



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0121

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Cooper Power Systems

Manufacturer's Technical Representative: Michael Loomans

Mailing Address: 2300 Badger Dr., Waukesha, WI 53188

Telephone: (262) 547-3265

Email: Michael.Loomans@CooperIndustries.com

Product Information

Product Name: Transformers

Product Type: Transformers – Liquid Filled

Product Model Number: Cooper Power Systems Pad Mounted and Substation Transformers

General Description: Pad-Mounted and Substation liquid filled transformers ranging from 45 kVA to 10,000 kVA, designed for indoor or outdoor applications.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: WE Gundy & Associates, Inc

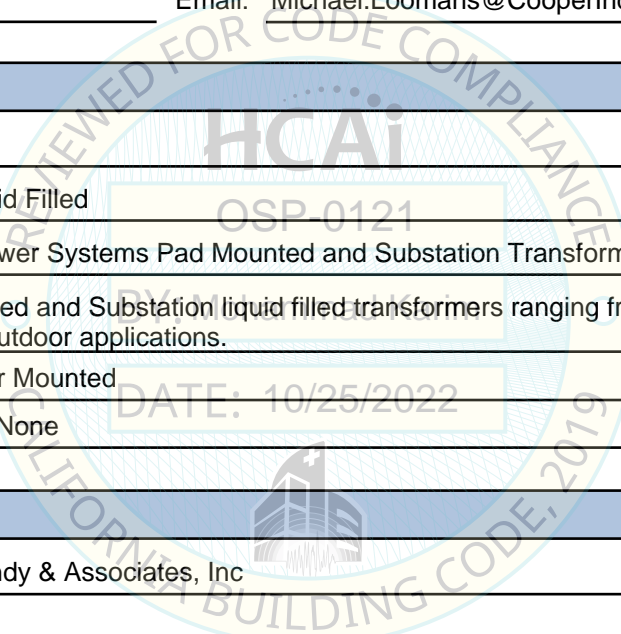
Contact Person: Travis Soppe

Mailing Address: PO Box 9121, Boise, ID 83707

Telephone: (208) 342-5989

Email: tsoppe@wegai.com

Title: President





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

Company Name: W.E. GUNDY & ASSOCIATES INC.
Name: Travis Soppe California License Number: S6115
Mailing Address: P.O. Box 9121, Boise, ID 83707
Telephone: (208) 342-5989 Email: tsoppe@wegai.com

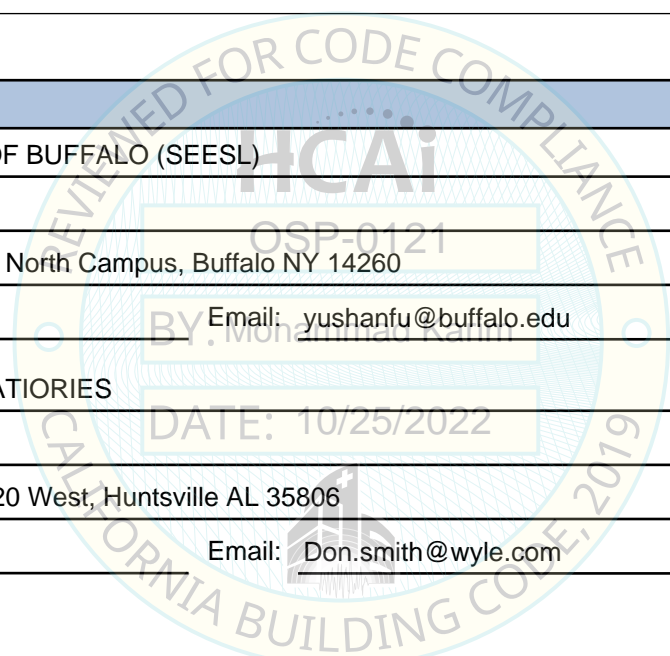
Certification Method

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

Testing Laboratory

Company Name: UNIVERSITY OF BUFFALO (SEESL)
Contact Person: Yushan Fu
Mailing Address: 212 Ketter Hall, North Campus, Buffalo NY 14260
Telephone: (716) 645-3491 Email: yushanfu@buffalo.edu

Company Name: WYLE LABORATORIES
Contact Person: Don Smith
Mailing Address: 7800 Highway 20 West, Huntsville AL 35806
Telephone: (256) 837-4411 Email: Don.smith@wyle.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = $F_p / W_p = 1.13$ for $SDS = 2.5$ at $z/h = 0$ or 0.67 for $SDS = 1.48$ at $z/h = 0$

SDS (Design spectral response acceleration at short period, g) = $SDS = 2.5$ or 1.48 for $z/h = 0$

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 10/25/2028

Date: 10/25/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: $SDS (g) =$ See Condition below $z/h =$ 0

Condition of Approval (if applicable): Maximum SDS for equipment shall be limited to the lowest of the approved SDS values in component or sub-component tables depending on subcomponent used.



Table 1

COOPER POWER SYSTEMS - CERTIFIED PRODUCT LINE MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER CNC - S_{DS} = 2.5g at z/h = 0



Model Line	kVA Rating	High Voltage (kV) Range	Tank Width (in)	Tank Depth (in)	Tank Height (in)	Max CG (in)	Max Weight (lbs)	Representative UUT ¹
3PH-(PDM)-045-CU-MS	45	2400 - 34500	35 - 53	17 - 30	47-72	28	4000	Extrapolated
3PH-PDM-075-CU-MS	75	2400 - 34500	35 - 53	17 - 30	47-72	28	4000	Extrapolated
3PH-PDM-112.5-CU-MS	112.5	2400 - 34500	35 - 53	17 - 32	47-72	28	4000	Extrapolated
3PH-PDM-150-CU-MS	150	2400 - 34500	35 - 53	17 - 32	47-72	28	4000	Extrapolated
3PH-PDM-225-CU-MS	225	2400 - 34500	35 - 53	17 - 32	47-72	28	5000	Extrapolated
3PH-PDM-300-CU-MS	300	2400 - 34500	39 - 61	17 - 34	47-72	28	5000	Extrapolated
3PH-SUB-500-CU-MS	500	34500	66	40	82	28	11755	UUT-3
3PH-(PDM,SUB)-500-CU-MS	500	2400 - 34500	43 - 66	21 - 38	47-82	28	11000	Interpolated
3PH-(PDM,SUB)-750-CU-MS	750	2400 - 34500	44 - 73	21 - 39	66 - 74	28	8000	Interpolated
3PH-(PDM,SUB)-1000-CU-MS	1000	2400 - 34500	47-69	25 - 39	66 - 84	29	15000	Interpolated
3PH-(PDM,SUB)-1500-CU-MS	1500	2400 - 34500	49 - 69	25 - 43	66 - 84	30	15000	Interpolated
3PH-(PDM,SUB)-2000-CU-MS	2000	2400 - 34500	51-77	25-43	66 - 97	31	13500	Interpolated
3PH-(PDM,SUB)-2000-CU-MS		2400 - 34500	52-77	28-43	66 - 97	33	15000	Interpolated
3PH-(PDM,SUB)-2000-CU-MS		2400 - 34500	56-77	31-43	66 - 97	33	20000	Interpolated
3PH-(PDM,SUB)-2000-CU-MS		2400 - 34500	60-77	33-43	66 - 97	33	22000	Interpolated
3PH-(PDM,SUB)-2500-CU-MS	2500	2400 - 34500	53-77	25-43	66 - 97	31	14500	Interpolated
3PH-(PDM,SUB)-2500-CU-MS		2400 - 34500	56-77	29-43	66 - 97	32	18000	Interpolated
3PH-(PDM,SUB)-2500-CU-MS		2400 - 34500	58-77	32-43	66 - 97	34	20000	Interpolated
3PH-(PDM,SUB)-2500-CU-MS		2400 - 34500	62-77	33-43	66 - 97	34	22000	Interpolated

General Notes:

Core and Coil assemblies can be constructed with copper, aluminum, or copper/aluminum combined windings.

3PH pad mount includes radial feed dead front, loop feed dead front and radial feed live front. Radial feed live front was tested.

The tank dimensions listed are representative of the oil filled main tank dimensions not the overall dimensions of the transformer. The overall dimensions of the transformer design are typically greater than the tank dimensions by as much as 75" due to components that connect directly to the tank not the foundation. These components include and are not limited to radiators, valves, breakers, gauges, and terminal enclosures.

¹ The units were tested at different times and the UUTs reference the following reports:

UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 1

COOPER POWER SYSTEMS - CERTIFIED PRODUCT LINE MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER CNC - S_{DS} = 2.5g at z/h = 0



Model Line	kVA Rating	High Voltage (kV) Range	Tank Width (in)	Tank Depth (in)	Tank Height (in)	Max CG (in)	Max Weight (lbs)	Representative UUT ¹
3PH-(PDM,SUB)-3000-CU-MS	3000	2400 - 34500	61-85	27-43	74 - 97	32	17500	Interpolated
3PH-(PDM,SUB)-3000-CU-MS		2400 - 34500	61-85	29-43	74 - 97	33	18750	Interpolated
3PH-(PDM,SUB)-3000-CU-MS		2400 - 34500	61-85	33-43	74 - 97	34	20500	Interpolated
3PH-(PDM,SUB)-3000-CU-MS		2400 - 34500	69-85	33-43	74 - 97	35	22000	Interpolated
3PH-(PDM,SUB)-3750-CU-MS	3750	2400 - 34500	65-97	29-45	72-98	33	21000	Interpolated
3PH-(PDM,SUB)-3750-CU-MS		2400 - 34500	65-97	32-45	72-98	34	22300	Interpolated
3PH-PDM-3750-CU-MS		2400 - 34500	71-97	33-45	72-98	34	22300	Interpolated
3PH-PDM-3750-CU-MS		14400	80	33	97	37	22345	UUT-5

General Notes:

Core and Coil assemblies can be constructed with copper, aluminum, or copper/aluminum combined windings.

3PH pad mount includes radial feed dead front, loop feed dead front and radial feed live front. Radial feed live front was tested.

The tank dimensions listed are representative of the oil filled main tank dimensions not the overall dimensions of the transformer. The overall dimensions of the transformer design are typically greater than the tank dimensions by as much as 75" due to components that connect directly to the tank not the foundation. These components include and are not limited to radiators, valves, breakers, gauges, and terminal enclosures.

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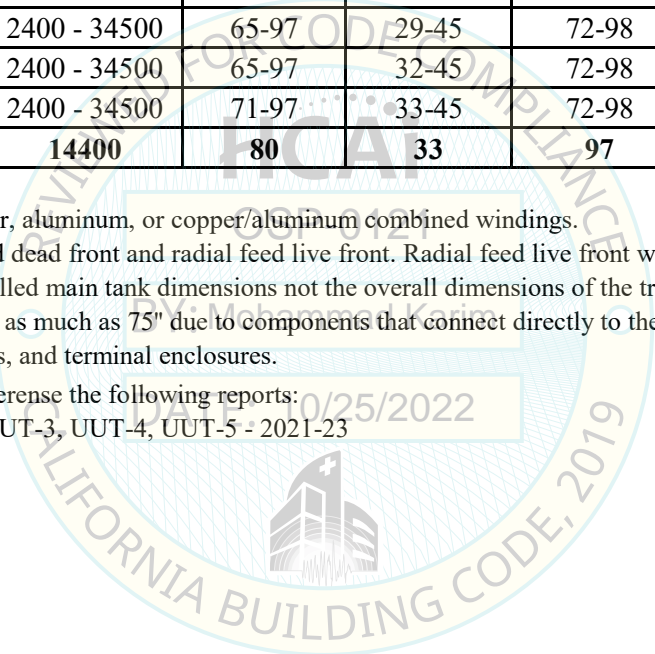


Table 2

COOPER POWER SYSTEMS - CERTIFIED PRODUCT LINE MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0



Model Line	kVA Rating	High Voltage (kV) Range	Tank Width (in)	Tank Depth (in)	Tank Height (in)	Max CG (in)	Max Weight (lbs)	Representative UUT ¹
3PH-PDM-045-AL-MS	45	2400 - 34500	56	19	67	28	2716	UUT-1
3PH-(PDM)-045-AL-MS	45	2400 - 34500	35 - 53	17 - 30	47-72	28	4000	Extrapolated
3PH-PDM-075-AL-MS	75	2400 - 34500	35 - 53	17 - 30	47-72	28	4000	Interpolated
3PH-PDM-112.5-AL-MS	112.5	2400 - 34500	35 - 53	17 - 32	47-72	28	4000	Interpolated
3PH-PDM-150-AL-MS	150	2400 - 34500	35 - 53	17 - 32	47-72	28	4000	Interpolated
3PH-PDM-225-AL-MS	225	2400 - 34500	35 - 53	17 - 32	47-72	28	5000	Interpolated
3PH-PDM-300-AL-MS	300	2400 - 34500	39 - 61	17 - 34	47-72	28	5000	Interpolated
3PH-PDM-500-AL-MS	500	2400 - 34500	43 - 61	19 - 35	47-72	28	6000	Interpolated
3PH-(PDM,SUB)-750-AL-MS	750	2400 - 34500	44 - 73	21 - 39	66 - 74	28	8000	Interpolated
3PH-(PDM,SUB)-1000-AL-MS	1000	2400 - 34500	44 - 73	22 - 39	66 - 74	29	8000	Interpolated
3PH-(PDM,SUB)-1500-AL-MS	1500	2400 - 34500	47 - 65	24 - 41	66 - 82	30	10500	Interpolated
3PH-(PDM,SUB)-1500-AL-MS		2400 - 34500	49 - 65	26 - 41	66 - 82	30	13000	Interpolated
3PH-(PDM,SUB)-2000-AL-MS	2000	2400 - 34500	55 - 77	24 - 41	74 - 84	33	9000	Interpolated
3PH-(PDM,SUB)-2000-AL-MS		2400 - 34500	61 - 77	27 - 41	74 - 84	33	13000	Interpolated
3PH-(PDM,SUB)-2500-AL-MS	2500	2400 - 34500	55 - 77	28 - 43	74 - 84	34	12000	Interpolated
3PH-(PDM,SUB)-2500-AL-MS		2400 - 34500	60 - 77	30 - 43	74 - 84	34	15000	Interpolated
3PH-(PDM,SUB)-2500-AL-MS		2400 - 34500	67 - 77	32 - 43	74 - 84	34	19000	Interpolated

General Notes:

Core and Coil assemblies can be constructed with copper, aluminum, or copper/aluminum combined windings.
 3PH pad mount includes radial feed dead front, loop feed dead front and radial feed live front. Radial feed live front was tested.
 The tank dimensions listed are representative of the oil filled main tank dimensions not the overall dimensions of the transformer. The overall dimensions of the transformer design are typically greater than the tank dimensions by as much as 75" due to components that connect directly to the tank not the foundation. These components include and are not limited to radiators, valves, breakers, gauges, and terminal enclosures.

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Table 2

**COOPER POWER SYSTEMS - CERTIFIED PRODUCT LINE MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0**



Model Line	kVA Rating	High Voltage (kV) Range	Tank Width (in)	Tank Depth (in)	Tank Height (in)	Max CG (in)	Max Weight (lbs)	Representative UUT ¹
3PH-(PDM,SUB)-3000-AL-MS	3000	2400 - 34500	55 - 77	28 - 43	74 - 97	35	11000	Interpolated
3PH-(PDM,SUB)-3000-AL-MS		2400 - 34500	61 - 77	31 - 43	74 - 97	35	15000	Interpolated
3PH-(PDM,SUB)-3000-AL-MS		2400 - 34500	66 - 77	34 - 43	74 - 97	35	20000	Interpolated
3PH-(PDM,SUB)-3750-AL-MS	3750	2400 - 34500	69 - 98	30 - 45	72 - 98	37	13000	Interpolated
3PH-(PDM,SUB)-3750-AL-MS		2400 - 34500	69 - 98	34 - 45	72 - 98	37	17000	Interpolated
3PH-(PDM,SUB)-3750-AL-MS		2400 - 34500	69 - 98	37 - 45	72 - 98	37	21000	Interpolated
3PH-SUB-3750-AL-MS		12470	70	37	104	37	20965	UUT-4

General Notes:

Core and Coil assemblies can be constructed with copper, aluminum, or copper/aluminum combined windings.
 3PH pad mount includes radial feed dead front, loop feed dead front and radial feed live front. Radial feed live front was tested.
 The tank dimensions listed are representative of the oil filled main tank dimensions not the overall dimensions of the transformer. The overall dimensions of the transformer design are typically greater than the tank dimensions by as much as 75" due to components that connect directly to the tank not the foundation. These components include and are not limited to radiators, valves, breakers, gauges, and terminal enclosures.

¹ The units were tested at different times and the UUTs reference the following reports:
 UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

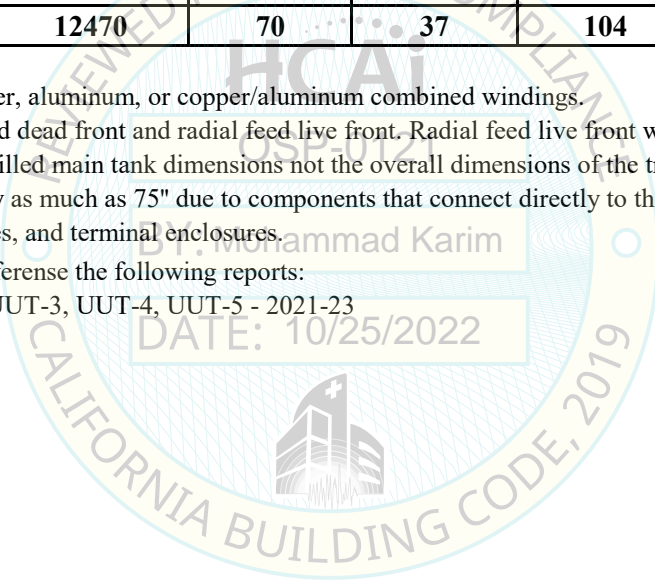


Table 3

COOPER POWER SYSTEMS - CERTIFIED PRODUCT LINE MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER CNC - S_{DS} = 1.48g at z/h = 0



Model Line	kVA Rating	High Voltage (kV) Range	Tank Width (in)	Tank Depth (in)	Tank Height (in)	Max CG (in)	Max Weight (lbs)	Representative UUT ¹
3PH-PDM-3750-CU-MS	3750	14400	80	33	97	37	22345	UUT-5
3PH-(PDM,SUB)-5000-CU-MS	5000	2400 - 34500	67 - 98	31 - 47	74 - 98	38	13500	Interpolated
3PH-(PDM,SUB)-5000-CU-MS		2400 - 34500	73 - 98	36 - 47	74 - 98	38	20000	Interpolated
3PH-(PDM,SUB)-5000-CU-MS		2400 - 34500	78 - 98	39 - 47	74 - 98	38	25000	Interpolated
3PH-(PDM,SUB)-5000-CU-MS		2400 - 34500	85 - 98	41 - 47	74 - 98	38	30000	Interpolated
3PH-(PDM,SUB)-5000-CU-MS		2400 - 34500	98	42 - 47	74 - 98	38	35000	Interpolated
3PH-(PDM,SUB)-5000-CU-MS		2400 - 34500	105	42 - 47	74 - 98	38	36000	Interpolated
3PH-(PDM,SUB)-7500-CU-MS		7500	2400 - 34500	67 - 96	35 - 53	84 - 98	39	16000
3PH-(PDM,SUB)-7500-CU-MS	2400 - 34500		75 - 96	37 - 53	84 - 98	39	20000	Interpolated
3PH-(PDM,SUB)-7500-CU-MS	2400 - 34500		85 - 96	39 - 53	84 - 98	39	25000	Interpolated
3PH-(PDM,SUB)-7500-CU-MS	2400 - 34500		88 - 96	42 - 53	84 - 98	39	30000	Interpolated
3PH-(PDM,SUB)-7500-CU-MS	2400 - 34500		96	44 - 53	84 - 98	39	35000	Interpolated
3PH-(PDM,SUB)-7500-CU-MS	2400 - 34500		105	44 - 53	84 - 98	39	36000	Interpolated
3PH-(PDM,SUB)-10000-CU-MS	10000		2400-34500	86-101	41 - 55	84 - 98	39	28500
3PH-(PDM,SUB)-10000-CU-MS		2400-34500	86-101	42 - 55	84 - 98	39	33500	Interpolated
3PH-(PDM,SUB)-10000-CU-MS		2400-34500	86-101	43 - 55	84 - 98	39	36000	Interpolated
3PH-SUB-10000-CU-MS		34500	86	43	94	39	35730	UUT-2

General Notes:


Core and Coil assemblies can be constructed with copper, aluminum, or copper/aluminum combined windings.

3PH pad mount includes radial feed dead front, loop feed dead front and radial feed live front. Radial feed live front was tested.

The tank dimensions listed are representative of the oil filled main tank dimensions not the overall dimensions of the transformer. The overall dimensions of the transformer design are typically greater than the tank dimensions by as much as 75" due to components that connect directly to the tank not the foundation. These components include and are not limited to radiators, valves, breakers, gauges, and terminal enclosures.

¹ The units were tested at different times and the UUTs reference the following reports:

UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 4	COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX 3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER 45-3750kVA COPPER / ALUMINUM CNC - $S_{DS} = 2.5g$ at $z/h = 0$			 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC.</small> <small>STRUCTURAL & EARTHQUAKE ENGINEERING</small>	
	Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
HV Bushings					
Eaton	2642201B01	15KV, 250A 2HL G-SP110BIL M.S. BUSH ASSY	1	UUT-1	
Eaton	2642201B03	35KV, 250A 2HL G-SP150BIL M.S. BUSH ASSY	1	UUT-4	
Eaton	DB935B200	BUSH HV,35KV,900A,INT SCRNCU,200BIL	7	UUT-3	
LV Bushings					
Eaton	2690286D06	BUSHING,TRI-CLAMP,5/8D,STUD	1	UUT-1	
HJ Industries	2694199A18	BUSH LV,1.2KV,1390/1810A,12EXT/2INT,CU	5	UUT-3	
HJ Industries	2694198A06	BUSH LV,1.2KV,3150A,6EXT/4INT,AL	6	Interpolated	
HJ Industries	2694198A08	BUSH LV,1.2KV,3150A,8EXT/4INT,AL	7	Interpolated	
HJ Industries	2694198A12	BUSH LV,1.2KV,3150A,12EXT/4INT,AL	7	Interpolated	
HJ Industries	11953879	5KV 2600A 4-HL INT/EXT SW BUSH ASSY	15	Interpolated	
HJ Industries	2694198A46	BUSH LV,1.2KV,4500A,6EXT/4INT,CU	17	Interpolated	
HJ Industries	2694198A48	BUSH LV,1.2KV,4500A,8EXT/4INT,CU	18	Interpolated	
HJ Industries	2694198A50	BUSH LV,1.2KV,4500A,10EXT/4INT,CU	20	Interpolated	
HJ Industries	2694198A52	BUSH LV,1.2KV,4500A,12EXT/4INT,CU	22	UUT-4	
HJ Industries	2680880A111	1.2KV 6000A 10-HL EXT 8-HL INT BUSHING	20	Interpolated	
HJ Industries	2680880A125	1.2KV 6000A 12-HL EXT 8-HL INT BUSHING	21	UUT-5	
Over-Voltage Protection					
Eaton	AD150PA100	ARREST DISC,INT NUT,BLK,PDLK,DECAL,AL	0.3	UUT-4	
Eaton	CLU23D15	15KV CLU ARRESTER W/LEAD, ISO LINK	0.4	UUT-4	
Over-Current Protection Housing					
Eaton	4000361C99FV	4011000B31 - BAYONET,23KV SW,FLPR,CART	1.6	UUT-1	

² The units were tested at different times and the UUTs referense the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 4

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER / ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Expulsion Fuses				
Eaton	4000353C04B	FUSE LINK,BAYONET,CURRENT SENSING,6A	0.1	UUT-1
Eaton	3437629C16M	FUSE,CART,100A,15.5KV,DUAL SENSING	0.1	UUT-1
Eaton	3544030M61M	FUSE,ELSP,30A,15.5KV,MINI	2	UUT-1
Eaton	CBUC38100D100	FUSE,ELSP,100A,38KV,3"D	10	Interpolated
Eaton	CBUC38080D100	FUSE,ELSP,80A,38KV,3"D	10	Interpolated
Eaton	CBUC23125D100	FUSE,ELSP,125A,23KV,3"D	11	Interpolated
Eaton	CBUC23150D100	FUSE,ELSP,150A,23KV,3"D	11	Interpolated
Eaton	CBUC15125C100	FUSE,ELSP,125A,15.5/17.2KV,2"D	11	Interpolated
Eaton	CBUC15180D100	FUSE,ELSP,180A,15.5KV,3"D	11	Interpolated
Eaton	CBUC38120D100	FUSE,ELSP,120A,38KV,3"D	12	Interpolated
Eaton	CBUC23165D100	FUSE,ELSP,165A,23KV,3"D	13	Interpolated
Eaton	CBUC38140D100	FUSE,ELSP,140A,38KV,3"D	13	UUT-3
Vacuum Fault Interrupter VFI				
Eaton	P22040572C0021	VFI KIT-15kV(16kA)-3PH-OIL	83	UUT-4
Eaton	P22040572C0020	VFI KIT-15KV 16KA -3PH-OIL W/ 2 AUX SW'S	83	Interpolated
Eaton	P22040572C0024	VFI KIT-15KV 16KA W/VB	83	Interpolated
Eaton	P22040572C0023	VFI KIT-15KV 16KA 3PH-OIL 2 AUX SW'S /VB	83	Interpolated
Eaton	P22040572C0013	VFI KIT-3PH-OIL-15/25KV 12KA	83	Interpolated
Eaton	P22040572C0012	VFI KIT-35KV-3PH-OIL 12 KA	83	Interpolated
Eaton	P22040572C0019	VFI KIT-35KV-3PH-OIL 12 KA W/OUT AUX SW	83	Interpolated
Eaton	P22040572C0017	VFI KIT-35KV-3PH-OIL 12 KA WITH 2 AUX SW'S	83	UUT-3

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 4

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER / ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Radiators				
TTP	1241750B11	59.1CTRS 11PAN 8HDR 20.5W RADIATOR	399	UUT-3
TTP	1241750B14	59.1CTRS 14PAN 8HDR 20.5W RADIATOR	508	Interpolated
TTP	1241531B14	66.9CTRS 14PAN 8HDR 20.5W RADIATOR	573	Interpolated
TTP	1241750B16	59.1CTRS 16PAN 8HDR 20.5W RADIATOR	581	Interpolated
TTP	1241936B13	78.7CTRS 13PAN 8HDR 20.5W RADIATOR	624	Interpolated
TTP	1241531B16	66.9CTRS 16PAN 8HDR 20.5W RADIATOR	656	Interpolated
TTP	1241750B19	59.1CTRS 19PAN 8HDR 20.5W RADIATOR	690	Interpolated
TTP	1241936B16	78.7CTRS 16PAN 8HDR 20.5W RADIATOR	768	Interpolated
TTP	1241531B19	66.9CTRS 19PAN 8HDR 20.5W RADIATOR	779	Interpolated
TTP	1241750B22	59.1CTRS 22PAN 8HDR 20.5W RADIATOR	799	Interpolated
TTP	1241531B22	66.9CTRS 22PAN 8HDR 20.5W RADIATOR	902	Interpolated
TTP	1241936B19	78.7CTRS 19PAN 8HDR 20.5W RADIATOR	912	UUT-5
TTP	1241936B22	78.7CTRS 22PAN 8HDR 20.5W RADIATOR	1056	UUT-5
TTP	1242361B13	ASSY W/VALVE 13PAN 66.9CTRS RADIATOR	675	Interpolated
TTP	1242360B22	ASSY W/VALVE 22PAN 59.1CTRS RADIATOR	799	Interpolated
TTP	1242361B16	ASSY W/VALVE 16PAN 66.9CTRS RADIATOR	827	Interpolated
TTP	1242361B22	ASSY W/VALVE 22PAN 66.9CTRS RADIATOR	1138	Interpolated
TTP	1242362B19	ASSY W/VALVE 19PAN 78.7CTRS RADIATOR	1147	Interpolated
TTP	1242362B22	ASSY W/VALVE 22PAN 78.7CTRS RADIATOR	1147	UUT-4
Tap Changer				
Eaton	2237179C02M	SWITCH,TC,3PH,300A,3DK,BT(8),AG,LVR	10	UUT-4
Eaton	2237500C33	SWITCH,TC,100A,3PH,5POS,A-E	1	UUT-1

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 4

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER / ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Dual Voltage Switch				
Eaton	2237403B01M	SWITCH,DV,150A,3PH,6DK,BP,BT(6/4),T/HTSK	5	UUT-1
Loadbreak Switch				
Eaton	LS2R338H3N1A	SWITCH,LB,2POS,3PH,38KV,RM	12	UUT-1
Eaton	P22041486C0001	VISIBLE BREAK SW KIT-2POS FRONT MTD RH	12	Interpolated
Eaton	LS4RH3R12B	SWITCH,LB,4POS,RM,HZ,3PH,1R,12KA,BBM	12	Interpolated
Eaton	LS4RH3S12B1	SWITCH,LB,4POS,RM,HZ,3PH,SB,12KA,BBM	12	Interpolated
Eaton	LS4RH3T12B	SWITCH,LB,4POS,RM,HZ,3PH,TB,12KA,BBM	12	Interpolated
Eaton	LS4RH3T12M	SWITCH,LB,4POS,RM,HZ,3PH,TB,12KA,MBB	12	Interpolated
Eaton	LS4RH3V12B	SWITCH,LB,4POS,RM,HZ,3PH,VB,12KA,BBM	12	Interpolated
Eaton	LS4RH3V12M	SWITCH,LB,4POS,RM,HZ,3PH,VB,12KA,MBB	12	UUT-4
Current Transformers				
Meramec Electrical Products	5000073641	5000073641 -CT UNR SOLID 250:5 C200 60HZ MR	17	UUT-4
Meramec Electrical Products	5000073416	5000073416 -CT UNR SOLID 150:5 C200 60HZ MR	18	Interpolated
Meramec Electrical Products	5083003A02	5083003A02 -CT UNR SOLID 4000:5 C100 60HZ MR	18	Interpolated
Meramec Electrical Products	13508961	13508961 -CT UNR SOLID 200:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	5000073459	5000073459 -CT UNR SOLID 800:5 C200 60HZ MR	20	Interpolated
Meramec Electrical Products	5000073970	5000073970 -CT UNR SOLID 4000:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	13490249	13490249 -CT UNR SOLID 600:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	5000070696	5000070696 -CT UNR SOLID 400:5 C100 60HZ MR	21	Interpolated
Meramec Electrical Products	5000073832	5000073832 -CT UNR SOLID 2500:5 C100 60HZ MR	21	Interpolated
Meramec Electrical Products	5000069640	5000069640 -CT UNR SOLID 200:5 C200 60HZ MR	22	Interpolated
Meramec Electrical Products	5000073275	5000073275 -CT UNR SOLID 1600:5 C100 60HZ MR	22	Interpolated
Meramec Electrical Products	13426633	13426633 -CT UNR SOLID 6000:5 C100 SR	22	Interpolated
Meramec Electrical Products	12827002	12827002 -CT UNR SOLID 400:5 C100 60HZ SR	22	Interpolated
Meramec Electrical Products	5000073245	5000073245 -CT UNR SOLID 1000:5 C100 60HZ MR	23	Interpolated

² The units were tested at different times and the UUTs referense the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 4

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
45-3750kVA COPPER / ALUMINUM CNC - $S_{DS} = 2.5g$ at $z/h = 0$**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Current Transformers - cont'd				
Meramec Electrical Products	5000070547	5000070547 -CT UNR SOLID 100:5 C100 60HZ SR	25	Interpolated
Meramec Electrical Products	5000073979	5000073979 -CT UNR SOLID 2500:5 C100 60HZ SR	25	Interpolated
Meramec Electrical Products	5000069644	5000069644 -CT UNR SOLID 4000:5 C200 60HZ MR	25	Interpolated
Meramec Electrical Products	5000069642	5000069642 -CT UNR SOLID 6000:5 C200 60HZ MR	27	Interpolated
Meramec Electrical Products	5000070302	5000070302 -CT UNR SOLID 600:5 C100 60HZ MR	28	Interpolated
Meramec Electrical Products	5000073674	5000073674 -CT UNR SOLID 1000:5 C200 60HZ MR	28	Interpolated
Meramec Electrical Products	5000073950	5000073950 -CT UNR SOLID 100:5 C200 60HZ MR	30	Interpolated
Meramec Electrical Products	5081132A01	5081132A01 -CT UNR SOLID 300:5 C100 60HZ MR	30	Interpolated
Meramec Electrical Products	5000070775	5000070775 -CT UNR SOLID 800:5 C100 60HZ MR	30	Interpolated
Meramec Electrical Products	5081132A02	5081132A02 -CT UNR SOLID 600:5 C200 60HZ MR	31	Interpolated
Meramec Electrical Products	5000070099	5000070099 -CT UNR SOLID 1600:5 C200 60HZ MR	32	Interpolated
Meramec Electrical Products	12563900	12563900 -CT UNR SOLID 150:5 C100 60HZ SR	35	Interpolated
Meramec Electrical Products	5090235A01	5090235A01 -CT UNR SOLID 200:5 C100 60HZ MR	35	Interpolated
Meramec Electrical Products	5081132A04	5081132A04 -CT UNR SOLID 300:5 C200 60HZ MR	35	Interpolated
Meramec Electrical Products	5000073207	5000073207 -CT UNR SOLID 1500:5 C200 60HZ MR	38	Interpolated
Meramec Electrical Products	5083002A01	5083002A01 -CT UNR SOLID 1200:5 C200 60HZ MR	40	Interpolated
Meramec Electrical Products	5000073271	5000073271 -CT UNR SOLID 1200:5 C100 60HZ MR	41	Interpolated
Meramec Electrical Products	5000069641	5000069641 -CT UNR SOLID 400:5 C200 60HZ MR	48	Interpolated
Meramec Electrical Products	5086515A01	5086515A01 -CT UNR SOLID 2000:5 C200 60HZ MR	51	Interpolated
Meramec Electrical Products	5000070303	5000070303 -CT UNR SOLID 2000:5 C100 60HZ MR	52	Interpolated
Meramec Electrical Products	5081132A03	5081132A03 -CT UNR SOLID 750/1500/3000:5 C100 60	75	Interpolated
Meramec Electrical Products	5086749A01	5086749A01 -CT UNR SOLID 3000:5 C200 60HZ MR	96	UUT-4

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23


Table 4	COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX 3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER 45-3750kVA COPPER / ALUMINUM CNC - S_{DS} = 2.5g at z/h = 0			 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING</small>	
Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²	
Potential Transformers					
Eaton	PCW0178	XFMR ASY-12470:120VAC-1.5KVA-60HZ	15	UUT-4	
Eaton	PCW0189	XFMR ASY- 4160:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0183	XFMR ASY- 2400:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0166	XFMR ASY- 7200:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0174	XFMR ASY-13200:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0188	XFMR ASY- 7620:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0190	XFMR ASY-13800:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0181	XFMR ASY- 7960:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0167	XFMR ASY-14400:120VAC-1.5KVA-60HZ	15	Interpolated	
Eaton	PCW0196	XFMR ASY - 19920:120VAC - 1.5KVA - 60HZ	15	UUT-3	
Monitoring Devices					
HJ Enterprises	DV1000-002	1.0" BR HEX-NIP&PLUG-W/SAMP VALVE ASSY	3	UUT-1	
HJ Enterprises	DV1013-002	2.0" BR HEX-NIP&PLUG-W/SAMP VALVE ASSY	5	Interpolated	
Qualitrol	151-101-1	THERM W/ANSI WELL-40TO120	1	UUT-1	
Qualitrol	020-550-01	MAGNETIC OIL LEVEL-LIQUID LEVEL GAUGE	1	UUT-1	
Qualitrol	50-35E	PRES-VAC +10 PSI,AIR 50SCF@15PSI GAUGE	1	UUT-4	
Qualitrol	201-020-01N	VALVE: PRESS REL BETA 1776K (1PH STD)	1	UUT-1	
Qualitrol	035-067-01 CS33028	LIQUID LEVEL W/MIN SW	1	UUT-4	
Qualitrol	167-214-01 CS-49445	LIQUID-TEMP W/2 SW	1	UUT-4	
Qualitrol	167-292-01 CS-41800	WINDING TEMP INDICATOR	1	UUT-4	
GEMS	PS-E-6PSI-R-4M-C-HN	PRESSURE ALARM GAGE	1	UUT-4	
GEMS	PS-EV-5"HG-R-4M-C-HN	VACUUM ALARM GAGE	1	UUT-4	
Qualitrol	208-001-39	PRESSURE RELIEF DEVICE	1	UUT-4	
Qualitrol	910-THD-A-NO-STD	RAPID RISE RELAY	2	UUT-4	
KRENZ	F24-A10108	FAN	10	UUT-4	
Qualitrol	351-2-5A	AIR BLEEDER	1	UUT-4	
² The units were tested at different times and the UUTs referense the following reports: UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23					

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
HV Bushings				
Eaton	2642201B01	15KV, 250A 2HL G-SP110BIL M.S. BUSH ASSY	0.9	UUT-1
Eaton	2642201B03	35KV, 250A 2HL G-SP150BIL M.S. BUSH ASSY	1.2	UUT-4
Eaton	DB625B125	BUSH HV: 25KV 600A DB W/INT SCRNL AL	4.1	UUT-2
Eaton	DB935B200	BUSH HV, 35KV, 900A, INT SCRNL, CU, 200BIL	6.8	UUT-3
Porcelain Products	2680880A102	25KV 2072A 4-HL EXT 1.63 INT BUSH ASSY	8.4	UUT-2
LV Bushings				
Eaton	2690286D06	BUSHING, TRI-CLAMP, 5/8D, STUD	0.6	UUT-1
HJ Industries	11953879	5KV 2600A 4-HL INT/EXT SW BUSH ASSY	15	UUT-2
HJ Industries	2694199A18	BUSH LV, 1.2KV, 1390/1810A, 12EXT/2INT, CU	5.2	UUT-3
HJ Industries	2694198A46	BUSH LV, 1.2KV, 4500A, 6EXT/4INT, CU	16.7	Interpolated
HJ Industries	2694198A48	BUSH LV, 1.2KV, 4500A, 8EXT/4INT, CU	18.4	Interpolated
HJ Industries	2694198A50	BUSH LV, 1.2KV, 4500A, 10EXT/4INT, CU	20.1	Interpolated
HJ Industries	2694198A52	BUSH LV, 1.2KV, 4500A, 12EXT/4INT, CU	21.8	UUT-4
HJ Industries	2680880A111	1.2KV 6000A 10-HL EXT 8-HL INT BUSHING	20	Interpolated
HJ Industries	2680880A125	1.2KV 6000A 12-HL EXT 8-HL INT BUSHING	21	UUT-5
Over-Voltage Protection				
Eaton	AD150PA100	ARREST DISC, INT NUT, BLK, PDLK, DECAL, AL	0.3	UUT-4
Eaton	CLU23D15	15KV CLU ARRESTER W/LEAD, ISO LINK	0.4	UUT-4
Over-Current Protection Housing				
Eaton	4000361C99FV	4011000B31 - BAYONET, 23KV SW, FLPR, CART	1.6	UUT-1

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Expulsion Fuses				
Eaton	4000353C04B	FUSE LINK,BAYONET,CURRENT SENSING,6A	0.1	UUT-1
Eaton	3437629C16M	FUSE,CART,100A,15.5KV,DUAL SENSING	0.1	UUT-1
Eaton	3544030M61M	FUSE,ELSP,30A,15.5KV,MINI	2.2	UUT-1
Eaton	CBUC38100D100	FUSE,ELSP,100A,38KV,3"D	10.0	Interpolated
Eaton	CBUC38080D100	FUSE,ELSP,80A,38KV,3"D	10.0	Interpolated
Eaton	CBUC23125D100	FUSE,ELSP,125A,23KV,3"D	10.5	Interpolated
Eaton	CBUC23150D100	FUSE,ELSP,150A,23KV,3"D	10.5	Interpolated
Eaton	CBUC15125C100	FUSE,ELSP,125A,15.5/17.2KV,2"D	10.7	Interpolated
Eaton	CBUC15180D100	FUSE,ELSP,180A,15.5KV,3"D	10.7	Interpolated
Eaton	CBUC38120D100	FUSE,ELSP,120A,38KV,3"D	11.5	Interpolated
Eaton	CBUC23165D100	FUSE,ELSP,165A,23KV,3"D	12.7	Interpolated
Eaton	CBUC38140D100	FUSE,ELSP,140A,38KV,3"D	12.8	UUT-3
Vacuum Fault Interrupter VFI				
Eaton	P22040572C0021	VFI KIT-15kV(16kA)-3PH-OIL	83	UUT-4
Eaton	P22040572C0020	VFI KIT-15KV 16KA -3PH-OIL W/ 2 AUX SW'S	83	Interpolated
Eaton	P22040572C0024	VFI KIT-15KV 16KA W/VB	83	Interpolated
Eaton	P22040572C0023	VFI KIT-15KV 16KA 3PH-OIL 2 AUX SW'S /VB	83	Interpolated
Eaton	P22040572C0013	VFI KIT-3PH-OIL-15/25KV 12KA	83	Interpolated
Eaton	P22040572C0012	VFI KIT-35KV-3PH-OIL 12 KA	83	Interpolated
Eaton	P22040572C0019	VFI KIT-35KV-3PH-OIL 12 KA W/OUT AUX SW	83	UUT-2
Eaton	P22040572C0017	VFI KIT-35KV-3PH-OIL 12 KA WITH 2 AUX SW'S	83	UUT-3

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Radiators				
TTP	1241750B11	59.1CTRS 11PAN 8HDR 20.5W RADIATOR	399	UUT-3
TTP	1241750B14	59.1CTRS 14PAN 8HDR 20.5W RADIATOR	508	Interpolated
TTP	1241531B14	66.9CTRS 14PAN 8HDR 20.5W RADIATOR	573	Interpolated
TTP	1241750B16	59.1CTRS 16PAN 8HDR 20.5W RADIATOR	581	Interpolated
TTP	1241936B13	78.7CTRS 13PAN 8HDR 20.5W RADIATOR	624	Interpolated
TTP	1241531B16	66.9CTRS 16PAN 8HDR 20.5W RADIATOR	656	Interpolated
TTP	1241750B19	59.1CTRS 19PAN 8HDR 20.5W RADIATOR	690	Interpolated
TTP	1241936B16	78.7CTRS 16PAN 8HDR 20.5W RADIATOR	768	Interpolated
TTP	1241531B19	66.9CTRS 19PAN 8HDR 20.5W RADIATOR	779	Interpolated
TTP	1241750B22	59.1CTRS 22PAN 8HDR 20.5W RADIATOR	799	Interpolated
TTP	1241531B22	66.9CTRS 22PAN 8HDR 20.5W RADIATOR	902	Interpolated
TTP	1241936B19	78.7CTRS 19PAN 8HDR 20.5W RADIATOR	912	UUT-5
TTP	1241936B22	78.7CTRS 22PAN 8HDR 20.5W RADIATOR	1056	UUT-5
TTP	1242361B13	ASSY W/VALVE 13PAN 66.9CTRS RADIATOR	675	Interpolated
TTP	1242360B22	ASSY W/VALVE 22PAN 59.1CTRS RADIATOR	799	Interpolated
TTP	1242361B16	ASSY W/VALVE 16PAN 66.9CTRS RADIATOR	827	Interpolated
TTP	1242361B22	ASSY W/VALVE 22PAN 66.9CTRS RADIATOR	1138	Interpolated
TTP	1242362B19	ASSY W/VALVE 19PAN 78.7CTRS RADIATOR	1147	UUT-2
TTP	1242362B22	ASSY W/VALVE 22PAN 78.7CTRS RADIATOR	1147	UUT-4
Tap Changer				
Eaton	2237179C02M	SWITCH,TC,3PH,300A,3DK,BT(8),AG,LVR	10	UUT-4
Eaton	2237500C33	SWITCH,TC,100A,3PH,5POS,A-E	1	UUT-1

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Dual Voltage Switch				
Eaton	2237403B01M	SWITCH,DV,150A,3PH	4.7	UUT-1
Loadbreak Switch				
Eaton	LS2R338H3N1A	SWITCH,LB,2POS,3PH,38KV,RM	12	UUT-1
Eaton	LS4RH3R12B	SWITCH,LB,4POS,RM,HZ,3PH,1R,12KA,BBM	12	Interpolated
Eaton	LS4RH3S12B1	SWITCH,LB,4POS,RM,HZ,3PH,SB,12KA,BBM	12	Interpolated
Eaton	LS4RH3T12B	SWITCH,LB,4POS,RM,HZ,3PH,TB,12KA,BBM	12	Interpolated
Eaton	LS4RH3T12M	SWITCH,LB,4POS,RM,HZ,3PH,TB,12KA,MBB	12	Interpolated
Eaton	LS4RH3V12B	SWITCH,LB,4POS,RM,HZ,3PH,VB,12KA,BBM	12	Interpolated
Eaton	LS4RH3V12M	SWITCH,LB,4POS,RM,HZ,3PH,VB,12KA,MBB	12	UUT-4
Eaton	P22041486C0001	VISIBLE BREAK SW KIT-2POS FRONT MTD RH	12	UUT-2
Current Transformers				
Meramec Electrical Products	5000073641	5000073641 -CT UNR SOLID 250:5 C200 60HZ MR	17	UUT-4
Meramec Electrical Products	5000073416	5000073416 -CT UNR SOLID 150:5 C200 60HZ MR	18	Interpolated
Meramec Electrical Products	5083003A02	5083003A02 -CT UNR SOLID 4000:5 C100 60HZ MR	18	Interpolated
Meramec Electrical Products	13508961	13508961 -CT UNR SOLID 200:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	5000073459	5000073459 -CT UNR SOLID 800:5 C200 60HZ MR	20	Interpolated
Meramec Electrical Products	5000073970	5000073970 -CT UNR SOLID 4000:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	13490249	13490249 -CT UNR SOLID 600:5 C100 60HZ SR	20	Interpolated
Meramec Electrical Products	5000070696	5000070696 -CT UNR SOLID 400:5 C100 60HZ MR	21	Interpolated
Meramec Electrical Products	5000073832	5000073832 -CT UNR SOLID 2500:5 C100 60HZ MR	21	Interpolated
Meramec Electrical Products	5000069640	5000069640 -CT UNR SOLID 200:5 C200 60HZ MR	22	Interpolated
Meramec Electrical Products	5000073275	5000073275 -CT UNR SOLID 1600:5 C100 60HZ MR	22	Interpolated
Meramec Electrical Products	13426633	13426633 -CT UNR SOLID 6000:5 C100 SR	22	Interpolated

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Current Transformers - cont'd				
Meramec Electrical Products	12827002	12827002 -CT UNR SOLID 400:5 C100 60HZ SR	22	Interpolated
Meramec Electrical Products	5000073245	5000073245 -CT UNR SOLID 1000:5 C100 60HZ MR	23	Interpolated
Meramec Electrical Products	5000070547	5000070547 -CT UNR SOLID 100:5 C100 60HZ SR	25	UUT-2
Meramec Electrical Products	5000073979	5000073979 -CT UNR SOLID 2500:5 C100 60HZ SR	25	Interpolated
Meramec Electrical Products	5000069644	5000069644 -CT UNR SOLID 4000:5 C200 60HZ MR	25	Interpolated
Meramec Electrical Products	5000069642	5000069642 -CT UNR SOLID 6000:5 C200 60HZ MR	27	Interpolated
Meramec Electrical Products	5000070302	5000070302 -CT UNR SOLID 600:5 C100 60HZ MR	28	Interpolated
Meramec Electrical Products	5000073674	5000073674 -CT UNR SOLID 1000:5 C200 60HZ MR	28	Interpolated
Meramec Electrical Products	5000073950	5000073950 -CT UNR SOLID 100:5 C200 60HZ MR	30	Interpolated
Meramec Electrical Products	5081132A01	5081132A01 -CT UNR SOLID 300:5 C100 60HZ MR	30	Interpolated
Meramec Electrical Products	5000070775	5000070775 -CT UNR SOLID 800:5 C100 60HZ MR	30	Interpolated
Meramec Electrical Products	5081132A02	5081132A02 -CT UNR SOLID 600:5 C200 60HZ MR	31	Interpolated
Meramec Electrical Products	5000070099	5000070099 -CT UNR SOLID 1600:5 C200 60HZ MR	32	Interpolated
Meramec Electrical Products	12563900	12563900 -CT UNR SOLID 150:5 C100 60HZ SR	35	Interpolated
Meramec Electrical Products	5090235A01	5090235A01 -CT UNR SOLID 200:5 C100 60HZ MR	35	Interpolated
Meramec Electrical Products	5081132A04	5081132A04 -CT UNR SOLID 300:5 C200 60HZ MR	35	Interpolated
Meramec Electrical Products	5000073207	5000073207 -CT UNR SOLID 1500:5 C200 60HZ MR	38	Interpolated
Meramec Electrical Products	5083002A01	5083002A01 -CT UNR SOLID 1200:5 C200 60HZ MR	40	Interpolated
Meramec Electrical Products	5000073271	5000073271 -CT UNR SOLID 1200:5 C100 60HZ MR	41	Interpolated
Meramec Electrical Products	5000069641	5000069641 -CT UNR SOLID 400:5 C200 60HZ MR	48	Interpolated
Meramec Electrical Products	5086515A01	5086515A01 -CT UNR SOLID 2000:5 C200 60HZ MR	51	Interpolated
Meramec Electrical Products	5000070303	5000070303 -CT UNR SOLID 2000:5 C100 60HZ MR	52	Interpolated
Meramec Electrical Products	5081132A03	5081132A03 -CT UNR SOLID 750/1500/3000:5 C100 60	75	Interpolated
Meramec Electrical Products	5086749A01	5086749A01 -CT UNR SOLID 3000:5 C200 60HZ MR	96	UUT-4

² The units were tested at different times and the UUTs reference the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

Table 5

**COOPER POWER SYSTEMS - CERTIFIED SUBCOMPONENT MATRIX
3-PHASE PAD MOUNT DISTRIBUTION TRANSFORMER
5000-10000kVA COPPER - S_{DS} = 1.48g at z/h = 0**



Manufacturer	Model	Description	Weight (lbs)	Representative UUT ²
Potential Transformers				
Eaton	PCW0178	XFMR ASY-12470:120VAC-1.5KVA-60HZ	15	UUT-4
Eaton	PCW0189	XFMR ASY- 4160:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0183	XFMR ASY- 2400:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0166	XFMR ASY- 7200:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0174	XFMR ASY-13200:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0188	XFMR ASY- 7620:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0190	XFMR ASY-13800:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0181	XFMR ASY- 7960:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0167	XFMR ASY-14400:120VAC-1.5KVA-60HZ	15	Interpolated
Eaton	PCW0196	XFMR ASY - 19920:120VAC - 1.5KVA - 60HZ	15	UUT-3
Monitoring Devices				
HJ Enterprises	DV1000-002	1.0" BR HEX-NIP&PLUG-W/SAMP VALVE ASSY	3	UUT-1
HJ Enterprises	DV1013-002	2.0" BR HEX-NIP&PLUG-W/SAMP VALVE ASY	5	UUT-2
Qualitrol	151-101-1	THERM W/ANSI WELL-40TO120	1	UUT-1
Qualitrol	020-550-01	MAGNETIC OIL LEVEL-LIQUID LEVEL GAUGE	1	UUT-1
Qualitrol	50-35E	PRES-VAC +10 PSI,AIR 50SCF@15PSI GAUGE	1	UUT-4
Qualitrol	201-020-01N	VALVE: PRESS REL BETA 1776K (1PH STD)	1	UUT-1
Qualitrol	035-067-01 CS33028	LIQUID LEVEL W/MIN SW	1	UUT-4
Qualitrol	167-214-01 CS-49445	LIQUID TEMP W/2 SW	1	UUT-4
Qualitrol	167-292-01 CS-41800	WINDING TEMP INDICATOR	1	UUT-4
Gems	PS-E-6PSI-R-4M-C-HN	PRESSURE ALARM GAGE	1	UUT-4
GEMS	PS-EV-5"HG-R-4M-C-HN	VACUUM ALARM GAGE	1	UUT-4
Qualitrol	208-001-39	PRESSURE RELIEF DEVICE	1	UUT-4
Qualitrol	910-THD-A-NO-STD	RAPID RISE RELAY	2	UUT-4
KRENZ	F24-A10108	FAN	10	UUT-4
Qualitrol	351-2-5A	AIR BLEEDER	1	UUT-4

² The units were tested at different times and the UUTs referense the following reports:
UUT-1 - T58059-1 / UUT-2 - T58059-2 / UUT-3, UUT-4, UUT-5 - 2021-23

UUT-1

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (4) 3/4" diameter grade 5 bolts.



Manufacturer: Cooper Power Stystems / Eaton	Test Location: Wyle Laboratories
Product Line: Three Phase Pad Mount Dist. Transformer	Report Number: T598059-1
Model Line Number: 3PH-PDM-045-AL-MS	UUT Designation: 000MP05KNXA
	UUT ID No: CP1050009934

UUT Function: Steps down voltage to the level used by consumers.

UUT Description: The unit is comprised of a standalone floor mounted mild steel tank with aluminum core and coil.

UUT Components: Mild Steel Tank, 45kVA aluminum core and coil, HV Bushings (2642201B01), LV Bushings (2690286D06), Over-Current Protection Housing (4000361C99FV), Expulsion Fuses (4000353C04B, 3437629C16M, 3544030M16M), Tap Changer (2237500C33), Dual Voltage Switch (2237403B01M), Loadbreak Switch (LS2R338H3N1A) and monitoring devices (DV1000-002, 151-101-1, 020-550-01, 201-020-01N).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
	Tank / Overall	Tank / Overall	Tank / Overall			
2,716	45" / 56"	19" / 49"	57" / 67"	13.0	18.0	31.0

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	2.50g	1.00g	1.68g	0.68g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-2

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (25) 3/4" diameter grade 5 bolts.



Manufacturer: Cooper Power Systems / Eaton	Test Location: Wyle Laboratories
Product Line: Three Phase Pad Mount Dist. Transformer	Report Number: T598059-2
Model Line Number: 3PH-SUB-10000-CU-MS	UUT Designation: 00003A71F0BS
	UUT ID No: CP1059001575

UUT Function: Steps down voltage to the level used by consumers.

UUT Description: The unit is comprised of a standalone floor mounted mild steel tank with copper core and coil.

UUT Components: Mild Steel Tank, 10000kVA copper core and coil, HV Bushings (DB625B125, 2680880A102), LV Bushings (11953879), Vacuum Fault Interrupter (P22040572C0019), Radiators (1242362B19), Loadbreak Switch (P22041486C0001), Current Transformers (5000070547) and Monitoring Devices (DV1013-002).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
	Tank / Overall	Tank / Overall	Tank / Overall			
35,730	86" / 121"	43" / 94"	98" / 107"	27.0	10.5	>33

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	1.48	0.00	1.50	1.48	0.59	1.29g	0.52g

Note: The unit was seismically tested biaxially to S_{DS} = 1.93g therefore the certification is valid for S_{DS} / 1.3 = 1.48g. The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-3

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (8) 3/4" diameter grade 5 bolts.



Manufacturer: Cooper Power Systems / Eaton	Test Location: SEESL
Product Line: Three Phase Pad Mount Dist. Transformer	Report Number: 2021.23
Model Line Number: 3PH-SUB-500-CU-MS	UUT Designation: 002LA67XBBS
UUT Function: Steps down voltage to the level used by consumers.	
UUT Description: The unit is comprised of a standalone floor mounted mild steel tank with copper core and coil.	
UUT Components: Mild Steel Tank, 500kVA copper core and coil, HV Bushing (DB935B200), LV Bushing (2694199A18), Expulsion Fuses (CBUC38140D100), Radiators (1241750B11), Potential Transformers (PCW0196).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
	Tank / Overall	Tank / Overall	Tank / Overall			
11,755	66" / 113"	40" / 78"	82" / 90"	14.9	19.4	18.5

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	2.50g	1.00g	1.68g	0.68g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-4

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Floor mounted with (8) 3/4" diameter grade 5 bolts.



Manufacturer: Cooper Power Systems / Eaton **Test Location:** SEESL

Product Line: Three Phase Pad Mount Dist. Transformer **Report Number:** 2021.23

Model Line Number: 3PH-SUB-3750-AL-MS **UUT Designation:** 0020BA11FNEA

UUT Function: Steps down voltage to the level used by consumers.

UUT Description: The unit is comprised of a standalone floor mounted mild steel tank with aluminum core and coil.

UUT Components: Mild Steel Tank, 3750kVA aluminum core and coil, HV Bushing (2642201B03), LV Bushing (2694198A52), Over-Voltage Protection (AD150PA100, CLU23D15), Vacuum Fault Interrupter (P22040572C0021), Radiators (1242362B22), Tap Changer (2237179C02M), Loadbreak Switch (LS4RH3V12M), Current Transformer (5000073641, 5086749A01), Potential Transformer (PCW0178) and Monitoring Devices (50-35E, 035-067-01, 167-214-01, 167-292-01, PS-E-6PSI-R-4M-C-HN, PS-EV-5"HG-R-4M-C-H, 208-001-39, 910-THD-A-NO-STD, F24-A10108, 351-2-5a).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
	Tank / Overall	Tank / Overall	Tank / Overall			
20,965	70" / 117"	37" / 96"	104" / 117"	7.4	11.6	9.3

SEISMIC TEST PARAMETERS

Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	2.50g	1.00g	1.68g	0.68g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-5

UNIT UNDER TEST (UUT)
SUMMARY SHEET



Mounting Details: Floor mounted with (4) 1-3/8" diameter grade 5 bolts with 1/2" thick plate washers.

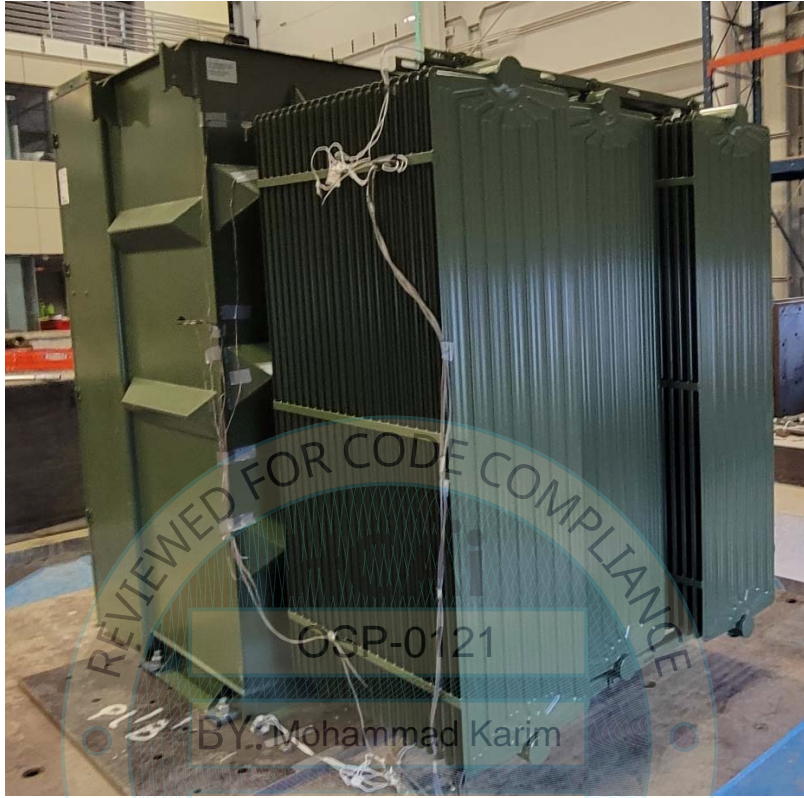


Table with 2 columns: Manufacturer, Product Line, Model Line Number, UUT Function, UUT Description, UUT Components. Values include Cooper Power Systems / Eaton, Three Phase Pad Mount Dist. Transformer, 3PH-PDM-3750-CU-MS, Steps down voltage to the level used by consumers, and Mild Steel Tank, 3750kVA copper core and coil, LV Bushings (2680880A125) and Radiators (1241936B19, 1241936B22).

UUT PROPERTIES

Table with 3 main columns: Weight (lb), Dimensions (inches), and Natural Frequency (Hz). Dimensions include Width, Depth, and Height for Tank and Overall. Natural Frequency includes FB, SS, and V values.

SEISMIC TEST PARAMETERS

Table with 9 columns: Test Criteria, SDS (g), z/h, Ip, AFLX-H, ARIG-H, AFLX-V, ARIG-V. Value for CBC 2019 / ICC-ES-AC156 is provided for all parameters.

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.