
	9GFXXXXXXX XXXXX	42	34.5	74	1577	40.6		Interp.
	9GHXXXXXXX AXXXX	42	34.5	74	933	36.4		Interp.
	9GHXXXXXXX AXXXX	…	…	…	…	…		Interp.
	9GHXXXXXXX AXXXX	42	34.5	74	1416	40.7		Interp.
	9GKXXXXXXX AXXXX	42	43.3	74	1064	35.7		Interp.
	9GKXXXXXXX AXXXX	…	…	…	…	…		Interp.
	9GK040A000A02R0	42	43.3	74	1722	38.1		17

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SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton ***Model Line:*** 93PM Uninterruptible Power Supply (UPS)		**TABLE 1.1**
Columns 1 & 2	Model Line	~~9M = 93PM 0.8 pf~~
		~~9N = 93PM 0.9 pf~~
		9P = 93PM 1.0 pf
Column 3	Base Model	A = 93PM-50 Capacity Frame
		B = 93PM-50 Redundant Frame, 1 UPM
		C = 93PM-50 Redundant Frame, 2 UPM
		D = 93PM-100 Capacity Frame, 1 UPM
		E = 93PM-100 Capacity Frame, 2 UPM
		F = 93PM-100 Redundant Frame, 1 UPM
		G = 93PM-100 Redundant Frame, 2 UPM
		H = 93PM-100 Redundant Frame, 3 UPM
		J = 93PM-150 Capacity Frame, 1 UPM
		K = 93PM-150 Capacity Frame, 2 UPM
		L = 93PM-150 Capacity Frame, 3 UPM
		M = 93PM-150 Redundant Frame, 1 UPM
		N = 93PM-150 Redundant Frame, 2 UPM
		P = 93PM-150 Redundant Frame, 3 UPM
		R = 93PM-150 Redundant Frame, 4 UPM
		S = 93PM-200 Capacity Frame, 1 UPM
		T = 93PM-200 Capacity Frame, 2 UPM
		U = 93PM-200 Capacity Frame, 3 UPM
		V = 93PM-200 Capacity Frame, 4 UPM
		Z = N/A, Used on P-110000112 93PM Accessories CTO
		9 = No UPS (SideCar Only)
		0 = 93PM-400 Capacity Frame, 2 UPM
		1 = 93PM-400 Capacity Frame, 3 UPM
		2 = 93PM-400 Capacity Frame, 4 UPM
		3 = 93PM-400 Capacity Frame, 5 UPM
		4 = 93PM-400 Capacity Frame, 6 UPM
		5 = 93PM-400 Capacity Frame, 7 UPM
		6 = 93PM-400 Capacity Frame, 8 UPM
Columns 4 & 5	UPS kVA Rating	02 = 20 kVA
		03 = 30 kVA
		04 = 40 kVA
		05 = 50 kVA
		06 = 60 kVA
		07 = 70 kVA
		08 = 80 kVA
		09 = 90 kVA

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BY: Structural Affairs
DATE: 06/16/2020
CALIFORNIA OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton ***Model Line:*** 93PM Uninterruptible Power Supply (UPS)		**TABLE 1.1**
Columns 4 & 5 (continued)	UPS kVA Rating	10 = 100 kVA
		11 = 110 kVA
		12 = 120 kVA
		13 = 130 kVA
		14 = 140 kVA
		15 = 150 kVA
		16 = 160 kVA
		17 = 170 kVA
		18 = 180 kVA
		19 = 190 kVA
		20 = 200 kVA
		25 = 250 kVA
		30 = 300 kVA
		35 = 350 kVA
		40 = 400 kVA
Column 6	Voltage Configuration	A = 400V, 4 wire
		B = 400V, 3 wire
		C = 480V, 4 wire
		D = 480V, 3 wire
		E = 380V, 4 wire
		F = 380V, 3 wire
		G = 360V, 4 wire
		H = 360V, 3 wire
		J = 415V, 4 wire
		K = 415V, 3 wire
		L = 440V, 4 wire
		M = 440V, 3 wire
		N = 480V 3-wire / 208V 4-wire (For use with IAC-D)
		P = 208V 3-wire / 208V 4-wire (For use with IAC-D)
Column 7	Internal Batteries	0 = No Internal Batteries; No Battery Breaker
		2 = With Internal Batteries, 3 strings, type 9Ah
		4 = With Internal Batteries, 4 strings, type 9Ah
		6 = With Internal Batteries, 5 strings, type 9Ah
		~~A = Optional DC Breaker (50kVA / 100kVA / 150kVA), No Internal Batteries~~
		B = With Internal Battery Trays (3 strings), type 9Ah (Batteries not Supplied)
		C = With Internal Battery Trays (4 strings), type 9Ah (Batteries not Supplied)
		D = With Internal Battery Trays (5 strings), type 9Ah (Batteries not Supplied)
		~~E = With External Separate Battery (per UPM)~~
		~~F = With Internal Batteries (4 strings), type 9Ah LL~~

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CALIFORNIA BUILDING CODE, 2019

SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton ***Model Line:*** 93PM Uninterruptible Power Supply (UPS)		**TABLE 1.1**
Column 7	Internal Batteries	~~G = With Internal Batteries (5 strings), type 9Ah LL~~
		~~H = With Internal Batteries (6 strings), type 9Ah LL~~
		~~J = With Internal Batteries (4 strings), type 9Ah LL~~
		K = With Internal Batteries And Thermal Sensor (3 strings), type 9Ah
		L = With Internal Batteries And Thermal Sensor (4 strings), type 9Ah
		M = With Internal Batteries And Thermal Sensor (4 strings), type 9Ah
Column 8	Input Options	0 = Single Feed, no Internal MBS
		1 = Single Feed, with Internal MBS
		2 = Dual Feed, no Internal MBS
		3 = Dual Feed, with Internal MBS
Column 9	Efficiency Options	0 = No ESS, no VMMS
		1 = No ESS, with VMMS
		2 = With ESS, no VMMS
		3 = With ESS, with VMMS
Column 10	Communication Options	0 = None (Empty)
		5 = PXGMS
		7 = PXGMS and EMP
		8 = Industrial Relay
		9 = PXGMS, Industrial Relay and EMP
Column 11	Sidecar / Top Entry Options	A = No Sidecar
		B = No Breakers, Left Mount
		C = No Breakers, Right Mount
		D = 2 Breaker, Left Mount (MBS)
		E = 3 Breaker, Left Mount (MBS)
		F = 4 Breaker, Left Mount (MBS)
		G = 2 Breaker, Right Mount (MBS)
		H = 3 Breaker, Right Mount (MBS)
		J = 4 Breaker, Right Mount (MBS)
		K = 3 Breaker, Left Mount (Tie, External Capacity)
		L = 4 Breaker, Left Mount (Tie w/ MBS, External Capacity)
		M = 3 Breaker, Right Mount (Tie, External Capacity)
		N = 4 Breaker, Right Mount (Tie, w/ MBS, External Capacity)
		P = 3 Breaker, Left Mount (Tie, External Redundant)
		R = 4 Breaker, Left Mount (Tie w/ MBS, External Redundant)
		S = 3 Breaker, Right Mount (Tie, External Redundant)
		T = 4 Breaker, Right Mount (Tie w/ MBS, External Redundant)
		U = 2 Breaker, Left Mount (Tie, External Capacity / Redundant)
		V = 2 Breaker, Right Mount (Tie, External Capacity / Redundant)

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SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton ***Model Line:*** 93PM Uninterruptible Power Supply (UPS)		**TABLE 1.1**
Column 12	Sidecar Breaker kAIC Rating	0 = no specification
		1 = STD kAIC, all Breakers Aux
		2 = STD kAIC, MBS Aux Only
		3 = High kAIC, all Breakers Aux
		4 = High kAIC, MBS Aux Only
Column 13	Cabinet Configuration[1]	0 = With Dress Skins, Top Air Exhaust
		1 = With Dress Skins, Rear Air Exhaust
		~~2 = No Dress Skins, Top Air Exhaust~~
		~~3 = No Dress Skins, Rear Air Exhaust~~
		4 = With Dress Skins, Top Air Exhaust, Sidecar Ship Separate
		5 = With Dress Skins, Rear Air Exhaust, Sidecar Ship Separate
Column 14	Factory Location[2]	R = Raleigh, NC
		F = FAA
		M = Healthcare
		L = UL 924
		A = UL 924a
		P = Power Conditioner (RPO)
		C = Frequency Converter (RPO)
Column 15	Generation Code	0 = Initial Release
		1 = ESS
		2 = 50KW STS W/Contactors
		3-9=Future Product Generation Codes

Notes:

[1] Option 4 and 5 denotes whether the unit is built on site or at factory. Sidecar is attached at site if building doors will not accommodate size of fully constructed unit.

[2] Based on runtime only

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer:	Eaton	**TABLE 1.2**
Model Line:	93 PM -L Uninterruptible Power Supply (UPS)	
Columns 1 & 2	Model Line	9G = 93PM-L (208V)
Column 3 &4	Model-UPM Count	C1= 93PM-L 60 Capacity Frame, 1UPM
		C2= 93PM-L 60 Capacity Frame, 2UPM
		C3= 93PM-L 60 Capacity Frame, 3UPM
		F1= 93PM-L 120 Capacity Frame, 1UPM
		F2= 93PM-L 120 Capacity Frame, 2UPM
		F3= 93PM-L 120 Capacity Frame, 3UPM
		F4= 93PM-L 120 Capacity Frame, 4UPM
		F5= 93PM-L 120 Capacity Frame, 5UPM
		F6= 93PM-L 120 Capacity Frame, 6UPM
		H1= 93PM-L 160 Capacity Frame, 1UPM
		H2= 93PM-L 160 Capacity Frame, 2UPM
		H3= 93PM-L 160 Capacity Frame, 3UPM
		H4= 93PM-L 160 Capacity Frame, 4UPM
		H5= 93PM-L 160 Capacity Frame, 5UPM
		H6= 93PM-L 160 Capacity Frame, 6UPM
		H7= 93PM-L 160 Capacity Frame, 7UPM
		H8= 93PM-L 160 Capacity Frame, 8UPM
		K1= 93PM-L 200 Capacity Frame, 1UPM
		K2= 93PM-L 200 Capacity Frame, 2UPM
		K3= 93PM-L 200 Capacity Frame, 3UPM
		K4= 93PM-L 200 Capacity Frame, 4UPM
		K5= 93PM-L 200 Capacity Frame, 5UPM
		K6= 93PM-L 200 Capacity Frame, 6UPM
		K7= 93PM-L 200 Capacity Frame, 7UPM
		K8= 93PM-L 200 Capacity Frame, 8UPM
		K9= 93PM-L 200 Capacity Frame, 9UPM
		K0= 93PM-L 200 Capacity Frame, 10UPM
		9C= No UPS(sidecar only) 60kVA frame, CTO5/6=12
		9K= No UPS(sidecar only) 120kVA frame, CTO5/6=24
Columns 5 & 6	UPS kVA Rating	02 = 10 kVA
		03 = 15 kVA
		04 = 20 kVA
		05 = 25 kVA
		06 = 30 kVA
		07 = 35 kVA
		08 = 40 kVA
		09 = 45 kVA
		10 = 50 kVA

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BY: Mehdi Dadras-Ajirlou
DATE: 06/16/2020
CALIFORNIA
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Manufacturer: Eaton ***Model Line:*** 93 PM -L Uninterruptible Power Supply (UPS)		**TABLE 1.2**
Columns 5 & 6 (continued)	UPS kVA Rating	11 = 55 kVA
		12 = 60 kVA
		13 = 65 kVA
		14 = 70 kVA
		15 = 75 kVA
		16 = 80 kVA
		17 = 85 kVA
		18 = 90kVA
		19 = 95 kVA
		20 = 100 kVA
		21 = 105 kVA
		22 = 110 kVA
		23 = 115 kVA
		24 = 120 kVA
		25 = 125 kVA
		26 = 130 kVA
		27 = 135 kVA
		28 = 140 kVA
		29 = 145 kVA
		30 = 150 kVA
		31 = 155 kVA
		32 = 160 kVA
		33 = 165 kVA
		34 = 170 kVA
		35 = 175 kVA
		36 = 180 kVA
		37 = 185 kVA
		38 = 190 kVA
		39 = 195 kVA
		40 = 200 kVA
Column 7	Voltage Configuration	A = Single Input 208/220V, 50/60 Hz; Output 208/220V, 1.0 p.f., 50/60Hz
		B = Dual Input 208/220V, 50/60 Hz; Output 208/220V, 1.0 p.f., 50/60Hz
Column 8	Internal Batteries	0 = No Internal Batteries; No Battery Breaker
		2 = With Internal Batteries, 2 strings
		3 = With Internal Batteries, 3 strings
		4 = With Internal Batteries, 4 strings
		5 = 2 Strings & Thermal Sensors
		6 = 3 Strings & Thermal Sensors
		7 = 4 Strings & Thermal Sensors

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer:	Eaton	**TABLE 1.2**
Model Line:	93 PM -L Uninterruptible Power Supply (UPS)	
Column 8 (continued)	Internal Batteries	8 = 2 Strings (Batteries Not Supplied)
		9 = 3 Strings (Batteries Not Supplied)
		A= 4 Strings (Batteries Not Supplied)
Column 9	Efficiency Options	0= No ESS
		1 =
		2 = ESS
Column 10	Connectivity Slots	0 = None
		1 = Environmental Monitoring Probe
		2 = PXGMS and IRC
		3 = EMP and IRC
		4 =
		5 = Power Xpert Gateway Mini-Slot
		6 =
		7 = PXGMS and EMP
		8 = Industrial Relay Card (IRC)
		9 = PXGMS, IRC and EMP
Column 11	Sidecar/Wireway Options	A = None
		B = Left Top Entry Sidecar, No Breakers
		C = Right Top Entry Sidecar, No Breakers
		D = Left MBS, 2 Breakers, MIS/MBP
		E = Left MBS, 3 Breakers, BIB/MIS/MBP
		F = Left MBS, 4 Breakers, RIB/BIB/MIS/MBP
		G = Right MBS, 2 Breakers, MIS/MBP
		H = 3 Breaker, Right Mount (MBS)
		J = Right MBS, 4 Breakers, RIB/BIB/MIS/MBP
		L = Wireway Ship Separate
Column 12	Sidecar Breaker	0 = No Specification
		1 = STD kAIC, Enhanced Monitoring (all breakers monitored)
		2 = STD kAIC, MBP/BIB Terminal Block monitored
Column 13	Environmental Options	0 = Top Exhaust
		1 = Rear Exhaust
		2 = Top Exhaust, OSHPD
		3 = Rear Exhaust, OSHPD
		4 = Top Exhaust, Conformal Coating
		5 = Rear Exhaust, Conformal Coating
		6 = Top Exhaust, OSHPD, Conformal Coating
		7 = Rear Exhaust, OSHPD, Conformal Coating
Column 14	Application Options	R = Standard (RPO)
		F = FAA

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SPECIAL SEISMIC CERTIFICATION
CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer:	Eaton	**TABLE 1.2**
Model Line:	93 PM -L Uninterruptible Power Supply (UPS)	
Column 14 (continued)	Application Options	M = Healthcare
		L = UL 924
		A = UL 924A
		C = Frequency Converter
		P = Power Converter
Column 15	Generation Code	0 = Initial Release
		1-9 = Future Product Generation Codes

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1800524-CR-001 R4

Manufacturer:	Eaton
Model Line:	93 PM IAC

TABLE 2

Certified Product Construction Summary:

50 kVA- 200 kVA; carbon steel frame and enclosure.

Certified Options Summary:

See model line numbering pages for the significance of 'X";
Dimensions are maximum without seismic mounting/bracket kit; weights are maximum.

Mounting Configuration:

Base mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: *CBC 2019* ***Seismic Certification Limits:*** S_{DS}= *1.83 g* *z/h=1.0* I_P= *1.5*

Model Line	Model	Dimensions (in)			Weight (lb)	Vertical C.G. (in)	Notes	UUT
		Depth	Width	Height				
93PM IAC	9PZMA A000000010	42	20	74	404	36		5
	9PZMX XXXXXXXX1X	…	…	…	…	…		Interp.
	9PZMD F200000010	42	20	74	726	36		6
	9PZMX XXXXXXXX1X	…	…	…	…	…		Interp.
	9PZRX XXXXXXXX1X	42	20	74	1034	…		Interp.
	9PZRA AXXXXXXX1X	42	31	74	674	33.7		Interp.
	9PZRX XXXXXXXX1X	…	…	…	…	…		Interp.
	9PZRD CXXXXXXX1X	42	31	74	1035	36.2		Interp.
	9PZSX XXXXXXXX1X	42	31	74	722	…		Interp.
	9PZXX XXXXXXXX1X	…	…	…	…	…		Interp.
	9PZD1 H000000011	42	31	74	1105	34		10
	9PZXX XXXXXXXX1X	…	…	…	…	…		Interp.
	9PZG4 SBC0001011	42	31	74	2165	27		11

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Manufacturer:	Eaton	IAC-T Model Line Numbering	**TABLE 2.1**
Model Line:	93PM Integrated Accessory Cabinet (IAC)		
Columns 1 - 3	Model Line	9PZ = 93PM Accessories	
Column 4	Accessory	M = IAC-T	
Column 5	Associated UPS Model	A = 50 kW	
		B = 100 kW	
		C = 150 kW	
		D = 200 kW	
Column 6	UPS Configuration	A = 1+1	
		B = 2+0	
		C = 2+1	
		D = 3+0	
		E = 3+1	
		F = 4+0	
Column 7	MIS/MBP Breakers	0 = No MIS, no MBP	
		1 = MIS, no MBP	
		2 = MIS, MBP	
Column 8	Exhaust Configuration	0 = Top Exhaust	
		1 = Rear Exhaust	
Column 9	Open	0 = Open	
Column 10	Open	0 = Open	
Column 11	Open	0 = Open	
Column 12	Open	0 = Open	
Column 13	Open	0 = Open	
Column 14	Structural Configuration	0 = Standard	
		1 = OSHPD	
Column 15	Generation Code	0 - 9 = Product Generation Codes	

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Manufacturer: Eaton	IAC-D Model Line Numbering	**TABLE 2.2**
Model Line: 93PM Integrated Accessory Cabinet (IAC)		

Columns 1-3	Model line	9PZ = 93PM Accessories
Column 4	Accessory	D = 50 kVA IAC-D, 480 V / 208 V
		E = 100 kVA IAC-D, 480 V / 208 V
		F = 150 kVA IAC-D, 480 V / 208 V
		G = 200 kVA IAC-D, 480 V / 208 V
		~~N = 50 kVA IAC-D, 208 V / 208 V~~
		~~P = 100 kVA IAC-D, 208 V / 208 V~~
Column 5	Output Transformer	1 = K1 Non TP1, 480 V / 208 V Delta / WYE
		2 = K13 Non TP1, 480 V / 208 V Delta / WYE
		3 = K1 TP1, 480 V / 208 V Delta / WYE
		4 = K13 TP1 480 V / 208 V Delta / WYE
Column 6	Breaker kAIC Rating	S = STD kAIC
		H = High kAIC
Column 7	Distribution Top	0 = No Distribution
		B = 225 A Panel Board Top
		1 = 1 Subfeed Breaker
		2 = 2 Subfeed Breakers
		3 = 3 Subfeed Breakers
		4 = 4 Subfeed Breakers
		5 = 5 Subfeed Breakers
		6 = 1 Subfeed Breaker + 4 Field Upgrades
		7 = 2 Subfeed Breakers + 3 Field Upgrades
		8 = 3 Subfeed Breakers + 2 Field Upgrades
		9 = 4 Subfeed Breakers + 1 Field Upgrade
Column 8	Distribution Bottom	0 = No Distribution
		B = 225 A Panel Board Bottom
		1 = 1 Subfeed Breaker
		2 = 2 Subfeed Breakers
		3 = 3 Subfeed Breakers
		C = 400 A Panel Board Bottom
		4 = 1 Subfeed Breaker + 2 Field Upgrades
		5 = 2 Subfeed Breakers + 1 Field Upgrade
Column 9	Distribution Breaker Type	0 = 80% Rated Breaker
		1 = 80% Rated Breaker w/ Aux (Distribution Subfeed Only)
		2 = 100% Rated Breaker (Distribution Subfeed Only)
		3 = 100% Rated Breaker w/ Aux (Distribution Subfeed Only)
Column 10	Branch Metering	0 = None
Column 11	Cabinet Configuration	0 = Top Exhaust
		1 = Rear Exhaust

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Manufacturer: Eaton	IAC-D Model Line Numbering	**TABLE 2.2**
Model Line: 93PM Integrated Accessory Cabinet (IAC)		

Column 12	Optional Breaker	0 = No Optional Breaker
		1 = 1 Optional 225 A Breaker
Column 13	Line and Match/ Remote Installation	0 = Line and Match
		1 = Remote
Column 14	Structural Configuration	0 = Standard
		1 = OSHPD
Column 15	Generation Code	0 - 9 = Product Generation Codes

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Manufacturer:	Eaton	IAC-B Model Line Numbering	**TABLE 2.3**
Model Line:	93PM Integrated Accessory Cabinet (IAC)		
Columns 1-3	Model line	9PZ = 93PM Accessories	
Column 4	Accessory	R = IAC-B	
Column 5	Associated UPS Model	A = 60 kW IAC-B 208/208V	
		B = 120 kW IAC-B 208/208V	
		C = 160 kW IAC-B 208/208V	
		D = 200 kW IAC-B 208/208V	
		E = 400 KW IAC-BD 480/480V	
Column 6	Breaker Configuration	A = 2-Breaker 65 KAIC (MBP/MIS)	
		B = 3-Breaker 65 KAIC (MBP/MIS/BIB)	
		C = 4-Breaker 65 KAIC (MBP/MIS/BIB/RIB) Single Input	
		D = 4-Breaker 65 KAIC (MBP/MIS/BIB/RIB) Dual Input	
Column 7	Key/Interlock	1 = Key Interlock	
		2 = Interlock Bracket	
Column 8	Open	0 = None	
Column 9	Open	0 = None	
Column 10	Exhaust Configuration	0 = Top Exhaust	
		1 = Rear Exhaust (208V only)	
Column 11	Installation Configuration	0 = N/A (400 kVA only)	
		1 = Right Side Install (208V only)	
		2 =Left Side Install (208V only)	
Column 12	Open	0 = None	
Column 13	Line & Match/Remote Installation	0 = Line and Match (Required for 160 & 200 kVA)	
		1 = Remote	
Column 14	Structural Configuration	0 = Standard	
		1 = OSHPD	
Column 15	Generation Code	0 - 9 = Product Generation Codes	

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

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Manufacturer: Eaton	IAC-BD Model Line Numbering	**TABLE 2.4**
Model Line: 93PM Integrated Accessory Cabinet (IAC)		

Columns 1-3	Model line	9PZ = 93PM Accessories
Column 4	Accessory	S = IAC-BD
Column 5	Associated UPS Model	E = 400 kW IAC-BD 480/480V
Column 6	Breaker Configuration	A = 2-Breaker 65 KAIC (MBP/MIS)
		B = 3-Breaker 65 KAIC (MBP/MIS/BIB)
Column 7	Breaker Interlock	1 = Key Interlock
		2 = Interlock Bracket
Column 8	Distribution	2 = 2 Subfeed Breakers
		3 = 3 Subfeed Breakers
		4 = 4 Subfeed Breakers
Column 9	Metering	0 = No Metering
		1 = Metering
Column 10	Exhaust Configuration	0 = Top Exhaust
		1 = Rear Exhaust
Column 11	Open	0 = None
Column 12	Open	0 = None
Column 13	Line & Match/ Remote Installation	0 = Line and Match
		1 = Remote Installation
Column 14	Structural Configuration	0 = Standard
		1 = OSHPD
Column 15	Generation Code	0 - 9 = Product Generation Codes

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Manufacturer: Eaton	IAC-PD Model Line Numbering	**TABLE 2.5**
Model Line: 93PM Integrated Accessory Cabinet (IAC)		

Columns 1-3	Model line	9PZ = 93PM Accessories
Column 4	Accessory	X = IAC-PD
Column 5	Associated UPS Model or Distribution Cabinet	A = 60 kVA 93PM-L-60, 208V
		B = 120 kVA 93PM-L-120, 208V
		C = 160 kVA 93PM-L-160, 208V
		D = 200 kVA 93PM-L-200, 208V
		E = 50 kVA 93PM 50, 480V
		F = 100 kVA 93PM 100, 480V
		G = 150 kVA 93PM 150, 480V
		H = 200 kVA 93PM 200, 480V
		J = 400 kVA 93PM 400, 480V
		K = 208V 250A IAC-D Subfeed Breaker
		L = 50 kVA IAC-D (208V) W/no Distribution Option
		M = 100 kVA IAC-D (208V) W/no Distribution Option
		N = 150 kVA IAC-D (208V) W/no Distribution Option
		P = 200 kVA IAC-D (208V) W/no Distribution Option
		R = 480V 250A IAC-BD Subfeed Breaker
Column 6	Input Voltage	2 = 208Y/120V 4-Wire
		4 = 480Y/277V 4-Wire
		5 = 480V 3-Wire
Column 7	Distribution Top	0 = No Distribution
		B = 225A Panel Board (208/120V)
		C = 400A Panel Board (208/120V)
		D = 225A Panel Board (480/277V)
		1 = 1 Subfeed Breaker (250A)
		2 = 2 Subfeed Breakers (250A)
		3 = 3 Subfeed Breakers (250A)
		4 = 1 Subfeed Breaker (400A)
		5 = 2 Subfeed Breakers (400A)
Column 8	Distribution Bottom	B = 225A Panel Board (208/120V)
		C = 400A Panel Board (208/120V)
		D = 225A Panel Board (480/277V)
		4 = 1 Subfeed Breaker (400A)
		5 = 2 Subfeed Breakers (400A)
Column 9	Open	0 = None
Column 10	Branch Metering	0 = None
		1 = BCMS
Column 11	Cabinet Configuration	0 = Top Exhaust
		1 = Rear exhaust

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SPECIAL SEISMIC CERTIFICATION
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Manufacturer: Eaton	IAC-PD Model Line Numbering	**TABLE 2.5**
Model Line: 93PM Integrated Accessory Cabinet (IAC)		

Column 12	Open	0 = None
Column 13	Line & Match/ Remote Installation	0 = Line and Match
		1 = Remote Installation
Column 14	Structural Configuration	0 = Standard
		1 = OSHPD
Column 15	Generation Code	0 - 9 = Product Generation Codes

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SPECIAL SEISMIC CERTIFICATION
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Manufacturer: Eaton
Model Line: 93 PM IBC

TABLE 3

Certified Product Construction Summary:
50 kVA- 200 kVA; carbon steel frame and enclosure.

Certified Options Summary:
See model line numbering pages for the significance of 'X";
Dimensions are maximum without seismic mounting/bracket kit; weights are maximum.

Mounting Configuration:
Base mounted - rigid
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: *CBC 2019* ***Seismic Certification Limits:*** S_{DS}= *1.83 g* *z/h=1.0* I_P= *1.5*

Model Line	Model	Dimensions (in)			Weight (lb)	CG (in.)	Notes	UUT
		Depth	Width	Height				
93PM IBC	9PZXXXXXX XXXXXX	42	20	74	…	…		Extrap.
	9PZBBAY08 013010	42	20	74	2246	32		7
	9PZXXXXXX XXXXXX	42	20	74	…	…		Interp.
	9PZABAE28 010010	42	32	74	3185	41		13
	9PZXXXXXX XXXXXX	42	32	74	…	…		Interp.
	9PZABAE50 110010	42	32	74	4745	41		8
	9PZXXXXXX XXXXXX	42	40	74	…	…		Interp.
	9PZABAE50 L10010	42	40	74	4841	41		9
	9PZXXXXXX XXXXXX	42	34	74	…	…		Interp.
	9PZUDBN54010010	42	34	74	5082	39		14

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SPECIAL SEISMIC CERTIFICATION
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Manufacturer: Eaton ***Model Line:*** 93PM IBC	IBC Model Line Numbering	**TABLE 3.1**
Columns 1-3	Model Line	9PZ = 93PM Accessories
Column 4	Accessory	A = IBC-L
		B = IBC-S
		C = IBC-LH
		T = IBC-LW (300A breaker)
		U = IBC-LHW (500A breaker)
		V = IBC-LW (400A breaker)
		~~W = IBC-SW~~
Column 5	Associated UPS Model	A = 50 kW (93PM)
		B = 100 kW (93PM)
		C = 150 kW (93PM)
		D = 200 kW (93PM)
		E = 400 kW (93PM)
		F = 60 kW (93PM-L)
		G = 120 kW (93PM-L)
		H = 160 kW (93PM-L)
		J = 200 kW (93PM-L)
Column 6	DC Voltage	A = 432 V
		B = 480 V
Columns 7-9	Battery Type[1]	B37 = UPS12-400MR, 1/4 (M6) Lugs
		E28 = HRL 12-280, 1/4 (M6) Lugs
		E39 = PWR 12-390, 1/4 (M6) Lugs
		E50 = PWR 12-500, 1/4 (M6) Lugs
		E54 = HRL 12-540, 1/4 (M6) Lugs
		H41 = ENERSYS XE95, 3/8 (M10) Lugs
		N54 = NSB12-540, 1/4 (M6) Lugs
		Y08 = NPX-80RFR, #10 (M5) Lugs
		~~E20 = HRL-12-200 1/4 (M6) Lugs~~
		001 = Empty Tray Assembly IBC-L, IBC-LW, 1/4 (M6) Lugs
		002 = Empty Tray Assembly IBC-S
		003 = Empty Tray Assembly IBC-LH, IBC-LW (N54), 1/4 (M6) Lugs
		004 = Emptry Tray Assembly IBC-LH, IBC-LW (H41), 3/8 (M10) Lugs
		005 = Empty Tray Assembly IBC-LW (E54/B37/N54), 1/4 (M6) LUGS
		006 = Empty Tray Assembly IBC-LW (H41), 3/8 (M10) Lugs
		007 = Empty tray assy IBC-LH (B37/E54) 1/4 (M6) Lugs
Column 10	Remote/ Top Entry Sidecar	0 = Line and Match, no Sidecar
		1 = Remote Installation, no Sidecar
		L = Remote with Left Sidecar for Top Entry (IBC-L/LH only)
		R = Remote with Right Sidecar for Top Entry (IBC-L/LH only)

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Manufacturer:	Eaton	IBC Model Line Numbering	**TABLE 3.1**
Model Line:	93PM IBC		
Column 11	Number of Battery Cabinets	1 = 1 Cabinet	
		2 = 2 Cabinets	
		3 = 3 Cabinets	
		4 = 4 Cabinets	
		5 = 5 Cabinets	
		6 = 6 Cabinets	
		7 = 7 Cabinets	
		8 = 8 Cabinets	
Column 12	Number of Battery Strings	0 = Single String	
		2 = 2 Battery Strings (IBC-S only)	
		3 = 3 Battery Strings (IBC-S only)	
Column 13	Battery Monitoring	0 = With Monitoring Tabs, Without Thermal Sensor	
		1 = Without Monitoring Tabs, Without Thermal Sensor	
		2 = With Monitoring Tabs, With Thermal Sensor	
		3 = W/Out Monitoring Tabs, With Thermal Sensor	
Column 14	Structural Configuration[2]	0 = Standard	
		1 = OSHPD	
		2 = UL924	
		3 = UL924/OSHPD	
Column 15	Generation Code	0 - 9 = Product Generation Codes	

Notes:

[1] 001-007 means the unit is shipped without batteries and they are installed onsite.

[2] UL certification was completed after first OSP, nothing has changed on the unit.

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SPECIAL SEISMIC CERTIFICATION
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Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Enclosures

TABLE 4

Building Code: CBC 2019 ***Seismic Certification Limits:*** S_{DS}= ***1.83 g z/h=1.0*** I_P = ***1.5***

Model Line (Manufacturer)	Model	Dimension (in)			Weight (lb)	Description	Notes	UUT
		Depth	Width	Height				
93PM (Eaton)	93PM Enclosures	42	20	74	366	93PM SMALL IAC-T / IBC-S FRAME		5,6,7
		42	22	74	392	93PM STD UPS FRAME		1
		42	31	74	397	93PM IAC-D / LARGE IAC-T FRAME		10,11
		42	32	74	435	93PM LARGE UPS FRAME		Interp.
		42	31.3	74	520	93PM-L IAC-B		Interp.
		42	31.3	74	540	93PM IAC-PD		Interp.
		42	30	74	557	93PM STD UPS + SMALL SC FRAME		4
		42	37	74	679	93PM STD UPS + LARGE SC FRAME		Interp.
		42	47	74	722	93PM LARGE UPS + LARGE SC FRAME		2,12
		42	32	74	856	93PM IBC-L FRAME		8,13
		42	34	74	828	93PM Frame Asm, IBC-L Weld		Interp.
		42	40	74	1021	93PM IBC-L + SMALL SC FRAME		9
		42	64	74	800	93PM 400 kVA capacity UPS (8UPM)		15
		42	34	74	993	93PM IBC-LHW Line & match		14
		42	22	74	495	93PM-L 60 kVA Frame		16
		42	30	74	667	93PM-L 60 kVA Frame w/ empty SC		Interp.
		42	34.5	74	744	93PM-L 60 kVA Frame w/ MBS SC		Interp.
		42	22	74	621	93PM-L 120 kVA Frame		Interp.
		42	34.5	74	859	93PM-L 120 kVA Frame w/ empty SC		Interp.
		42	34.5	74	870	93PM-L 120 kVA Frame w/ MBS SC		Interp.
		42	34.5	74	732	93PM-L 160k VA frame		Interp.
		42	43.3	74	859	93PM-L 200k VA frame		17

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SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

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Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Electrical Components

TABLE 5

Building Code: CBC 2019 ***Seismic Certification Limits:*** S_{DS}= ***1.83 g z/h=1.0*** I_P = ***1.5***

Component Type	Manufacturer	Model	Description	Notes	UUT
Panel Board	Eaton	122950146	PDU PRL1 225A; Cu		11
		122950148	PDU PRL2A 225A; Cu		Interp.
		122950147	PDU PRL1 400A; Cu		11
Power Modules	Eaton	730-05211	208V-4 Wire 20kW UPM		16,17
		733-D2072	208V-4 Wire 20kW UPM		Interp.
		730-80505	480V-3 Wire 50kW UPM	New PCB layout, no structural change	Interp.
		730-B1045	480V-3 Wire 50kW UPM		1,2,4
		733-82035	480V-3 Wire 50kW UPM		Interp.
		744-A4535	480V-4 Wire 50kW UPM		Interp.
		730-D0057	480V-4 Wire 50kW UPM		12
Static Switches	Eaton	730-D0039	50kW STS; CS Frame; Al heat sink		1,4
		730-B1035	100kW STS; CS Frame; Al heat sink		Interp.
		730-D0021	150kW/200kW STS; CS Frame; Al heat sink		12
		730-05213	93PM-L 60 kW STS		16
		730-05212	93PM-L 120 kW STS		Interp.
		730-05214	93PM-L 200 kW STS		17
Transformers	Eaton	WPV50012	50 kVA, K1,TP1,480/208 Delta/WYE		10
		WPN50131	50 kVA, K13,Non TP1 480/208 Delta/WYE		Interp.
		WPN50132	50 kVA, K13,TP1 480/208 Delta/WYE		Interp.
		WPV12011	100 kVA, K1, Non TP1,480/208 Delta/WYE		Interp.
		WPV12012	100 kVA, K1,TP1,480/208 Delta/WYE		Interp.
		WPN12132	100 kVA, K13, TP1 480/208 Delta/WYE		Interp.
		WPV49011	K1, Non TP1, 480/208 Delta/WYE		Interp.

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SPECIAL SEISMIC CERTIFICATION
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Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Electrical Components

TABLE 5

Building Code: CBC 2019 **Seismic Certification Limits:** S_{DS}= 1.83 g z/h=1.0 I_P = 1.5

Component Type	Manufacturer	Model	Description	Notes	UUT
Transformers	Eaton	WPN49131	K13, Non TP1 480/208 Delta/WYE		Interp.
		WPV49012	K1, TP1, 480/208 Delta/WYE		Interp.
		WPN49132	K13, TP1 480/208 Delta/WYE		Interp.
		WPV19011	K1, Non TP1, 480/208 Delta/WYE		Interp.
		WPN19131	K13, Non TP1 480/208 Delta/WYE		Interp.
		WPV19012	K1, TP1, 480/208 Delta/WYE		Interp.
		WPN19132	K13, TP1 480/208 Delta/WYE		11
Contactors	Eaton	DILM17-10 (RDC60)	K5 Contactor (50KW); 1 lb		1,4
		DILM115 (RDC60)	K5 Contactor (100KW); 5 lbs		Interp.
		DILM185A/22 (RDC60)	K5 Contactor (150KW); 14 lbs		Interp.
		DILM250/22 (RDC48)	K5 Contactor, (200kW); 17 lbs		12

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Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Batteries

TABLE 6

Building Code: CBC 2019 **Seismic Certification Limits:** S_{DS}= 1.83 g z/h=1.0 I_P = 1.5

Component Type	Manufacturer	Model	Description	Notes	UUT
Batteries	CSB	HR1227WFR	12V, 27 Watt (5Ah), VRLA; ABS hous.; 4.3 lbs		16
		PWRH1227W2FR	12V, 27 Watt (5Ah), VRLA; ABS hous.; 4.3 lbs		Interp.
		PWHR1234W2FR	12V, 34 Watt (9Ah), VRLA; ABS hous.; 6 lbs		4
		HRL1234W2FR	12V, 34 Watt (9Ah), VRLA; ABS hous.; 6 lbs		Interp.
		HRL12280WFR	12V, 34 Watt (9Ah), VRLA; ABS hous.; 57 lbs		Interp.
		PWHR12280W4FR	12V, 34 Watt (9Ah), VRLA; ABS hous.; 57 lbs		13
		HRL12330FR	12V, 280W; PP housing; 65 lbs		Interp.
		HRL12390FR	12V, 390W; PP housing; 73 lbs		Interp.
		PWHR12390W4FR	12 V, 100 Ah; PP housing; 74 lbs		Interp.
		HRL12540WFR	12 V, 143 Ah; PP housing; 97 lbs		Interp.
		PWHR12540WFR	12 V, 143 Ah; PP housing; 97 lbs		Interp.
		HRL12500W	12V, 120 Ah; PP housing; 101 lbs		Interp.
		PWHR12500W4FR	12 V, 120 Ah; PP housing; 101 lbs		8,9
	ENERSYS	12HX300	12 V, 83 Ah; PP housing; 60 lbs		13
		12HX330	12 V, 82 Ah; PP housing; 71 lbs		Interp.
		0790-6005-C0K00	12 V, 95 Ah; PP housing; 77 lbs		9
		12HX400	12 V, 120 Ah; PP housing; 80 lbs		Interp.
		12HX505	12 V, 506 Ah; PP housing; 103 lbs		Interp.
		12HX540	12 V, 123 Ah; PP housing; 106 lbs		Interp.
		12HX500	12 V, 506 Ah; PP housing; 110 lbs		13
	G.S. YUASA	NPX-80RFR	12 V, 20 Ah, VRLA; PP housing; 15 lbs		7
Batteries	NORTHSTAR	NSB12540	12V, 125 Ah; PP housing; 98 lbs		9, 14
	C&D Dynasty	UPS12-300MR	12 V, 78 Ah; PP housing; 58 lbs		13

APPROVED FOR CODE COMPLIANCE
OSHPD
OSP-0405
BY: Mohammad Ghasemi
DATE: 06/16/2020
CALIFORNIA BUILDING CODE 2019

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Batteries

TABLE 6

Building Code: CBC 2019 ***Seismic Certification Limits:*** S_{DS}= ***1.83 g*** ***z/h=1.0*** I_P = ***1.5***

Component Type	Manufacturer	Model	Description	Notes	UUT
Batteries	C&D Dynasty	UPS12-350MR	12 V, 93.2 Ah; PP housing; 67 lbs		Interp.
		UPS12-400MR	12 V, 100 Ah; PP housing; 80 lbs		Interp.
		UPS12-490MR	12 V, 134 Ah; PP housing; 100 lbs		13

REVIEWED FOR CODE COMPLIANCE
OSHPD
OSP-0405
BY: Mohammad Aliaari
DATE: 06/16/2020
CALIFORNIA BUILDING CODE, 2019

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

1800524-CR-001 R4

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Table Description: Breakers

TABLE 7

Building Code: CBC 2019
Seismic Certification Limits: S_{DS}= 1.83 g z/h=1.0 I_P = 1.5

Component Type	Manufacturer	Model	Description	Notes	UUT
Breakers (Thermal Magnetic)	Eaton (CH)	HFD3080L	FD-Frame, 3-pole, 80 A, 5 lbs		4
		FD	FD-Frame, 3-pole, 80-225 A, 5 lbs		Interp.
		HFD3110L	FD-Frame, 3-pole, 110 A, 5 lbs		1,4
		HFD4175ELA02S22	FD-Frame, 3-pole, 175 A, 5 lbs		4
		JG	JG-Frame, 3-pole, 80-250 A, 6 lbs		Interp.
		HJGE3125FAGC	JG-Frame, 3-pole, 125 A, 6 lbs		4
		HKDDC3300WA07S49	KD-Frame, 3-pole, 300 A, 12 lbs		13
		HKD3300W	KD-Frame, 3-pole, 300 A, 12 lbs		12
		KD	KD-Frame, 3-pole, 175-400 A, 12 lbs		Interp.
		HKD3400W	KD-Frame, 3-pole, 400 A, 12 lbs		12
		HLGE3300FAW	LG-Frame, 3-pole, 300 A, 16 lbs		6
		LG	LG-Frame, 3-pole, 300-600 A, 16 lbs		Interp.
		LD	LD-Frame, 3-pole, 600 A, 20 lbs		Interp.
		MD	MD-Frame, 3-pole, 700 A, 29 lbs		Interp.
		ND	ND-Frame, 3-pole, 1200 A, 45 lbs		Interp.
		NG	NG-Frame, 3-pole, 800-1200 A, 45 lbs		Interp.
		HNGS312032MC	NG-Frame, 3-pole, 1200 A, 45 lbs		6

* Breakers listed here include part numbers which identify configuration, manufacturer, materials, and breaker rating. Interpolated items have the same manufacturer, materials, and have the same configuration and construction as the tested units.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 BY: Mohammad Ahsan DATE: 06/16/2020 CALIFORNIA BUILDING CODE 2019

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

Manufacturer: Eaton

Model Line: 93PM and 93PM-L Uninterruptible Power Supply (UPS)

UUT	Unit Description	Report Number	Testing Laboratory	F_p/W_p	S_{DS}	z/h	I_P
1	93 PM 50kVA Capacity UPS (1 UPM)	71589 RevA	Wyle Laboratories	1.72 1.08	2.39	1 0	1.5
2	93 PM 200kVA Capacity UPS (4 UPM)	71589 RevA	Wyle Laboratories	1.72 1.08	2.39	1 0	1.5
4	93 PM 50kVA Capacity UPS (1 UPM)	71589 RevA	Wyle Laboratories	1.72 1.08	2.39	1 0	1.5
5	93 PM 50kVA External Redundant IAC-T	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
6	93 PM 200kVA External Capacity IAC-T	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
7	93 PM 100kVA IBC-S	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
8	93 PM 100kVA IBC-L	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
9	93 PM 100kVA IBC-L	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
10	93 PM 50kVA IAC-D	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
11	93 PM 200kVA IAC-D	71589 RevA	Wyle Laboratories	1.32 0.82	1.83	1 0	1.5
12	93 PM 200kVA Capacity UPS (4 UPM)	174-9243708-000	AREVA Inc.	1.8 1.13	2.5	1 0	1.5
13	93 PM 100kVA IBC-L	174-9243708-000	AREVA Inc.	1.65 1.03	2.29	1 0	1.5
14	93PM 200 kVA IBC-LHW	JID 16-00773 Rev1	Clark Testing	1.44 1.44	2.00 3.20	1 0	1.5
15	93 PM 400 kVA UPS (8 UPM)	JID 16-00773 Rev1	Clark Testing	1.44 1.44	2.00 3.20	1 0	1.5
16	93PM-L-60kVA (3 UPM)	JID 19-00067 Rev3	Clark Testing	1.32 0.82	1.83	1 0	1.5
17	93PM-L-200kVA (10 UPM)	JID 19-00067 Rev3	Clark Testing	1.32 0.82	1.83	1 0	1.5

Notes:

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 BY: Mohammad Aliaan DATE: 06/16/2020 CALIFORNIA BUILDING CODES

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 1

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9PA05D0220A01R1 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
50kVA Capacity UPS (1 UPM), no Batteries, no Sidecar. Frame (Eaton), Seismic Kit (Eaton), Power Module (Eaton), FD3110L Breaker (Eaton), MBS Switch (Sontheimer), Static Switch (Eaton), Contactor (Eaton)

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 Exp: 06/16/2020

UUT Properties

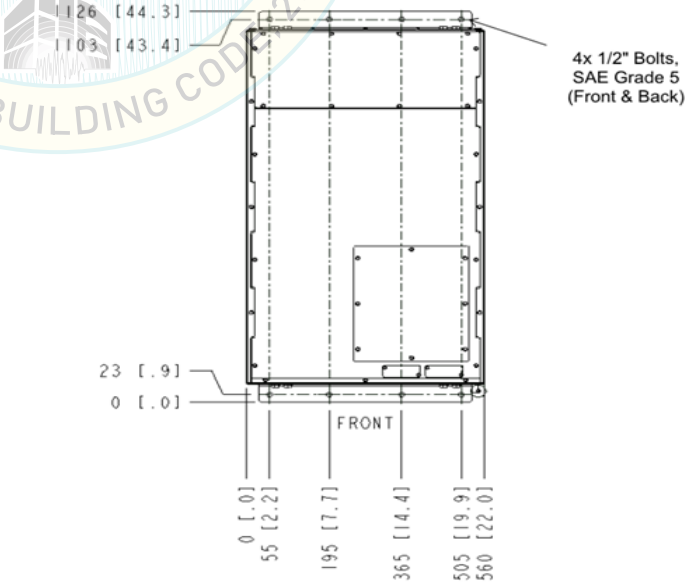
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
686	42	22	74	13.0	10.5	>33

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.39	1.0	1.5	3.82	2.87	1.6	0.64

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 2

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9PV20D0029F20R1 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
200kVA Capacity UPS (4 UPM) + 4 Bkr MBS Sidecar. Frame (Eaton), Seismic Kit (Eaton), Power Module (Eaton), Static Switch (Eaton), Contactor (Eaton), KD3400W, KD3300W Breakers (Eaton)

UUT Properties

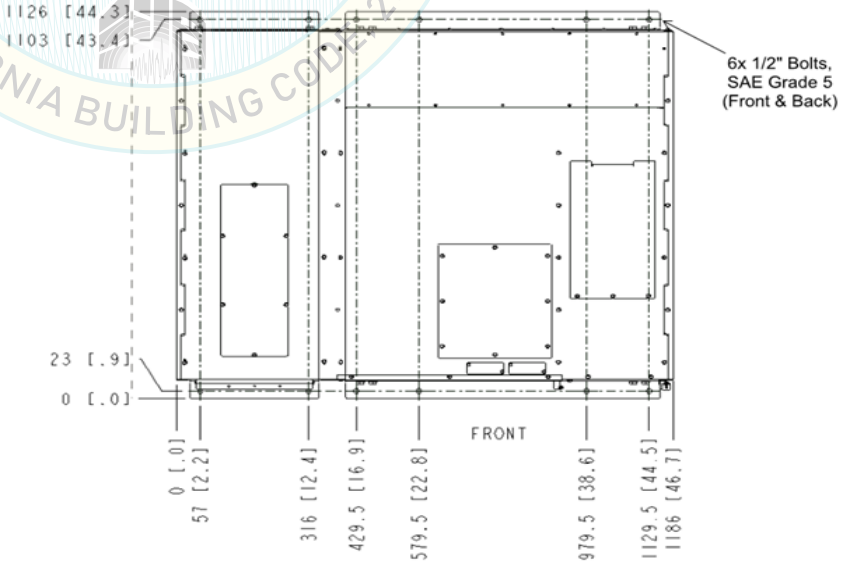
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1774	42	46.7	74	14	12.2	32

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.39	1.0	1.5	3.82	2.87	1.6	0.64

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (12) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 Exp. 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 4

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9PA05D6029L00R1 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
50kVA Capacity UPS (1 UPM) with Batteries + Tie / Bypass Sidecar. Frame (Eaton), Seismic Kit (Eaton), Power Module (Eaton), FD4175ELA02SS22, FD3110L, JGE3125FAGC Breakers (Eaton), MBS Switch (Sontheimer), Static Switch (Eaton), Contactor (Eaton), Batteries (CSB)

UUT Properties

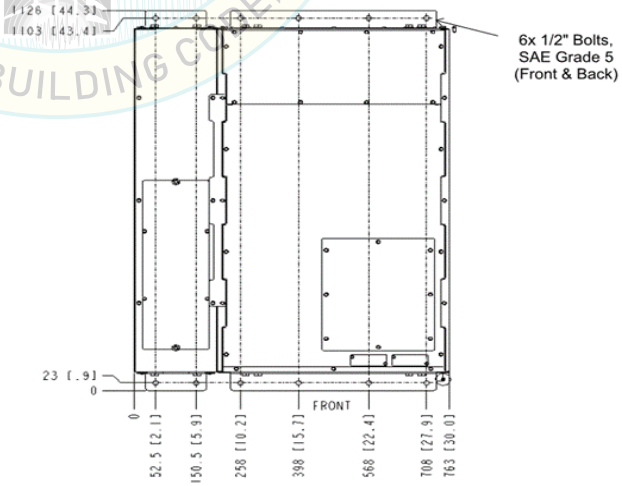
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2178	42	30	74	13	7.8	> 33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.39	1.0	1.5	3.82	2.87	1.6	0.64

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (12) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 DSA Approved 06/16/2020 CALIFORNIA BUILDING CODE 2019

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 5

Manufacturer: Eaton
Model Line: 93 PM IAC
Model Number: 9PZMAA000000010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
50kVA External Redundant IAC-T, 2 Bkr. Frame (Eaton), Seismic Kit (Eaton), FD3080 Breakers (Eaton)

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 06/16/2020

UUT Properties

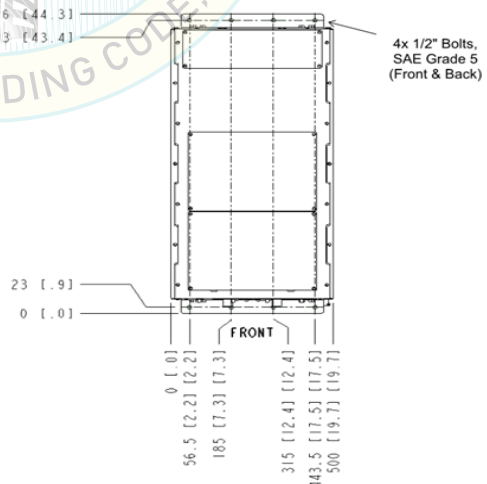
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
404	42	19.7	74	9	7.9	24

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 6

Manufacturer: Eaton
Model Line: 93 PM IAC
Model Number: 9PZMDF200000010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
200kVA External Capacity IAC-T, 4 Bkr + MIS, MBP. Frame (Eaton), Seismic Kit (Eaton), LGE3300FAW, NGS312032MC Breakers (Eaton)

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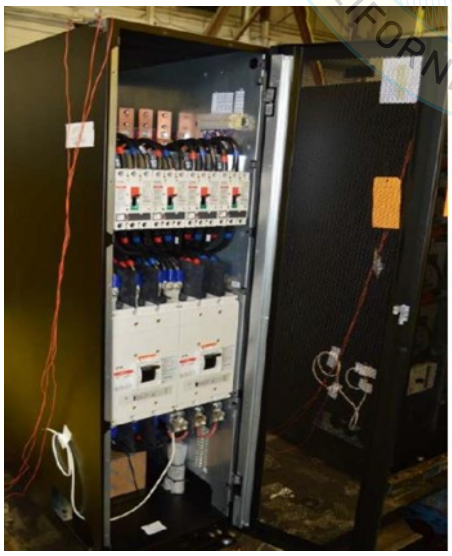
UUT Properties

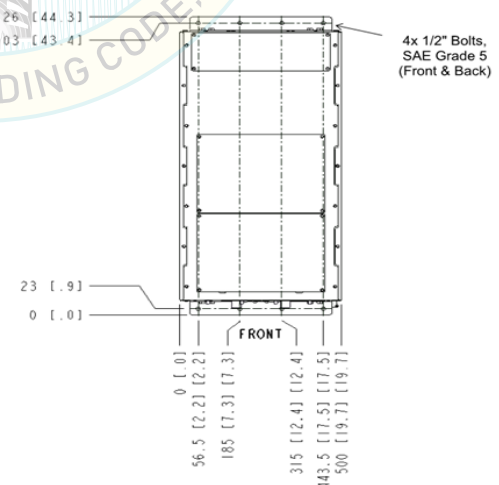
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
726	42	19.7	74	9.5	5.5	> 33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 7

Manufacturer: Eaton
Model Line: 93 PM IBC
Model Number: 9PZBBAY08013010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
100kVA IBC-S, Line & Match. Frame (Eaton), Seismic Kit (Eaton), HKDC3300WA07S49 Breaker (Eaton), Batteries (G.S. Yuasa)

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE, 2019 06/16/2020

UUT Properties

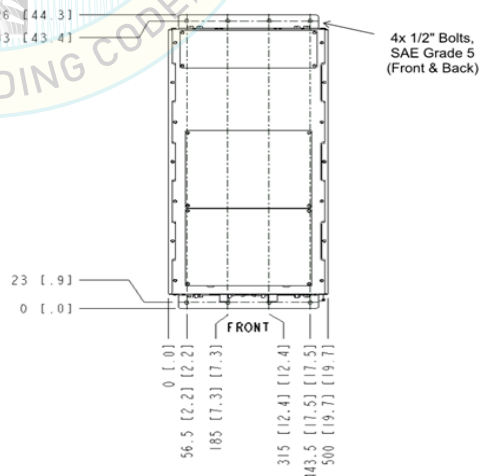
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2246	42	19.7	74	10	5	22

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 8

Manufacturer: Eaton
Model Line: 93 PM IBC
Model Number: 9PZABAE50010010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
100kVA IBC-L, Line & Match. Frame (Eaton), Seismic Kit (Eaton), HKDC3300WA07S49 Breaker (Eaton), Batteries (CSB)

UUT Properties

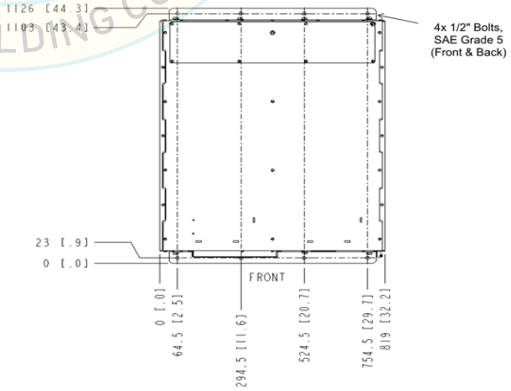
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
4745	42	32.2	74	10	4.7	21

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE, 2019 Exp: 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 9

Manufacturer: Eaton
Model Line: 93PM IBC
Model Number: 9PZABAE50L10010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
100kVA IBC-L, Remote with Left Sidecar. Frame (Eaton), Seismic Kit (Eaton), HKDC3300WA07S49 Breaker (Eaton), Batteries (CSB / Northstar / Enersys)

UUT Properties

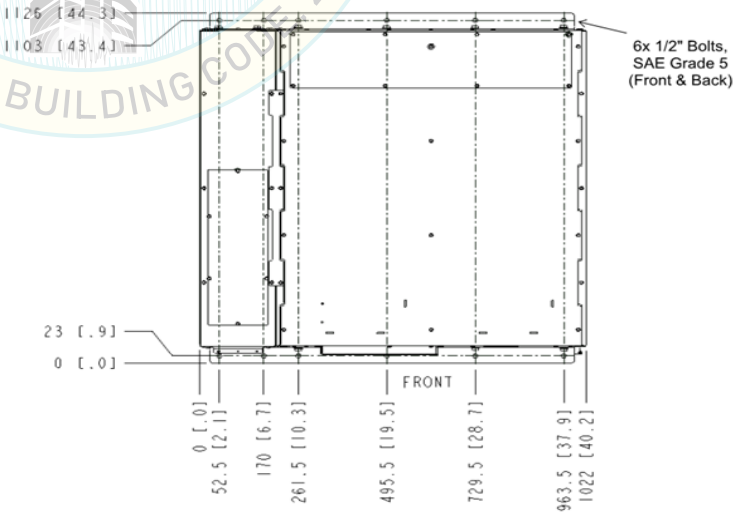
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
4841	42	40.2	74	9.5	5.7	22

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (12) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 Exp. 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 10

Manufacturer: Eaton
Model Line: 93 PM IAC
Model Number: 9PZD1H000000011 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
50kVA IAC-D, 480 Vin / 208 Vout. Frame (Eaton), Seismic Kit (Eaton), HFD3080L, HKD3175W Breakers (Eaton), Transformer (Eaton)

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 06/16/2020

UUT Properties

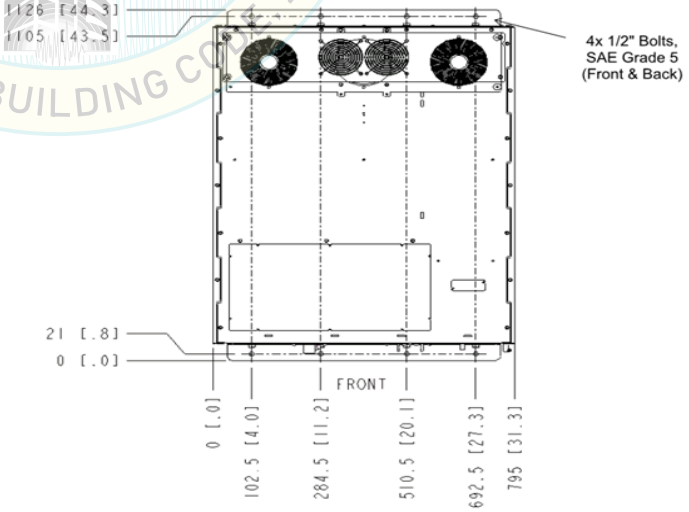
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1105	42	31.3	74	11	7.9	22

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 11

Manufacturer: Eaton
Model Line: 93 PM IAC
Model Number: 9PZG4SBC0001011 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
200kVA IAC-D, 480 Vin / 208 Vout. Frame (Eaton), Seismic Kit (Eaton), FD3225, KD3400F Breakers (Eaton), Transformer (Eaton)

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 Exempt 06/16/2020

UUT Properties

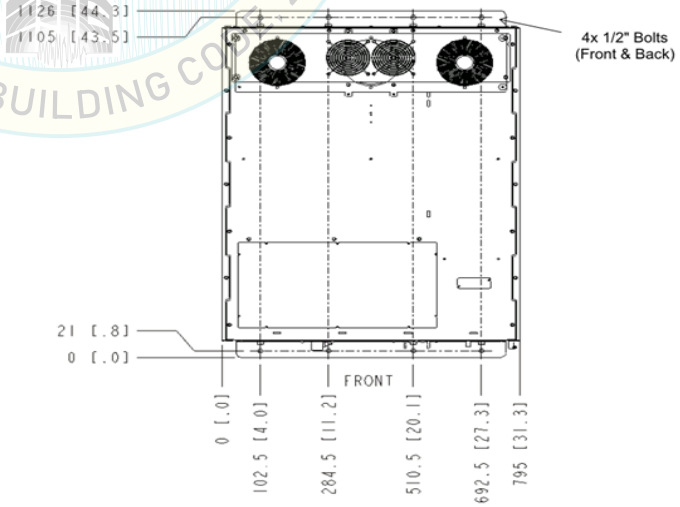
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2165	42	31.3	74	9.5	8	22

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0	1.5	2.93	2.2	1.23	0.49

Test Mounting Details:





The UUT was rigid mounted to steel floor members using (8) 1/2" Grade 5 bolts. The steel floor members were welded to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 12

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9PV20C0029F20R2 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
200kVA Capacity UPS (4 UPM) + 4 Bkr MBS Sidecar. Frame (Eaton), Seismic Kit (Eaton), HKDC3300WA07S49 Breaker (Eaton), Batteries (CSB)

UUT Properties

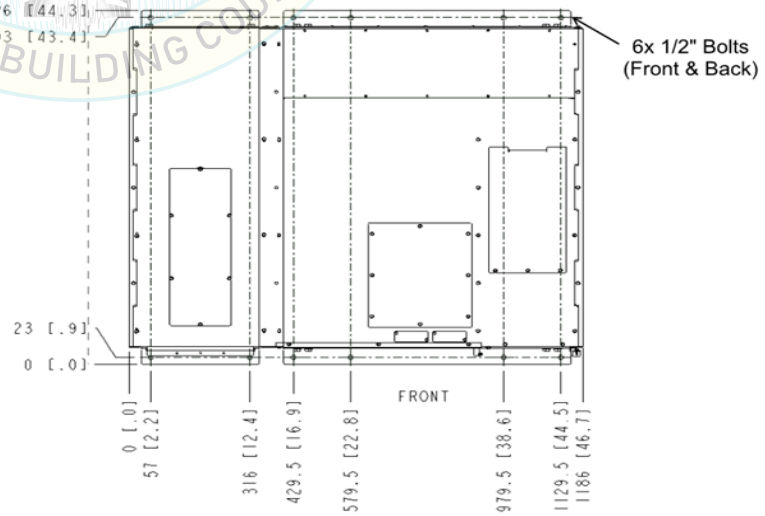
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1795	42	46.7	74	6.4	5.2	6.2

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details:





The UUT was rigid mounted to an aluminum plate using (12) 1/2" Grade 5 bolts. The aluminum plate was rigid mounted to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE, 2019 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 13

Manufacturer: Eaton
Model Line: 93 PM IBC
Model Number: 9PZABAE28010010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
100kVA IBC-L, Line and Match, no Sidecar. Frame (Eaton), Seismic Kit (Eaton), HKDC3300WA07S49 Breaker (Eaton), Batteries (CSB)

UUT Properties

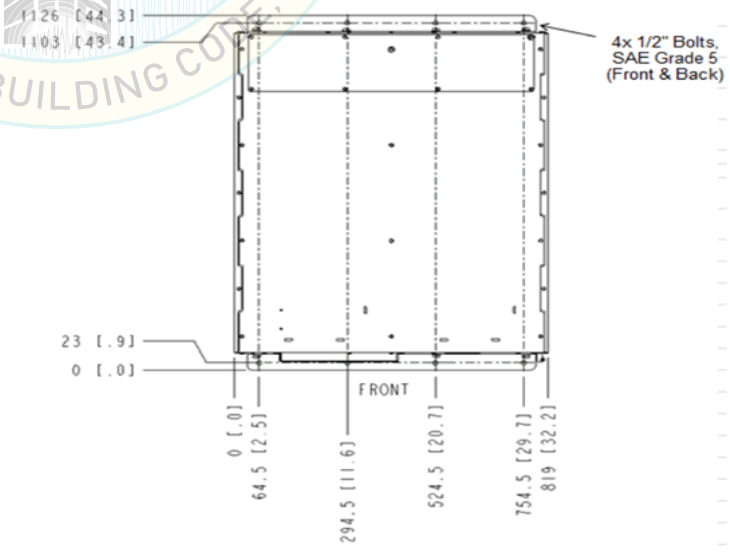
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
3185	42	32.2	74	14.6	5.4	> 33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.29	1.0	1.5	3.66	2.74	1.53	0.61

Test Mounting Details:





The UUT was rigid mounted to an aluminum plate using (8) 1/2" Grade 5 bolts. The aluminum plate was rigid mounted to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE 2019 Exp: 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 14

Manufacturer: Eaton
Model Line: 93 PM IBC
Model Number: 9PZUDBN54010010 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
93PM 200 kVA IBC-LHW Line & match. (40) Northstar NSB12540 Batteries.

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
5082	42	34.2	74.1	10.57	9.86	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.0 g	1.0	1.5	3.2	2.4	2.13	0.85
		3.2 g	0.0					

Test Mounting Details:





The UUT was rigid mounted to an Aluminum plate using (12) 1/2" Grade 5 bolts. The Aluminum plate was rigid mounted to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE, 2019 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 15

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9P640D0029A00R2 ***Serial Number:*** N/A

Product Construction Summary:
Powder coated carbon steel framing

Options/Subcomponent Summary:
400 kVA UPS, 8 UPM. Frame (Eaton), Seismic Kit (Eaton)

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2628	42	63.9	74	20.55	12.91	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	2.0 g	1.0	1.5	3.2	2.4	2.13	0.85
		3.2 g	0.0					

Test Mounting Details:





The unit was rigid floor mounted to an Aluminum plate using (16) 1/2" Grade 5 bolts. The Aluminum plate was rigid mounted to the shake table.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 CALIFORNIA BUILDING CODE, 2019 06/16/2020

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

UUT 16

Manufacturer: Eaton
Model Line: 93PM Uninterruptible Power Supply (UPS)
Model Number: 9GC312A700A02R0 ***Serial Number:*** EN025UJJ02

Product Construction Summary:
Powder coated carbon steel framing.

Options/Subcomponent Summary:
93PM-L-60kVA, (160) CSB batteries (HR1227WFR), Eaton static switch(730-05213), 3 Eaton power modules(730-05211), Eaton frame, Eaton seismic kit(P-103000765).

UUT Properties

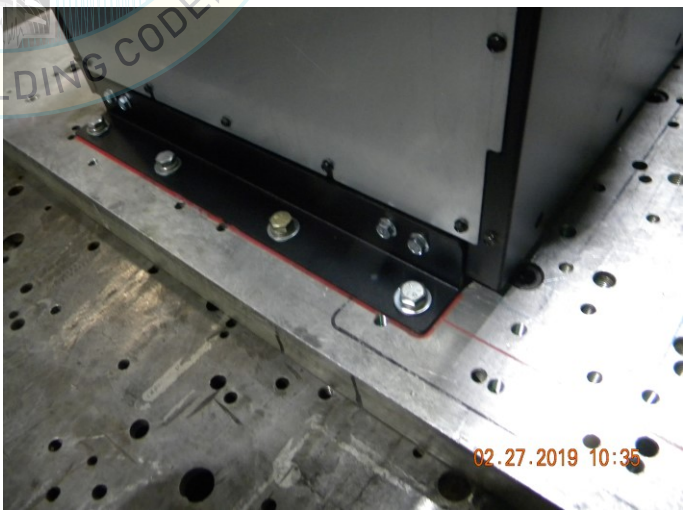
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,604	42.0	22.0	74.0	10.5	6.6	12.2

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0 0.0	1.5	2.93	2.20	1.22	0.49

Test Mounting Details:





The UUT was rigid mounted to an Aluminum plate using (8) 1/2" Grade 5 bolts. The Aluminum plate was rigid mounted to the shake table. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 06/16/2020 CALIFORNIA BUILDING CODE, 2019

UNIT UNDER TEST (UUT) SUMMARY SHEET

1800524-CR-001 R4

Manufacturer:	Eaton		**UUT 17**
Model Line:	93PM Uninterruptible Power Supply (UPS)		
Model Number:	9GK040A000A02R0	***Serial Number:***	EN021UJJ05

Product Construction Summary:

Powder coated carbon steel framing.

Options/Subcomponent Summary:

93PM-L-200kVA, Eaton static switch(730-05214), 10 Eaton power modules(730-05211), Eaton frame, Eaton seismic kit(P-103003059).

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,722	42.0	43.4	74.0	22.4	19.2	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} (g)	z/h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015)	1.83	1.0 0.0	1.5	2.93	2.20	1.22	0.49

Test Mounting Details:





The UUT was rigid mounted to an Aluminum plate using (8) 1/2" Grade 5 bolts. The Aluminum plate was rigid mounted to the shake table. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

REVIEWED FOR CODE COMPLIANCE OSHPD OSP-0405 06/16/2020 CALIFORNIA BUILDING CODE, 2019