



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

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

OFFICE USE ONLY

APPLICATION #: OSP-0019

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Eaton

Manufacturer's Technical Representative: Russell Boyce

Mailing Address: 2210 Highway 72/221 East, Greenwood, SC 29649

Telephone: (864) 942-6137

Email: RussellBoyce@eaton.com

Product Information

Product Name: Switchgear/Switchboards

Product Type: Switchgear - Medium Voltage

Product Model Number: See Product Range Summary

General Description: Medium Voltage, 5-27kV Metal Enclosed and 5-15kV Metal Clad Switchgear, 4000A maximum, NEMA 1 and 3R assemblies, front and rear accessible.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Eaton

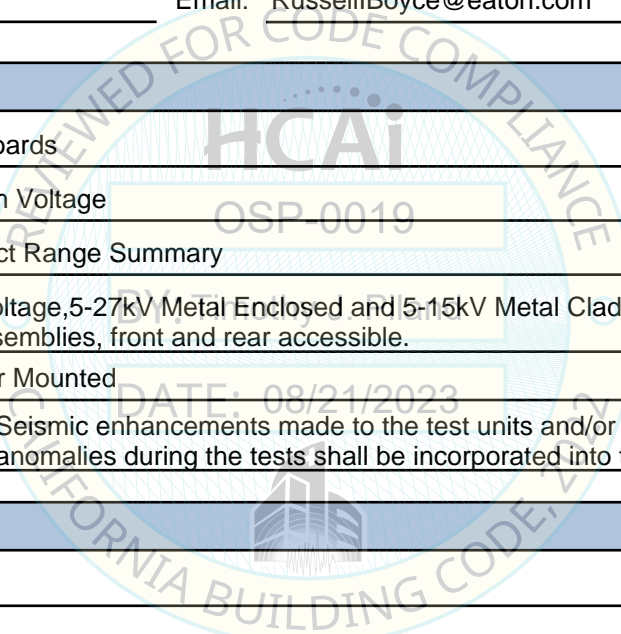
Contact Person: Eddie Wilkie

Mailing Address: 175 Vista Blvd, Arden, NC 28704

Telephone: (828) 651-0707

Email: eddiewilkie@eaton.com

Title: Director of Engineering





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

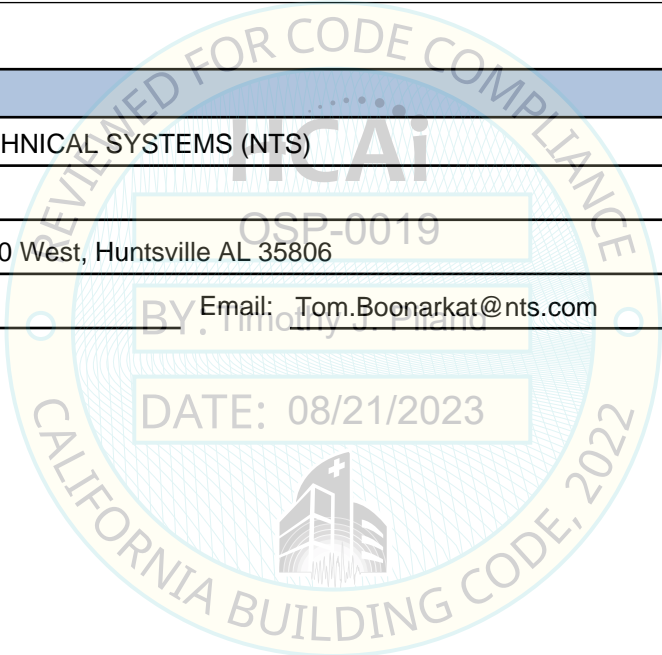
Company Name: ISAT
Name: WILLIAM JOERGER California License Number: S4545
Mailing Address: 1020 Crews Road, Quite Q, Matthews, NC 28105
Telephone: (510) 714-0216 Email: wvjoerger@isatsb.com

Certification Method

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

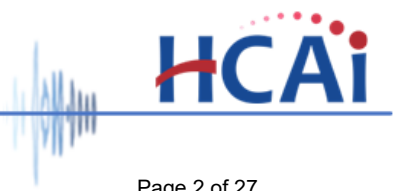
Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)
Contact Person: Tom Boonarkat
Mailing Address: 7800 Highway 20 West, Huntsville AL 35806
Telephone: (256) 716-4291 Email: Tom.Boonarkat@nts.com



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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.14

SDS (Design spectral response acceleration at short period, g) = 1.52

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) = See Resonance Summary

Overall dimensions and weight = See Product Range Summary

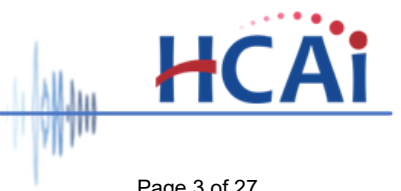
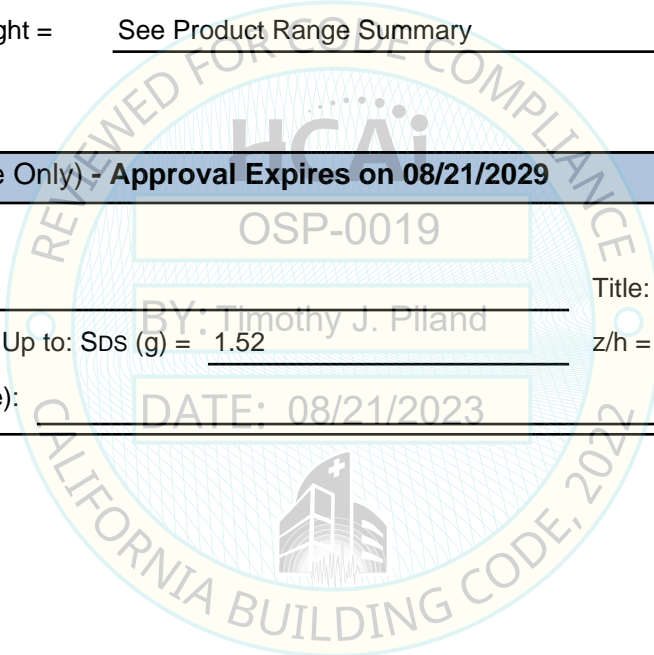
HCAI Approval (For Office Use Only) - Approval Expires on 08/21/2029

Date: 8/21/2023

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 1.52 z/h = 1

Condition of Approval (if applicable): DATE: 08/21/2023



Certified Product Range Summary
VacClad-W (VCP-W) Metal-Clad Switchgear (5-15kV)
Ganged Assemblies

Model/UUT Identifier	Section Continuous Current Rating (Amps)	Bus Material	Width (in.)	Depth (in.)	Height (in.)	Maximum Weight (lbs.)	Maximum C.G. (Height) [in.]	S _{DS} (g)	F _p /W _p	NEMA Enclosure Type	Notes	UUT
72Y9429-1	1200	Copper	26.25	78.5	83.5	1612	60	1.52	1.14	1	1,2,3	22
72Y9429-2			26.25	78.5	83.5	1333	60			1	1,2,3	23
72YCXXX-X			26	96	80,95,100	1451	60			1	1,2,3	Interpolated
72YCXXX-X			36	96	80,95,100	1612	60			1	1,2,3	Interpolated
72YCXXX-X	2000		36	96	80,95,100	2320	60			1	1,2,3	Interpolated
72YCXXX-X	3000		36	96	80,95	2320	60			1	1,2,3	Interpolated
72YCXXX-X	4000		36	96	80,95	5215	54			1	1,2,3	Interpolated
72YCXXX-X			36	96	120	5215	56			1	1,2,3	Interpolated
72Y9431-2			40.12	102.75	130.5	4834	56.86			1	1,2,3	25
72Y9431-1			40.12	98.50	106	5215	58.14			1	1,2,3	24

Model/UUT Identifier	Section Continuous Current Rating (Amps)	Bus Material	Width (in.)	Depth (in.)	Height (in.)	Maximum Weight (lbs.)	Maximum C.G. (Height) [in.]	S _{DS}	F _p /W _p	NEMA Enclosure Type	Notes	UUT
72YCXXX-X	1200	Copper	36	101	115	1612	65	1.52	1.14	3R	1,2,3	Extrapolated
72YCXXX-X	2000		36	101	115	2320	65			3R	1,2,3	Extrapolated
72Y9400-2	3000		36	101.3	115	3219	58.42			3R	1,2,3	1b
72YCXXX-X			36	101	115	2320	62			3R	1,2,3	Interpolated
72Y9400-1			36	101.3	115	4825	62.51			3R	1,2,3	1a

- 1 - Engineered to order product. Unique identifiers provided for each vertical section.
- 2 - Manufactured by Eaton. All enclosures made from powder coated, mild carbon steel.
- 3 - Certification applies to a minimum of (2) Switchgear enclosures bolted together.

Certified Product Range Summary

MVS Medium Voltage (5-27kV) Load Interrupter Metal-Enclosed Switchgear														
Model/UUT Identifier	Main Bus Continuous Current Rating (Amps)	Bus Material	Width (in.)	Depth (in.)	Height (in.)	Maximum Weight (lbs.)	Maximum Tested C.G. (Height) [in.]	S_{DB}	F_p/W_p	NEMA Enclosure Type	Notes	UUT		
YYYYXXXX-XX	200	Copper	26	27.25	66.25	550	48.81	1.52	1.14	1	2,5,6	Extrapolated		
GWDMVS0425-001	600	Copper	36.25	39	92.75	848	66.69			1	2,5,6	28		
P4MVSND-001a	600	Copper	19.75	66	119	919				3R	2,3,5,6	7a		
P4MVSND-001b	600	Copper	19.75	66	119	919	3R			2,3,5,6	7b			
GWDMVS0425-003	2000	Copper	39.75	84.25	96.75	1372	49.3			3R	2,3,5,6	30		
YYYYXXXX-XX	600	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1500	59.8			1	2,5,6	Interpolated		
P9ARCMVS-002a	1200	Copper	38.38	39	125	1509				1	2,5,6	10a		
P9ARCMVS-002b	1200	Copper	38.38	39	125	1509	49.17			1	2,5,6	10b		
YYYYXXXX-XX	600	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600				3R	2,3,5,6	Interpolated		
YYYYXXXX-XX	1200	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1600				1	2,5,6	Interpolated		
YYYYXXXX-XX	1200	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600				3R	2,3,5,6	Interpolated		
YYYYXXXX-XX	2000	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1600				1	2,5,6	Interpolated		
YYYYXXXX-XX	2000	Copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600				3R	2,3,5,6	Interpolated		
GWDMVS0425-004	2000	Copper	39.75	84.25	96.75	1600				3R	2,3,5,6	31		
GWD00050-025	1200	Copper	49	74	133	2530				88	3R	2,4,6	38	
MEF and MSB Medium Voltage Metal-Enclosed Switchgear														
72YXXXX-XX	1200	Copper	26	61.25	98	1640	54.12			1.52	1.14	1	1,2,5	1f
72Y1059-2	1200	Copper	26	61.25	98	1640	50.93					1	1,2,5	Interpolated
72YXXXX-XX	2000	Copper	45	61.25	98	2400		1	1,2,5			Interpolated		
72Y1059-1	2000	Copper	45	61.25	98	2400	1	1,2,5	1e					

For 5 - 27kV MVS, the Indoor and Outdoor enclosures are mounted to the foundation in similar fashion.

- 1 - Engineered to order product. Unique identifiers provided for each vertical section.
- 2 - Manufactured by Eaton. All enclosures made from powder coated, mild carbon steel.
- 3 - A MEMA 3R enclosure contains a complete NEMA 1 Switchgear panel in each vertical section.
- 4 - Certification applies to a minimum of (1) vertical section of Switchgear.
- 5 - Certification applies to a minimum of (2) vertical sections of Switchgear or direct coupling to transformer.
- 6 - Engineered to order product. First (3) fields indicate destination region with following fields random generated characters.

Tension Analysis
MVS Medium Voltage (5-27kV) Load Interrupter Metal-Enclosed Switchgear

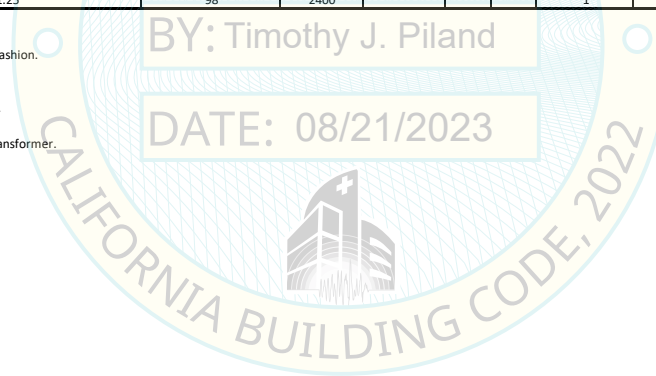
Model/UUT Identifier	Main Bus Continuous Current Rating (Amps)	Bus Material	Width (in.)	Depth (in.)	Height (in.)	Maximum Weight (lbs.)	Maximum Tested C.G. (Height) [in.]	S ₀₅	F _p /W _p	NEMA Enclosure Type ⁴	Notes	UUT	Max Tension	Comments		
MVS	200	copper	26	27.25	66.25	550	48.81	1.52	1.14	1	1,2,5	Extrapolated	N/A	Not certified as standalone enclosure, see note 5		
GWDMVS0425-001	600	copper	36.25	39	92.75	848	48.81			1	1,2,5	28	N/A	Not certified as standalone enclosure, see note 5		
P4MVSND-001a	600	copper	19.75	66	119	919	66.69			3R ³	1,2,3,5	7a	N/A	Not certified as standalone enclosure, see note 5		
P4MVSND-001b	600	copper	19.75	66	119	919	66.69			3R ³	1,2,3,5	7b	N/A	Not certified as standalone enclosure, see note 5		
GWDMVS0425-003	2000	copper	39.75	84.25	96.75	1372	49.3			3R ³	1,2,3,5	30	N/A	Not certified as standalone enclosure, see note 5		
MVS	600	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1500	59.8			1	1,2,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
P9ARCMVS-002a	1200	copper	38.38	39	125	1509	59.8			1	1,2,5	10a	N/A	Not certified as standalone enclosure, see note 5		
P9ARCMVS-002b	1200	copper	38.38	39	125	1509	59.8			1	1,2,5	10b	N/A	Not certified as standalone enclosure, see note 5		
MVS	600	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600	49.17			3R ³	1,2,3,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
MVS	1200	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1600	49.17			1	1,2,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
MVS	1200	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600	49.17			3R ³	1,2,3,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
MVS	2000	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	90.38, 95.5, 125	1600	49.17			1	1,2,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
MVS	2000	copper	36	34.94,37, 49.25,53, 62,68, 70,80,82	95.5	1600	49.17			3R ³	1,2,3,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5		
GWDMVS0425-004	2000	copper	39.75	84.25	96.75	1600	49.17			3R ³	1,2,3,5	31	N/A	Not certified as standalone enclosure, see note 5		
GWD00050-025	1200	copper	49	74	133	2530	88			3R ³	1,2,4	38	2723			
MEF and MSB Medium Voltage Metal-Enclosed Switchgear																
MEF	1200	copper	26	61.25	98	1640	54.12			1.52	1.14	1	1,2,5	1f	N/A	Not certified as standalone enclosure, see note 5
72Y1059-2	1200	copper	26	61.25	98	1640						1	1,2,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5
MEF	2000	copper	45	61.25	98	2400	50.93					1	1,2,5	Interpolated	N/A	Not certified as standalone enclosure, see note 5
72Y1059-1	2000	copper	45	61.25	98	2400						1	1,2,5	1e	N/A	Not certified as standalone enclosure, see note 5

For 5 - 27kV MVS ,the Indoor and Outdoor enclosures are mounted to the foundation in similar fashion.

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- 2 - Manufactured by Eaton. All enclosures made from powder coated, mild carbon steel.
- 3 - A MEMA 3R enclosure contains a complete NEMA 1 Switchgear panel in each vertical section.
- 4 - Certification applies to a minimum of (1) vertical section of Switchgear.
- 5 - Certification applies to a minimum of (2) vertical sections of Switchgear or direct coupling to transformer.

BY: Timothy J. Piland

DATE: 08/21/2023



Medium Voltage Switchgear Certified Subcomponents: Enclosures¹

NEMA Enclosure type	Dimensions (in)			Manufacturer	Test Status
	Width	Depth	Height		
1	18	60	92	Eaton	Extrapolated
	18	60, 72	92, 112		Extrapolated
	26	61.25	92		1f
	26.25	78.5	83.5		22, 23
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36	96, 98	95		Interpolated
	36.25	39	92.75		28
	38.38	39	125		10a, 10b
	40.12	102.8	130.5		25
	40.12	98.5	106		24
45	61.25	92	1f		
3R	18	60, 72	98.13, 119	Eaton	Extrapolated
	19.75	66	119		7a, 7b
	36	101.3	115		1a, 1b
	39.75	84.25	96.75		30, 31
	49	74	133		38

1. All enclosures made from powder coated, mild carbon steel.

Certified Subcomponents: Power Circuit Breakers VCP-W & VCP-T (Metal-Clad and Metal-Enclosed Switchgear)

Frame Size (Amperes)	Model	Maximum Voltage (Vac)	Width (in.)	Height (in.)	Depth (in.)`	Weight (lbs.)	Manufacturer	Test Status
VCP-W								
1200	50 VCP-WND 250	5000	19	30	31.4	350	Eaton	22
	50 VCP-W 250, 40C, 25, 40	5000	29	30	31.4	350	Eaton	Interpolated
	50 VCP-W 350, 50C, 50	5000	29	30	31.4	460	Eaton	Interpolated
	50 VCP-W 500, 63C, 63	5000	29	30	31.4	575	Eaton	Interpolated
	75 VCP-W 500, 50C, 50	7500	29	30	31.4	375	Eaton	Interpolated
	150 VCP-W 500, 25C, 25	15000	29	30	31.4	350	Eaton	Interpolated
	150 VCP-W 750, 40C, 40	15000	29	30	31.4	350	Eaton	Interpolated
	150 VCP-W 1000, 50C, 50	15000	29	30	31.4	460	Eaton	Interpolated
2000	150 VCP-W 1500, 63C, 63	15000	29	30	31.4	575	Eaton	Interpolated
	50 VCP-W 250, 40C, 25, 40	5000	29	30	31.4	410	Eaton	Interpolated
	50 VCP-W 350, 50C, 50	5000	29	30	31.4	490	Eaton	Interpolated
	50 VCP-W 500, 63C, 63	5000	29	30	31.4	575	Eaton	Interpolated
	75 VCP-W 500, 50C, 50	7500	29	30	31.4	410	Eaton	Interpolated
	150 VCP-W 500, 25C, 25	15000	29	30	31.4	410	Eaton	Interpolated
	150 VCP-W 750, 40C, 40	15000	29	30	31.4	410	Eaton	Interpolated
	150 VCP-W 1000, 50C, 50	15000	29	30	31.4	490	Eaton	Interpolated
3000	150 VCP-W 1500, 63C, 63	15000	29	30	31.4	575	Eaton	Interpolated
	50 VCP-W 250, 40C, 25, 40	5000	29	30	31.4	525	Eaton	Interpolated
	50 VCP-W 350, 50C, 50	5000	29	30	31.4	525	Eaton	Interpolated
	50 VCP-W 500, 63C, 63	5000	29	30	31.4	575	Eaton	Interpolated
	75 VCP-W 500, 50C, 50	7500	29	30	31.4	525	Eaton	Interpolated
	150 VCP-W 500, 25C, 25	15000	29	30	31.4	525	Eaton	Interpolated
	150 VCP-W 750, 40C, 40	15000	29	30	31.4	525	Eaton	Interpolated
	150 VCP-W 1000, 50C, 50	15000	29	30	31.4	525	Eaton	Interpolated
150 VCP-W 1500, 63C, 63	15000	29	30	31.4	575	Eaton	24	
VCP-T								
1200	50 VCP-T 25	5000	16.98	21.92	23.54	250	Eaton	Extrapolated
	50 VCP-T 40	5000	22.52	27	25.76	440	Eaton	Extrapolated
	150 VCP-T 25	15000	16.98	21.92	23.54	250	Eaton	Extrapolated
	150 VCP-T 40	15000	22.52	27	25.76	440	Eaton	1f
2000	50 VCP-T 25	5000	22.52	27	25.76	440	Eaton	Interpolated
	50 VCP-T 40	5000	22.52	27	25.76	440	Eaton	Interpolated
	150 VCP-T 25	15000	22.52	27	25.76	440	Eaton	Interpolated
	150 VCP-T 40	15000	22.52	27	25.76	440	Eaton	1e

Certified Subcomponents: MV Switches

Frame Size (Amperes)	Model	Maximum Voltage (Vac)	Width (in.)	Height (in.)	Depth (in.)`	Weight (lbs.)	Manufacturer	Test Status
600	N/A ¹	15,000	18.00	39.19	60.00	175	Eaton	Extrapolated
1200	N/A ¹	15,000	18.00	39.19	60.00	175	Eaton	7a,7b
600	N/A ¹	15,000	31.76	39.19	31.46	175	Eaton	Interpolated
1200	N/A ¹	15,000	31.76	39.19	31.46	175	Eaton	28,30,31
600	N/A ¹	27,000	43.76	47.47	47.1	250	Eaton	38

1. Switch is built into enclosure assembly and not defined via a model number.

Certified Subcomponents: Instrument Transformers (Metal-Clad and Metal-Enclosed Switchgear)

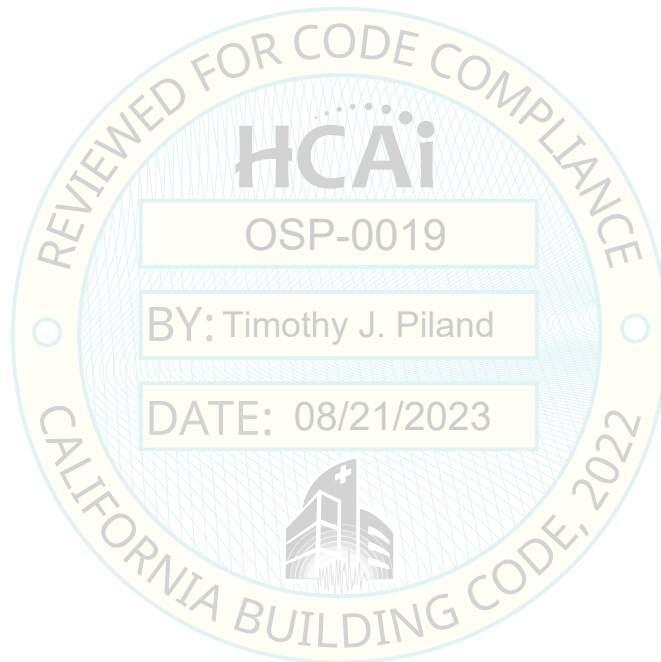
Size (VA)	Winding Material	Part Number	Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)	Manufacturer	Test Status
700 VA VT VIY-60 2400/120V L-L	Copper	7525A60G01	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 4200/120V L-L	Copper	7525A60G02	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 4800/120V L-L	Copper	7525A60G03	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 3600/120V L-L	Copper	7525A60G14	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 2400/120V L-G	Copper	7525A61G01	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2400/120	Copper	7525A61G02	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 4200/120V L-G	Copper	7525A61G03	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2400/120 FLUXD	Copper	7525A61G04	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 4800/120V L-G	Copper	7525A61G05	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 1440/120	Copper	7525A61G13	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT VIY-60 3600/120V L-G	Copper	7525A61G14	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 1440/120 FLUXD	Copper	7525A61G15	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2160/120	Copper	7525A61G16	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2160/120 FLUXD	Copper	7525A61G17	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2760/120	Copper	7525A61G18	6.75	10	8.25	36	ABB	Extrapolated
700 VA VT, ABB, VIY-60, 2760/120 FLUXD	Copper	7525A61G19	6.75	10	8.25	36	ABB	Extrapolated
1000 VA VT VIZ-11 4800/120V L-L	Copper	7525A64G03	13.13	9.25	9	65	ABB	Extrapolated
1000 VA VT VIZ-11 7200/120V L-L	Copper	7525A64G04	13.13	9.25	9	65	ABB	Extrapolated
1000 VA VT VIZ-11 8400/120V L-L	Copper	7525A64G05	13.13	9.25	9	65	ABB	Extrapolated
1000 VA VT VIZ-11 12000/120V L-L	Copper	7525A64G06	13.13	9.25	9	65	ABB	Extrapolated
1000 VA VT VIZ-11 13200/120V L-L	Copper	7525A64G07	13.13	9.25	9	65	ABB	Extrapolated
1000 VA VT VIZ-11 14400/120V L-L	Copper	7525A64G08	13.13	9.25	9	65	ABB	25
1000 VA VT VIZ-11 6600/120V L-G	Copper	7525A64G09	13.13	9.25	9	65	ABB	Interpolated
1000 VA VT VIZ-11 12470/120V L-L	Copper	7525A64G14	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 4200/120V L-G	Copper	7525A65G06	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 7200/120V L-G	Copper	7525A65G07	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 4200/120V L-G FLUXD	Copper	7525A65G08	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 8400/120V L-G	Copper	7525A65G09	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 4800/120V L-G	Copper	7525A65G10	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 4800/120V L-G FLUXD	Copper	7525A65G11	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 12000/120V L-G	Copper	7525A65G12	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 7200/120V L-G	Copper	7525A65G13	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 7200/120V L-G FLUXD	Copper	7525A65G14	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 13200/120V L-G	Copper	7525A65G15	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 7620/120V L-G	Copper	7525A65G16	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 7620/120V L-G FLUXD	Copper	7525A65G17	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 14400/120V L-G	Copper	7525A65G18	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 8400/120V L-G	Copper	7525A65G19	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 8400/120V L-G FLUXD	Copper	7525A65G20	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 6600/120V L-G	Copper	7525A65G22	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 12470/120V L-G	Copper	7525A65G38	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 2760/120V L-G	Copper	7525A65G41	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 2760/120V L-G FLUXD	Copper	7525A65G42	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 3840/120V L-G	Copper	7525A65G43	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 3840/120V L-G FLUXD	Copper	7525A65G44	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 6960/120V L-G	Copper	7525A65G45	13.13	9.25	9	65	ABB	Interpolated
1500 VA VT VIZ-11 6960/120V L-G FLUXD	Copper	7525A65G46	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-75 2400/120V	Copper	7525A70G01	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-75 4800/120V	Copper	7525A70G03	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-75 7200/120V	Copper	7525A70G04	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 7200/120V	Copper	7525A70G05	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 7620/120V	Copper	7525A70G06	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 8400/120V	Copper	7525A70G07	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 12000/120V	Copper	7525A70G08	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 13200/120V	Copper	7525A70G09	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 14400/120V	Copper	7525A70G10	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 14400/120V-50hz	Copper	7525A70G14	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 12000/120V-50hz	Copper	7525A70G15	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 2400/120V	Copper	7525A70G17	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-75 7200/120V-50hz	Copper	7525A70G18	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 12470/120V	Copper	7525A70G27	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 10000/120V	Copper	7525A70G28	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-11 13800/120V	Copper	7525A70G37	13.13	9.25	9	65	ABB	Interpolated
1500VA VT VIZ-75 4200/120V	Copper	7525A70G02	13.13	9.25	9	65	ABB	30
CPT 5 KVA 1PH 12470/240-120V	Copper	3A39136H17A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 13200/240-120V	Copper	3A39136H21A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 13800/240-120V	Copper	3A39136H31A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 2400/240-120V	Copper	3A39136H01A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 4160/240-120V	Copper	3A39136H05A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 4760/240-120V	Copper	3A39136H09A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 4800/240-120V	Copper	3A39136H25A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 7200/240-120V	Copper	3A39136H13A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 5 KVA 1PH 8320/240-120V	Copper	3A39136H28A	16.5	10.25	14.75	127	AFP	Extrapolated
CPT 10 KVA 1PH 12470/240-120V	Copper	3A39136H18A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 13200/240-120V	Copper	3A39136H22A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 13800/240-120V	Copper	3A39136H32A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 2400/240-120V	Copper	3A39136H02A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 4160/240-120V	Copper	3A39136H06A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 4760/240-120V	Copper	3A39136H10A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 4800/240-120V	Copper	3A39136H26A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 10 KVA 1PH 7200/240-120V	Copper	3A39136H14A	11.63	17.5	15.63	215	AFP	Extrapolated
CPT 15 KVA 1PH 12470/240-120V	Copper	3A39136H19A	11.63	17.5	15.63	250	AFP	Extrapolated

Certified Subcomponents: Instrument Transformers (Metal-Clad and Metal-Enclosed Switchgear)

Size (VA)	Winding Material	Part Number	Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)	Manufacturer	Test Status
CPT 15 KVA 1PH 13200/240-120V	Copper	3A39136H23A	11.63	17.5	15.63	250	AFP	Extrapolated
CPT 15KVA 1PH 12470/240-120V	Copper	3A39136H19A	11.63	17.5	15.63	250	AFP	Extrapolated
CPT 15 KVA 1PH 4160/240-120V	Copper	3A39136H07A	11.63	17.5	15.63	250	AFP	31
CPT 15 KVA 1PH 4760/240-120V	Copper	3A39136H11A	11.63	17.5	15.63	250	AFP	Interpolated
CPT 15 KVA 1PH 4800/240-120V	Copper	3A39136H27A	11.63	17.5	15.63	250	AFP	Interpolated
CPT 15 KVA 1PH 7200/240-120V	Copper	3A39136H15A	11.63	17.5	15.63	250	AFP	Interpolated
CPT 15 KVA 1PH 8320/240-120V	Copper	3A39136H30A	11.63	17.5	15.63	250	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 2400/240-120V, 4 TAPS	Copper	410725	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 4160/240-120V, 4 TAPS	Copper	410723	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 4800/240-120V, 4 TAPS	Copper	410721	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 7200/240-120V, 4 TAPS	Copper	410719	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 8320/240-120V, 4 TAPS	Copper	410715	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 12000/240-120V, 4 TAPS	Copper	410713	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 12470/240-120V, 4 TAPS	Copper	410711	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 13200/240-120V, 4 TAPS	Copper	410709	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 13800/240-120V, 4 TAPS	Copper	410707	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 37.5 KVA 1-PH 14400/240-120V, 4 TAPS	Copper	410705	21.5	20	27	550	AFP	Interpolated
CPT, AFP, 45 KVA, 3-PH 13800/120-208V, 4 TAPS (2) 2.5%	Copper	460506V	23	16	34.5	655	AFP	25
750 VA, VT, 2400/120V LL	Copper	1C19636H01	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 3600/120V LL	Copper	1C19636H02	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 4200/120V LL	Copper	1C19636H03	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 4800/120V LL	Copper	1C19636H04	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2400/120V LG	Copper	1C19636H21	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 3600/120V LG	Copper	1C19636H22	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 4200/120V LG	Copper	1C19636H23	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 4800/120V LG	Copper	1C19636H24	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 1440/208V LG	Copper	1C19636H41	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2160/208V LG	Copper	1C19636H42	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2400/208V LG	Copper	1C19636H43	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2760/208V LG	Copper	1C19636H44	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 1440/208V LG	Copper	1C19636H61	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2160/208V LG	Copper	1C19636H62	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2400/208V LG	Copper	1C19636H63	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2760/208V LG	Copper	1C19636H64	6.38	9.31	6.5	34	ITI	Extrapolated
750 VA, VT, 2400/120V LG	Copper	1C19636H21	6.38	9.31	6.5	34	ITI	22
1500 VA, VT, 4800/120V LL	Copper	1C19636H11	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 6600/120V LL	Copper	1C19636H12	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 7200/120V LL	Copper	1C19636H13	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 8400/120V LL	Copper	1C19636H14	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 12000/120V LL	Copper	1C19636H15	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 12480/120V LL	Copper	1C19636H16	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 13200/120V LL	Copper	1C19636H17	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 14400/120V LL	Copper	1C19636H18	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 4800/120V LG	Copper	1C19636H31	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 6600/120V LG	Copper	1C19636H32	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 720000/120V LG	Copper	1C19636H33	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 8400/120V LG	Copper	1C19636H34	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 12000/120V LG	Copper	1C19636H35	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 12480/120V LG	Copper	1C19636H36	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 13200/120V LG	Copper	1C19636H37	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 14400/120V LG	Copper	1C19636H38	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 4200/120V LG	Copper	1C19636H51	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 4800/120V LG	Copper	1C19636H52	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 6960/120V LG	Copper	1C19636H53	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 7200/120V LG	Copper	1C19636H54	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 7620/120V LG	Copper	1C19636H55	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 8400/120V LG	Copper	1C19636H56	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 4200/120V LG	Copper	1C19636H71	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 4800/120V LG	Copper	1C19636H72	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 6960/120V LG	Copper	1C19636H73	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 7200/120V LG	Copper	1C19636H74	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 7620/120V LG	Copper	1C19636H75	10	13.13	9.25	85	ITI	Interpolated
1500 VA, VT, 8400/120V LG	Copper	1C19636H76	10	13.13	9.25	85	ITI	Interpolated
1500 VA VT PTW5 14400 / 120 L-L	Copper	PTW5-1-110-1442S	10	13.13	9.25	85	ITI	1b
CPT 5 KVA 1PH 12470/240-120V	Copper	3A39136H17C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 13200/240-120V	Copper	3A39136H21C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 13800/240-120V	Copper	3A39136H31C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 2400/240-120V	Copper	3A39136H01C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 4160/240-120V	Copper	3A39136H05C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 4760/240-120V	Copper	3A39136H09C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 4800/240-120V	Copper	3A39136H25C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 7200/240-120V	Copper	3A39136H13C	17	9	14.12	165	ITI	Interpolated
CPT 5 KVA 1PH 8320/240-120V	Copper	3A39136H28C	17	9	14.12	165	ITI	Interpolated
CPT 10 KVA 1PH 12470/240-120V	Copper	3A39136H18C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 13200/240-120V	Copper	3A39136H22C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 13800/240-120V	Copper	3A39136H32C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 2400/240-120V	Copper	3A39136H02C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 4160/240-120V	Copper	3A39136H06C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 4760/240-120V	Copper	3A39136H10C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 10 KVA 1PH 4800/240-120V	Copper	3A39136H26C	11.5	17.88	15.38	250	ITI	Interpolated

Certified Subcomponents: Instrument Transformers (Metal-Clad and Metal-Enclosed Switchgear)

Size (VA)	Winding Material	Part Number	Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)	Manufacturer	Test Status
CPT 10 KVA 1PH 7200/240-120V	Copper	3A39136H14C	11.5	17.88	15.38	250	ITI	Interpolated
CPT 15 KVA 1PH 12470/240-120V	Copper	3A39136H19B	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 13200/240-120V	Copper	3A39136H23B	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 4160/240-120V	Copper	3A39136H07C	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 4760/240-120V	Copper	3A39136H11C	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 4800/240-120V	Copper	3A39136H27C	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 7200/240-120V	Copper	3A39136H15C	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15 KVA 1PH 8320/240-120V	Copper	3A39136H30C	11.5	17.88	15.38	290	ITI	Interpolated
CPT 15kVA 1PH 12470/240-120V	Copper	3A39136H19C	11.5	17.88	15.38	290	ITI	1b



UUT 1a (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9400-1

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 3000A, copper bus.

Options/Component Summary: VCP-W breaker, 3000A (Model: 150 VCP-W750)

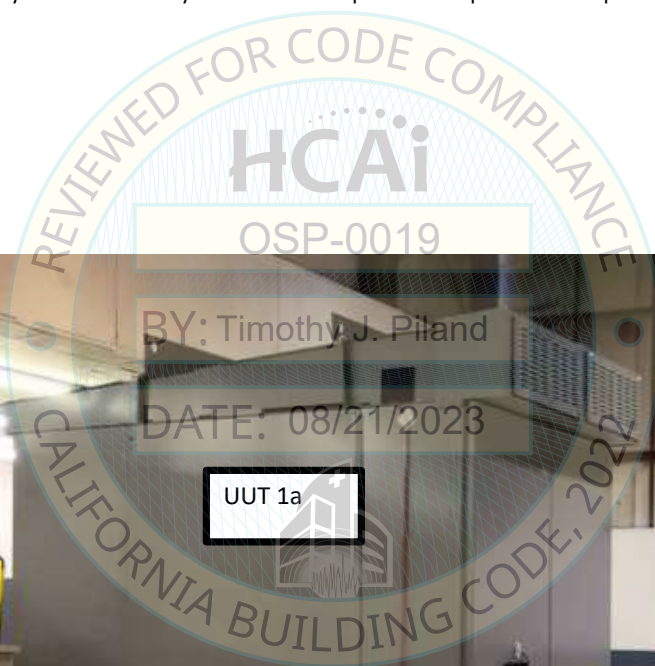
UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
4825	36	101.3	115	8.7	4	18

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	62.51	1.52	1	1.5	2.43	1.82	1.02	0.41

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

58271R11-4

UUT 1b (Unit Under Test) Summary Sheet (58271R11-4)

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9400-1

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating, 3000A, copper bus.

Options/Component Summary: CPT 15kVA 12470-120, (Part#: CPTS595151242A); PT 1500VA 14400-120, (Part#: PTW5-1-110-1442S)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
3219	36	101.3	115	8.7	4	18

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	58.42	1.52	1	1.5	2.43	1.82	1.02	0.41

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

58271R11-4

UUT 1e (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: MEF Medium Voltage Switchgear

Model Number: 72Y1059

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 3000A, copper bus.

Options/Component Summary: VCP-T breaker, 2000A(Model: 150 VCP-T40)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
2400	45	61.25	98	8.92	5.36	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	50.93	1.98	1	1.5	3.17	2.38	1.33	0.53

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a concrete slab using (9) Hilti P/N HSL-I M12 65/80 concrete anchors.
The concrete slab was contained within a skid which was welded to the shake table.

7Q010

UUT 1f (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: MEF Medium Voltage Switchgear

Model Number: 72Y1059

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 3000A, copper bus.

Options/Component Summary: VCP-T breaker, 1200A (Model: 150 VCP-T 40)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1640	26	61.25	98	8.92	5.36	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	54.12	1.98	1	1.5	3.17	2.38	1.33	0.53

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a concrete slab using (5) Hilti P/N HSL-I M12 65/80 concrete anchors.
The concrete slab was contained within a skid which was welded to the shake table.

7Q010

UUT 22 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9429-1

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 1200A, copper bus.

Options/Component Summary: VCP-W breaker, 1200A(Model: 50 VCP-WND 250); PT 750VA, 2400-120 (Part#: 1C19636H21);

Relays: Multilin (SR350, SR750)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1612	26.25	78.5	83.5	17	10.5	26

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	35.98	2.4	1	1.5	3.84	2.88	1.61	0.65

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 23 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9429-2

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 1200A, copper bus.

Options/Component Summary: Relay - ATC Controller Eaton Automatic Transfer Relay(ATC600)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1333	26.25	78.5	83.5	17	10.5	26

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	36.58	2.4	1	1.5	3.84	2.88	1.61	0.65

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 24 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9431-1

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 4000A, copper bus.

Options/Component Summary: VCP-W Breaker, 3000A (Model: 150VCPW63); Relays; models (EDR3000, SEL 751A, ABB-SC)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
5215	40.12	98.5	106	11	5.2	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	58.14	1.95	1	1.5	3.12	2.34	1.31	0.53

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 25 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: VacClad-W Medium Voltage Switchgear

Model Number: 72Y9431-2

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 4000A, copper bus.

Options/Component Summary: 45kVA 3-PH CPT, 13800-120, (Part # 460506V); 1000VA PT, 14400-120 (Part#: 7525A64G08; Relay EDR 5000

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
4834	40.12	102.75	130.5	13	4.8	24

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	56.86	1.85	1	1.5	2.96	2.22	1.24	0.50

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 7a (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: P4MVSND-001a

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 3R enclosure rating. 1200A, copper bus.

Options/Component Summary: MVSND switch (5kV, 1200A, 40kA Sym withstand)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
919	19.75	66	119	6.5	3.5	26

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	66.69	2.34	1	1.5	3.74	2.81	1.57	0.63

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

70566R12

UUT 7b (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: P4MVSND-001b

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 3R enclosure rating. 1200A, copper bus.

Options/Component Summary: MVSND switch (5kV, 1200A, 40kA Sym withstand)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
919	19.75	66	119	8.1	4	26

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	66.69	2.34	1	1.5	3.74	2.81	1.57	0.63

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

70566R12

UUT 10a (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: P9ARCMVS-002a

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 1200A, copper bus.

Options/Component Summary: MVS2 switch (15kV, 600A, 40kA Sym withstand)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1509	38.38	39	125	8.5	12	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	59.8	2.92	1	1.5	4.67	3.50	1.96	0.79

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (4) 1/2" bolts. The steel frame was welded to the shake table.

70566R12

UUT 10b (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: P9ARCMVS-002b

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 1200A, copper bus.

Options/Component Summary: MVS2 switch (15kV, 600A, 40kA Sym withstand)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1508	38.38	39	125	8.5	12	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	59.8	2.92	1	1.5	4.67	3.50	1.96	0.79

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT
10b
(far
right)

UUT was mounted to a rigid frame using (4) 1/2" bolts. The steel frame was welded to the shake table.

70566R12

UUT 28 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: GWDMVS0425-001

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 800A Main Bus, copper bus.

Options/Component Summary: MVS2 switch (15kV, 600A, 25kA Sym withstand)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
848	36.25	39	92.75	6	5.2	>33

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	48.81	2.43	1	1.5	3.89	2.92	1.63	0.66

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 30 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: GWDMVS0425-003

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 2000A, copper bus.

Options/Component Summary: MVS2 switch (15kV, 1200A, 25kA Sym withstand); 1.5 kVA 1-PH CPT (Part # 7525A70G02)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1372	39.75	84.25	96.75	11	3.8	24

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	49.3	2.39	1	1.5	3.82	2.87	1.60	0.65

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 31 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: GWDMVS0425-004

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 1 enclosure rating. 2000A, copper bus.

Options/Component Summary: MVS2 switch(15kV, 1200A, 25kA Sym withstand); 15kVA CPT (Part #3A39136H07A)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
1600	39.75	84.25	96.75	11	3.8	24

Seismic Test Parameters

Building Code	Test Criteria	C.G.-Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	49.17	2.39	1	1.5	3.82	2.87	1.60	0.65

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

71272R13

UUT 38 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Metal-Enclosed Medium Voltage Switchgear

Model Number: GW00050-025

Product Construction Summary: Cabinet is constructed of powder-coated carbon steel, NEMA Type 3R enclosure. enclosure rating. 1200A, copper bus.

Options/Component Summary: MV switch (27kV, 600A)

UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Width	Depth	Height	Front-Back	Side-Side	Vertical
2530	49	74	133	4.4	2	13

Seismic Test Parameters

Building Code	Test Criteria	C.G.- Height (in.)	S_{DS}	z/h	I_p	A_{Flx-H}	A_{Rig-H}	A_{Flx-V}	A_{Rig-V}
CBC 2019	ICC-ES AC156	88	1.70	1	1.5	2.72	2.04	1.14	0.46

UUT maintained structural integrity and functionality as confirmed in post test inspection and operation checks.



UUT was mounted to a rigid frame using (6) 1/2" bolts. The steel frame was welded to the shake table.

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