



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY
APPLICATION #: OSP - 0162 - 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [] New [X] Renewal

Manufacturer Information

Manufacturer: MTE Corporation / TEAL Electronics Corporation

Manufacturer's Technical Representative: Roderick Harvey

Mailing Address: 4350 Executive Dr., Suite 315, San Diego, CA 92121

Telephone: 858.366.7540 Email: roderick.harvey@mtecorp.com

Product Information

Product Name: Customizable PDU / PCDU / VRDU Power Distribution Units

Product Type: Power Distribution Units

Product Model Number: Various (See Attachment)
(List all unique product identification numbers and/or part numbers)

General Description: Floor Mount & Wall Mount Power Distribution Units. Seismic enhancements made to the test units
and modifications required to address the anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid Base Mounted & Rigid Wall Mounted

Applicant Information

Applicant Company Name: SEESTudio, Inc.

Contact Person: Dan Junker, SE

Mailing Address: 2655 Camino del Rio N. Suite 100, San Diego, CA 92108

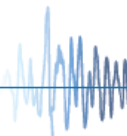
Telephone: 619.606.5058 Email: djunker@seestudioinc.com

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

Signature of Applicant: [Handwritten Signature] Date: 12.12.18

Title: Principal Engineer Company Name: SEESTudio, Inc.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





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

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

Company Name: SEESstudio, Inc.

Name: Dan Junker, SE California License Number: S6178

Mailing Address: 2655 Camino del Rio N. Suite 100, San Diego, CA 92108

Telephone: 619.606.5058 Email: djunker@seestudioinc.com

Supports and Attachments Preapproval

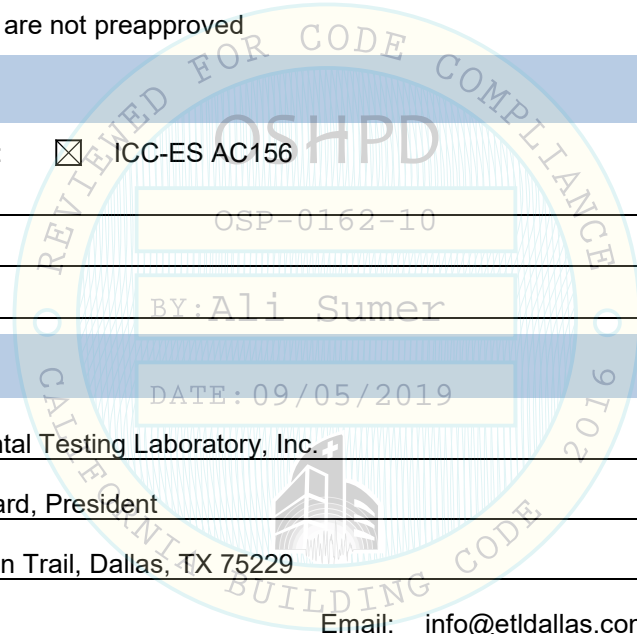
Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

Supports and attachments are not preapproved

Certification Method

Testing in accordance with: ICC-ES AC156

Other (Please Specify): _____



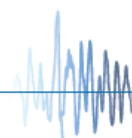
Testing Laboratory

Company Name: Environmental Testing Laboratory, Inc.

Contact Name: Brady Richard, President

Mailing Address: 11034 Indian Trail, Dallas, TX 75229

Telephone: 972-247-9657 Email: info@etldallas.com





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Seismic Parameters

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

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

S_{DS} (Design spectral response acceleration at short period, g) = 2.0

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

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

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = OSP-0162-10

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = BY: Ali Sumer

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = DATE: 09/05/2019

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): SEES Certified Component Summary

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:

Date: September 4, 2019

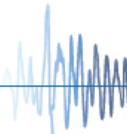
Print Name: Ali Sumer

Title: DSE

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

z/h = 1.0

Condition of Approval (if applicable): _____





SPECIAL SEISMIC CERTIFICATION

CERTIFIED COMPONENTS

TABLE 1

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: PDU / PCDU / VRDU

TABLE DESCRIPTION: Power Distribution Unit Enclosures

CONSTRUCTION SUMMARY: CERTIFICATION PARAMETERS:

Painted galvanized cold-rolled carbon steel enclosure. Certified unit construction shall be identical to cabinet construction of UUT's.

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

OPTIONS SUMMARY:

Internal components as detailed in following Certified Sub-Component tables.

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

MOUNTING SUMMARY:

NOTES:

Rigid floor mounted. Unit anchorage shall be designed on a project specific basis by SEOR. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Model Line	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Group 1 Enclosures	Floor Mount PDU / PCDU / VRDU	20.0	19.0	227.0	500	Minimum	Extrapolated
		Custom units can vary in size and weight within the range specified	2
		20.5	21.5	56.5	1,195		1
		37.0	37.0	65.5	2,660		
		Maximum	Extrapolated



SPECIAL SEISMIC CERTIFICATION

CERTIFIED COMPONENTS

TABLE **2**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: Wall Mount

TABLE DESCRIPTION: Power Distribution Unit Enclosures

CONSTRUCTION SUMMARY:

Painted galvanized cold-rolled carbon steel enclosure. Certified unit construction shall be identical to cabinet construction of UUT's.

OPTIONS SUMMARY:

Internal components as detailed in following Certified Sub-Component tables.

CERTIFICATION PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

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

MOUNTING SUMMARY:

Rigid floor mounted. Unit anchorage shall be designed on a project specific basis by SEOR. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

NOTES:

Model Line	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Group 2 Enclosures	Wall Mount	8.0	21.5	24.0	130	Minimum Custom units can vary in size and weight within the range specified Maximum	Extrapolated
		9.8	21.5	35.5	130		3
		10.0	40.0	42.0	133		5
		9.0	30.0	24.0	210		4
		10.0	40.0	42.0	210		Extrapolated



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **3**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units

TABLE DESCRIPTION: **Capacitors**

CONSTRUCTION SUMMARY:

CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:

Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

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

MOUNTING SUMMARY:

NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
ABB TI, T2, T2S, S1, S3, S4 T3, TS3, T4, T5, XT1, XT2, XT3, XT4	TIN080TL	4.0	3.0	5.0	5.0		2
	TIN050TL	4.0	3.0	5.0	5.0		3
	TIN080TLS4	4.0	3.0	5.0	5.0		1
	TIN025TL	4.0	3.0	5.0	5.0		1
	S3N150TW	5.0	4.0	7.0	5.0		1
	TS3N150TW	4.0	4.0	6.0	5.0		3
	T3N070TW	4.0	4.0	6.0	5.0		4
	T4N250BW	6.0	5.0	8.0	5.0		3
	T5N400BW	5.0	6.0	8.0	5.0		1
	XT4NU3250EFF	6.0	5.0	8.0	5.0		5
	XT1NU3050AAA	4.0	3.0	5.0	5.0		5
	XT1NU3030AAA	4.0	3.0	5.0	5.0		5
	XT4NU3150AFF	6.0	5.0	8.0	5.0		5
	ABB S200, S200P, S200U, S200UP, S200UC, S290, S200M, S200MU	S201-K15	4.0	1.0	3.5	2.0	
S201-K1		4.0	1.0	3.5	2.0		1
S201-K20		4.0	1.0	3.5	2.0		2
S201-K3		4.0	1.0	3.5	2.0		3,5
S201-K50		4.0	1.0	3.5	2.0		1
S202-K63		4.0	2.0	3.5	2.0		1
S202-K0.5		4.0	2.0	3.5	2.0		1
S202-K8		4.0	2.0	3.5	2.0		4
S203P-K10		4.0	3.0	3.5	2.0		1
S281UC-K2		4.0	1.0	3.5	2.0		3
S202U-K13		4.0	2.0	3.5	2.0		4
S203U-K10		4.0	3.0	3.5	2.0		1
S203U-K50		4.0	3.0	3.5	2.0		1
S201MUC-K2		4.0	2.0	3.5	2.0		5
S201-K2	4.0	2.0	3.5	2.0		5	



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **3**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: **Capacitors**

CONSTRUCTION SUMMARY:	CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:	Building Code: CBC 2016
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.	Component Importance Factor: $I_p = 1.5$
	S_{DS} at z/h = 1.0: S _{DS} = 2.0g

MOUNTING SUMMARY:	NOTES:
Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.	

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Airpax/ Sensata <i>LELH,LEG, LEGH,C,IEG</i>	LELEH11116250.0L	3.0	4.0	3.0	2.0		1
	LEG616310.001	2.0	4.0	3.0	2.0		1
Bussmann <i>MDA,FNG, FNQR,FWH,M DA,KTK, KLM</i>	MDA 1.0	0.5 Diam.		1.0	1.0		2
	FNQ-30.0	0.5 Diam.		1.5	0.2		2,4
	FNQ 2.0	0.5 Diam.		1.5	0.2		1
	FNQ-R-1 1/2	0.5 Diam.		1.5	0.2		3,5
	FWH400A	1.5 Diam.		4.3	1.0		1
	KLM-1	0.5 Diam.		1.5	0.2		3,5
	MDA .5	0.7 Diam.		1.3	0.2		2
	MDA 2.0	0.7 Diam.		1.3	0.2		
	MDA-1/4	0.7 Diam.		1.3	0.2		1
KTK-1/8	0.5 Diam.		1.5	0.2		1	
Cutler Hammer <i>EHD,ED, EDH, EDC, FDB,FD,HFD,F DC</i>	EHD3080	3.0	4.0	6.0	5.0		1
	FDB3030-U55	3.0	4.0	6.0	5.0		1
Shawmut <i>AJT</i>	0273.100H	0.25 Diam.		0.4	0.1		1
Square D <i>QOU, TYPE UL489</i>	QOU350	3.0	2.0	2.0	2.0		1
	QOU30001	3.0	2.0	2.0	2.0		1
	QOU210	3.0	2.0	2.0	2.0		1
	60110 TYPE UL489	3.0	1.0	4.0	2.0		1
WEBER/ SCHURTER <i>AS 168X</i>	AS168-X-CB-3G	3.0	3.0	4.0	2.0		1
	AS168-X-CB-1G	3.0	3.0	4.0	2.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 3

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: **Capacitors**

CONSTRUCTION SUMMARY:		CERTIFICATION PARAMETERS:	
OPTIONS SUMMARY: Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.		Building Code: CBC 2016	
		Component Importance Factor: $I_p = 1.5$	
		S_{DS} at z/h = 1.0: $S_{DS} = 2.0g$	
MOUNTING SUMMARY:		NOTES:	
Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.			

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Mallory CGS,CG, CGR,CGO, CGH,HES	CGS433U040X5C		3.0 Diam.	5.2	2.0		1
Panasonic ECQE	ECQ-E2224KS	0.5	0.6	1.3	0.2		1
Cornell Dubilier Electronics 500-943C	500C103T050AC2B		1.3 Diam.	4.2	1.0		1
	5984-940C16P47K-F		3.0 Diam.	6	3.0		1
AVX FFVE,FFVI, FFVA	FFV16-9471-A		3.3 Diam.	2.5	3.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 4

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units

TABLE DESCRIPTION: Contactors / Relays

CONSTRUCTION SUMMARY: CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:

Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

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

MOUNTING SUMMARY:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

NOTES:

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
ABB CA,CAL,CC, CM-PS,AL, AE,AF	CAL5-11	3.0	1.0	3.0	1.0		3
	ISVR430885R1300	1.0	4.0	4.0	0.5		1
	A26-30-10-84	4.0	3.0	4.0	5.0		1
	A9-30-10-84	3.0	2.0	3.0	5.0		1
	AE30-30-11-81	4.0	3.0	5.0	5.0		1
	AF300-30-11-72	12.0	7.0	8.0	15.0		1
	A63-30-11-84	5.0	3.0	5.0	5.0		3
	AF65-30-11-13	5.0	3.0	5.0	5.0		5
	CAL4-11	3.0	1.0	3.0	1.0		5
Bender SED140	925 104	2.0	3.0	5.0	2.0		1
Cutler Hammer/ Eaton C25, Freedom	C25ENF440A	3.3	2.0	2.5	2.0		1
	C25xxx	3.3	2.0	2.5	2.0		1
	CE15HN2AB	4.25	4.0	5.0	7.0		1
Deltrol 900	20240-83	4.0	2.5	3.0	1.0		1
IDEC RR	RRIBA-USA24V	1.5	1.5	2.0	0.2		1
	RR2BA-UDC12V	1.5	1.5	2.0	0.2		3
SSAC RLM	RLM611	4.5	3.2	1.5	1.0		1
Transtronics BVUPS	BVUPS12FPA-10	3.0	2.0	3.0	0.2		3



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 5

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Surge Suppressors

CONSTRUCTION SUMMARY: **CERTIFICATION PARAMETERS:**

OPTIONS SUMMARY:
 Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
 S_{Ds} at $z/h = 1.0$: $S_{Ds} = 2.0g$

MOUNTING SUMMARY: **NOTES:**

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
ABB OVR	OVR 40-440s p	3.0	0.75	4.0	0.5		1
	OVR40275SPTS	3.0	0.75	4.0	0.5		1
Citel DS	DS250VGT-300	3.0	1.5	3.0	0.5		3
Phoenix Contact VAL-MS BE,FM	VAL-MS 230 IT S	4.0	1.0	2.0	1.0		2
	VAL-MS 500 ST	4.0	1.0	2.0	1.0		4
	VAL-MS BE	4.0	1.0	2.0	1.0		4
	VAL-MS BE/FM	4.0	1.0	2.0	1.0		1
Panasonic V Series	ERZ-V07D101	0.3 Diam.		0.2	0.1		1

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS
TABLE 6

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Filters

CONSTRUCTION SUMMARY:	CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:	Building Code: CBC 2016
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.	Component Importance Factor: $I_p = 1.5$
MOUNTING SUMMARY:	NOTES:
Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.	S_{DS} at $z/h = 1.0$: $S_{DS} = 2.0g$

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Radius Power <i>RP</i>	RP300-200-22N	15.8	6.7	4.5	20.0		1
	RP300-250-22-S	15.8	6.7	4.5	20.0		1
Radius Power <i>DSC</i>	DSCI000-4	4.0	2.5	2.0	1.0		1
MTE <i>N, RLX</i>	RLX-0014-008	3.5	6.0	6.5	30.0		1
	N-281	12.0	8.0	7.25	30.0		1
	N-364	12.0	12.0	7.25	11.0		1
	RLX-0014-009	6.0	3.5	6.25	25.0		1
	N-312	12.0	12.0	7.25	11.0		1
TEAL	Tealwave	3.25	5.5	6.9	2.5		4



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 7

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Switches

CONSTRUCTION SUMMARY:		CERTIFICATION PARAMETERS:	
OPTIONS SUMMARY: Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.		Building Code: CBC 2016 Component Importance Factor: $I_p = 1.5$ S_{DS} at z/h = 1.0: S _{DS} = 2.0g	

MOUNTING SUMMARY:		NOTES:	
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Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Cutler Hammer E22, E22M	E22PB3	1.0	2.0	2.0	0.2		3
	E22B2	1.0	2.0	1.0	0.2		1
	E22EB2	1.0	2.0	1.0	0.2		3
	E22LB2	1.0	2.0	3.0	0.2		1
	E22VA1	1.5	1.0	3.0	0.2		1
	E22B1	1.5	1.0	3.0	0.2		5
	E22B2	1.5	1.0	3.0	0.2		5
C&K TL	12TL4A2	2.0	0.5	2.0	0.2		1
Square D 40MM	XB4BS542	3.5	2.0	2.0	0.2		1
	XB4BS8445	3.5	2.0	2.0	0.2		1
KRAUSNAIM ER 1400, O	L400USA193600EG	13.2	7.0	5.1	2.0		1
ABB O, 22MM	OL40WS4PB	7.0	2.0	2.0	3.0		2
	MPD2-22C11L8	2.5	1.5	2.5	0.2		1
	M2SS2-41G01	3.0	1.5	2.0	0.2		1
GE Industrial 30MM	CR104PBG01R1	2.3 Diam.		2.5	0.2		2



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 8

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Resistors

CONSTRUCTION SUMMARY:

CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:

Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
S_{DS} at z/h = 1.0: S_{DS} = 2.0g

MOUNTING SUMMARY:

NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
XICON Passive Components CF-RC	CF-RC	3.0 Diameter		5.0	0.15		1
OHMITE 270,89	L100J5KOE	0.75	0.75	6.5	1.0		1
	810F40RE	1.4	0.8	0.4	0.2		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **9**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units

TABLE DESCRIPTION: Indicators

CONSTRUCTION SUMMARY: CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:

Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

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

MOUNTING SUMMARY:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

NOTES:

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Cutler Hammer E22,E22M, 25MM	E22H2	1.0 Diam.		2.0	0.2		1
	EXXX	1.0 Diam.		2.0	0.2		1
Chicago Mini LED 1935,2191	19352130	1.5 Diam.		0.6	0.2		1
	2191U7-24V	1.5 Diam.		0.4	0.1		1
ABB ML,MC	ML1-20GI0L1	3.0 Diam.		1.6	0.2		3
	ML1-20GI0L8	3.0 Diam.		1.6	0.2		2
Allen Bradley 800F	800-FP-P3PN3G	3.0 Diam.		1.6	0.2		4
	800-FP-P5PN3Y	3.0 Diam.		1.6	0.2		1
	800FM-G4	3.0 Diam.		1.6	0.2		5
	800F-AHA1	3.0 Diam.		1.6	0.2		5
VCC Miniature Indicators CMC	CMC321RTP	0.3 Diam.		0.33	0.1		1
	CMC321GTP	0.3 Diam.		0.33	0.1		1
Dialight 95 Series	95-5763-09-311	0.63 Diam.		2.5	0.1		1
Newhaven DIS,NHD	NHD-240128WG-BT	4.0	6.0	1.0	1.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **10**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Control Transformers

CONSTRUCTION SUMMARY:	CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:	Building Code: CBC 2016
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.	Component Importance Factor: $I_p = 1.5$
	S_{DS} at z/h = 1.0: S _{DS} = 2.0g

MOUNTING SUMMARY:	NOTES:
--------------------------	---------------

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
ACME TA	TA-83300	4.0	3.0	3.0	4.0		1
Square D Type T,TF	9070-T50D19, 50	4.0	4.0	3.0	4.0		1
	9070-T300D19	5.0	5.0	6.0	5.0		1
	9070-T300D40	5.0	5.0	6.0	5.0		3,5
	9070-TI00D31	4.0	4.0	3.0	4.0		1
Midwest 5SC	5SC40110201	3.5	2.0	5.0	2.0		1
VCC Miniature Indicators CMC	4-49-6634	2.8	2.5	3.0	3.0		1
	4-54-0500	5.25	5.0	6.0	50.0		1
Hammond	5SC40110201	6.0	5.0	4.0	10.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **11**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Transformers

CONSTRUCTION SUMMARY: CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
S_{DS} at z/h = 1.0: S_{DS} = 2.0g

MOUNTING SUMMARY: NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
TEAL Electronics 072,073	0720401	8.5	7.5	6.0	60		4
	0730490	13.0	18.0	23.0	680		2
	0730539	18.0	24.0	24.0	1000		1

BY: Ali Sumer
DATE: 09/05/2019

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **12**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Sensors

CONSTRUCTION SUMMARY:	CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:	Building Code: CBC 2016
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.	Component Importance Factor: $I_p = 1.5$
	S_{DS} at z/h = 1.0: S _{DS} = 2.0g
MOUNTING SUMMARY:	NOTES:
Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.	

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Honeywell T775A/B/M	T775B2040	3.0	5.0	9.0	5.0		1
Building Automation BAPI	BA/T10K-H305D-WP	9.0	3.0	4.5	2.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **13**

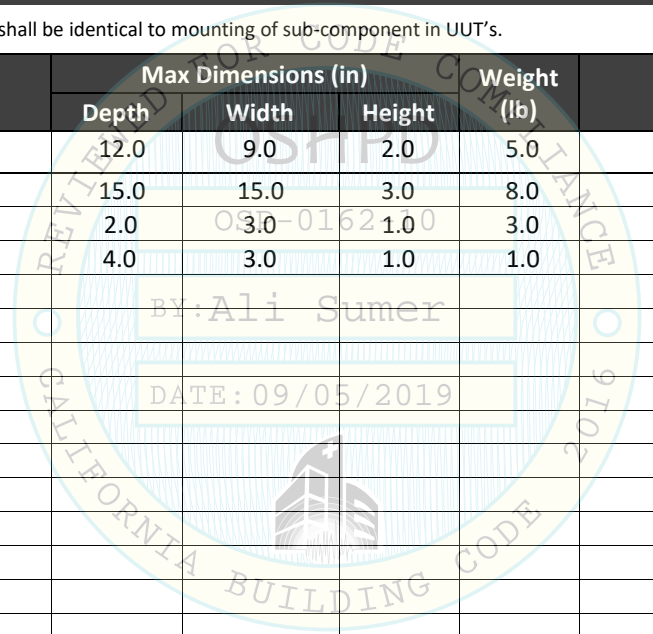
MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: Panel Control Boards

CONSTRUCTION SUMMARY:	CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:	Building Code: CBC 2016
Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.	Component Importance Factor: $I_p = 1.5$
	S_{DS} at z/h = 1.0: S _{DS} = 2.0g

MOUNTING SUMMARY:	NOTES:
-------------------	--------

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Teal Electronics 080	0800290	12.0	9.0	2.0	5.0		1
	0800337	15.0	15.0	3.0	8.0		1
	0800346	2.0	3.0	1.0	3.0		1
	0800335-01	4.0	3.0	1.0	1.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

 TABLE **14**
MANUFACTURER: MTE Corporation / TEAL Electronics Corporation

MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units

TABLE DESCRIPTION: VFD's, Power Monitors, Inductors, Fans

CONSTRUCTION SUMMARY:
CERTIFICATION PARAMETERS:
OPTIONS SUMMARY:

Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$
S_{DS} at z/h = 1.0: $S_{DS} = 2.0g$
MOUNTING SUMMARY:
NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Yaskawa CIMR-F/V VFD	CIMRF7U41100061	30.5	20.0	14.2	250.0		1
	CIMR-VU4A0002FA	4.0	4.25	6.0	3.0		1
Teal Electronics 0810748,49, 50 Power Monitor	0810748	5.6	8.1	2.6	2.0		1
	0810749	5.6	4.7	4.7	5.0		1
Pacific Tran Inductor	26835	7.0	13.0	8.0	25.0		1
EBM 400N Series Fans	4660N	3.0	3.0	1.5	1.0		1
NMB 3115FS Fans	3115FS23TB30A00	3.0	3.0	1.5	1.0		2
Orion Fans	OA172SAPL	7.0	6.0	1.5	2.0		1
Tronics Fans	F6025-H	2.4	2.4	1.0	1.0		1
Comair Fans	MR77	7.0	6.0	2.0	2.0		1



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE **15**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
TABLE DESCRIPTION: UPS / Batteries / Power Supplies

CONSTRUCTION SUMMARY: CERTIFICATION PARAMETERS:

OPTIONS SUMMARY:
 Enclosure types per Tables 1 & 2 are available as custom units with internal component options available as presented herein.

CERTIFICATION PARAMETERS:
Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
S_{DS} at z/h = 1.0: S_{DS} = 2.0g

MOUNTING SUMMARY: NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Model	Max Dimensions (in)			Weight (lb)	Description	UUT
		Depth	Width	Height			
Eaton/ Powerware 5115,9140	PW51151000i	13	6	8	30		1
	103005093-6591	30	19	10.5	255		1
	103004729-6591	28	19	5.25	175		2
Marathon Power Athlon	ARMS-3000-02	20.0	19.0	5.2	70.0		2
	EBPR-0014-96	20.0	19.0	5.2	90.0		2
Condor GPC,GPM, GPF,GSM	GPC140-12	5.0	9.0	2.5	1.0		1
	GPFC110	4.0	6.5	2.0	1.0		1
	GSM15-24G	2.1	3.0	1.0	0.3		1
	GPMP900-24	5.0	13.0	2.5	5.0		1
Power-Sonic PS	3115FS23TB30A00	6.0	3.0	4.0	5.0		1,3
Pulspower ML15,SLV	3115FS23TB30A00	4.0	1.0	3.0	0.5		1,3

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

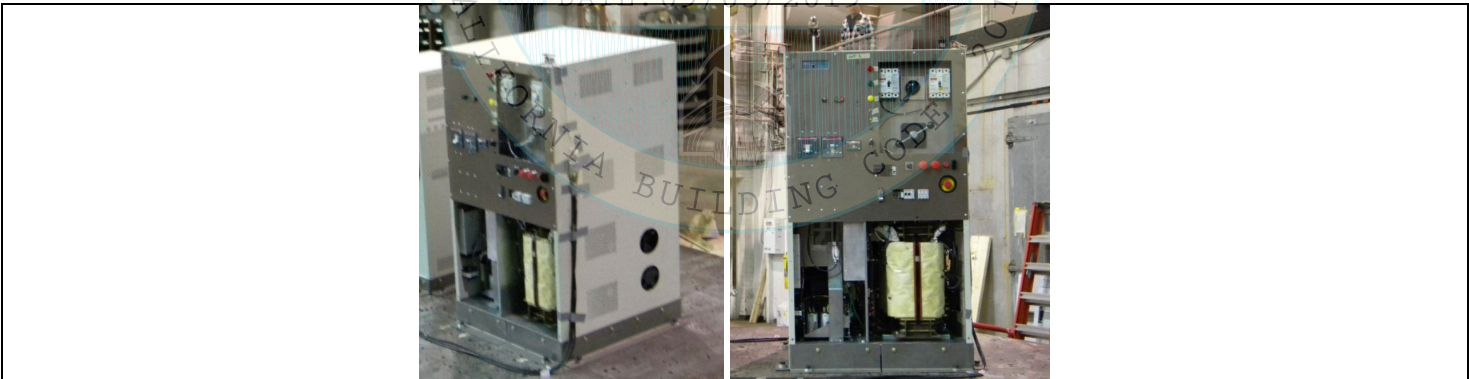
 UUT **1**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

CONSTRUCTION SUMMARY:	TEST PARAMETERS:		
Painted galvanized cold-rolled carbon steel enclosure.	Building Code: CBC 2016	Component Importance Factor: $I_p = 1.5$	Test Criteria: AC-156

OPTIONS SUMMARY:
 ABB T1N080TLS4,T1N025TL,S3N150TW,T5N400BW,S201-K15,S201-K1,S201-K50,S202-K63,S202-K0.5,S203P-K10,S203U-K10,S203U-K50 Capacitors. Airpax/Sensata LELH11116250.0L,LEG616310.001 Capacitors. Bussmann FNQ2.0.FWH400A,MDA-1/4,KTk-1/8 Capacitors. Cutler Hammer EHD3080,FDB3030-U55 Capacitors. Little Fuse 0273.100H Capacitor. Shawmut 0273.100H Capacitor. Square D QOU350,QOU30001, QOU210,60110 Capacitors. Weber/Schurter AS168-X-CB-3G,AS168-X-CB-1G Capacitors. Mallory CGS433U040X5C Capacitor. Panasonic ECQ-E2224KS Capacitor. Cornell Dubilier 500C103T050AC2B, 5984-940C16P47K-F Capacitors. AVX FFV16-9471-A Capacitor. Motor Cap CBB65-660R346R Capacitor. ABB 1SVR430885R1300,A26-30-10-84,A9-30-10-84,AE30-30-11-81,AF300-30-11-72 Contactors/Relays. Bender 925 104 Contactors/Relay. Cutler Hammer/Eaton C25ENF440A,C25XXX,CE15HN2AB Contactors/Relays. Deltrol 20240-83 Contactors/Relay. IDEC RR1BA-USA24V Contactor/Relay. SSAC RLM611 Contactors/Relay. ABB OVR40-440SP,OVR40275SPTS Surge Suppressors. Phoenix Contact VAL-MS BE/FM Surge Suppressor. Panasonic ERZ-V07D101 Surge Suppressor. Radius Power RP300-200-22N,RP300-250-22-S Filters. Radius Power DSC1000-4 Filter. MTE RLX-0014-008,N-281,N-364,RLX-0014-009,N-312 Filters. Cutler Hammer E22B2, E22LB2,E22VA1 Switches. C&K 12TL4A2 Switch. Square D XB4BS542,XB4BS8445 Switches. Krausnaimer L400USA193600EG Switch. ABB MPD2-22C11L8,M2S52-41G01 Switches. XICON 3" Diam. CF-RC Resistor. Ohmite L100J5K0E,810F40RE Resistors. Cutler Hammer E22H2,EXXX Indicators. Chicago Mini LED 19352130,2191U7-24V Indicators. Allen Bradley 800-PP-P5PN3Y Indicator. VCC CMC321RTP,CMC321GTP Indicators. Dialight 95-5763-09-311 Indicator. Newhaven NHD-240128WG-BT Indicator. ACME TA-83300 Control Transformer. Square D 9070-T50D19,9070-T300D19,9070-T100D31 Control Transformers. Midwest 55C40110201 Control Transformer. VCC 4-49-6634,4-54-0500 Control Transformers. Hammond 55C40110201 Control Transformer. Teal Electronics 0730539 Transformer. Honeywell T775B2040 Sensor. Building Autom BA/T10K-H305D-WP Sensor. TEAL 0800290,0800337,0800346,0800335-01 PCB's. Yaskawa CIMRF7U41100061, CIMR-VU4A0002FA VFD's. TEAL 0810748,0810749 Power Monitors. Pacific Tran 26835 Inductor. EBM 4660N Fan. Orion OA172SAPL Fan. Tronics F6025-H fan. Comair MR77 Fan. Eaton/Powerware PW51151000i,103005093-6591 Batteries. Condor GPC140-12,GPFC110,GSM15-24G,GPMP900-24 Power Supplies. Power-Sonic 3115FS23TB30A00 Power Supply. Pulspower 3115FS23TB30A00 Power Supply.

MOUNTING SUMMARY:	NOTES:
Rigid floor mounted. Unit mounted to shake table with a total of eight (8) 5/8"-11 Gr. 5 bolts.	Contents were included in testing per operating conditions.

UUT IMAGE

UUT PROPERTIES

Dimensions (in)			Weight (lb)	First Natural Frequency (Hz)		
Depth	Width	Height		F-B	S-S	Vert
37.0	37.0	65.5	2,660	19.3	9.9	25.4

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S_{Ds} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.25	1.0	3.60	2.70	1.50	0.60



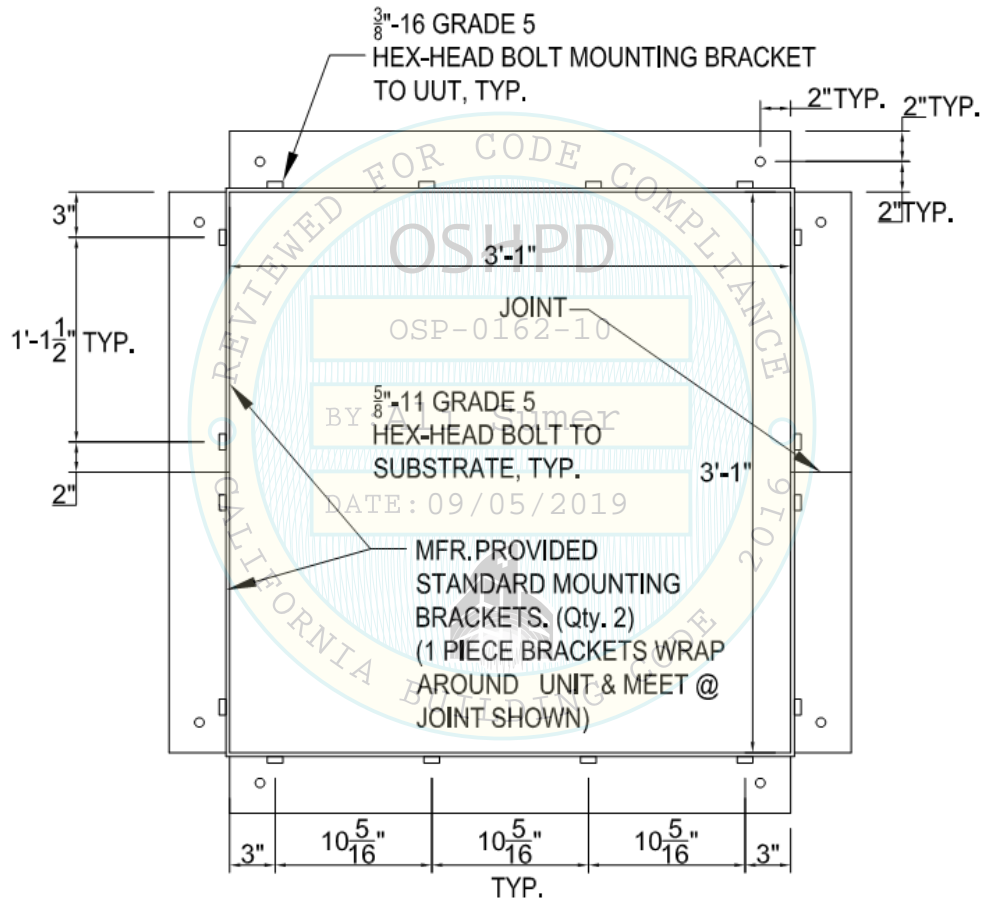
SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **1**

- MANUFACTURER:** MTE Corporation / TEAL Electronics Corporation
- MODEL LINE:** PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
- MODEL NUMBER:** Custom Prototype Test Unit

SUPPORT AND ATTACHMENT SUMMARY:



Plan View

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **2**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

CONSTRUCTION SUMMARY:

Painted galvanized cold-rolled carbon steel enclosure.

TEST PARAMETERS:

Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
Test Criteria: AC-156

OPTIONS SUMMARY:

ABB T1N080TL Capacitor. ABB S201-K20 Capacitor. Bussmann MDA 1.0, FNQ-30.0, MDA .5 Capacitors. Phoenix Contact VAL-MS 230 ITS Surge Suppressor. ABB OL40WS4PB Switch. GE Industrial CR104PBG01R1 Switch. ABB ML1-20G10L8 Indicator. TEAL 0730490 Transformer. NMB 3115FS23TB30A00 Fan. Eaton/Powerware 103004729-6591 Battery. Marathon Power ARMS-3000-02, EBPR-0014-96 Power Supplies.

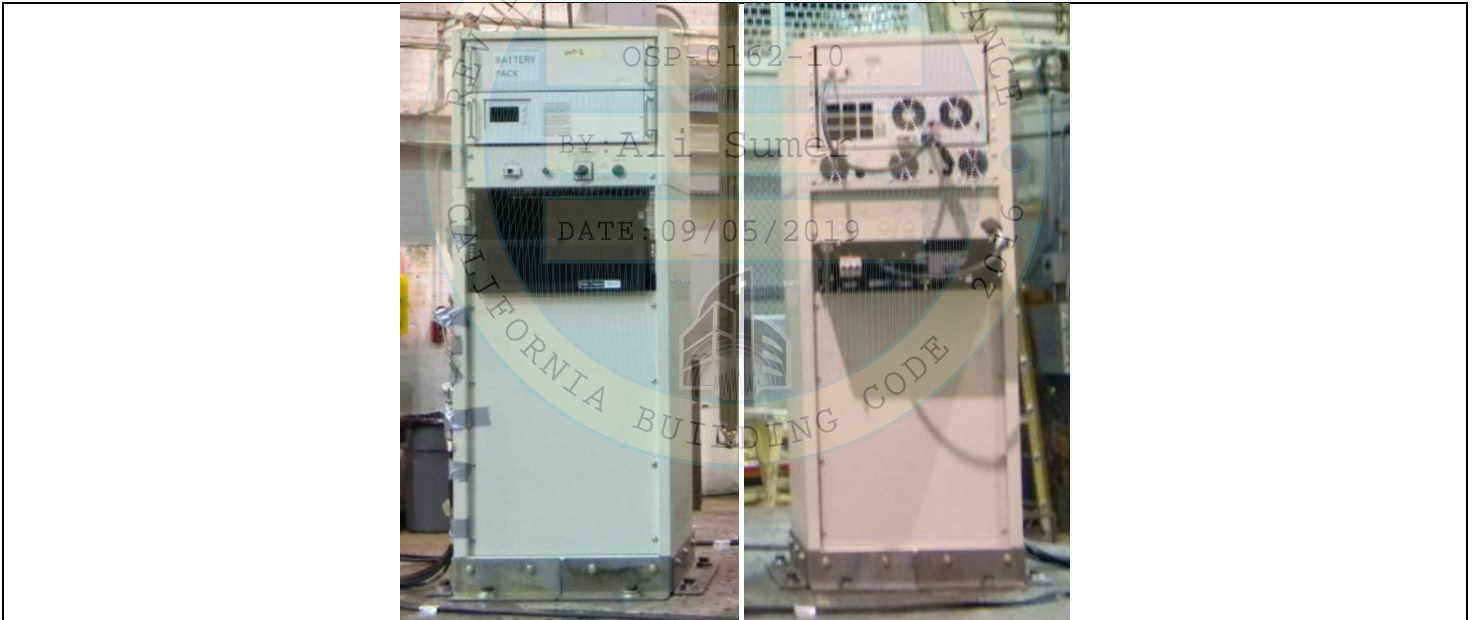
MOUNTING SUMMARY:

Rigid floor mounted. Unit mounted to shake table with a total of eight (8) 5/8"-11 Gr. 5 bolts.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)			Weight (lb)	First Natural Frequency (Hz)		
Depth	Width	Height		F-B	S-S	Vert
20.5	21.5	56.5	1,195	19.5	8.8	21.3

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S_{Ds} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.25	1.0	3.60	2.70	1.50	0.60



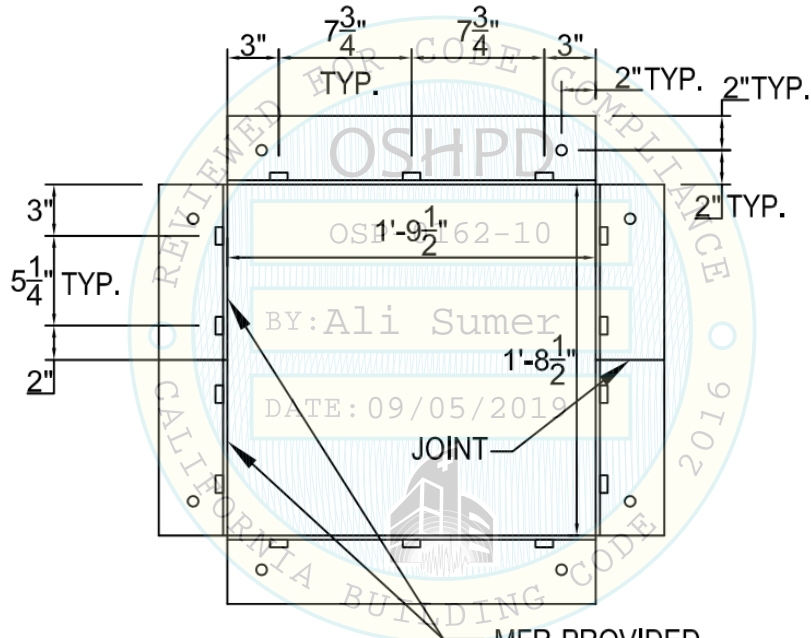
SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **2**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

SUPPORT AND ATTACHMENT SUMMARY:



MFR. PROVIDED
STANDARD MOUNTING
BRACKETS. (Qty. 2)
(1 PIECE BRACKETS WRAP
AROUND UNIT & MEET @
JOINT SHOWN)

Plan View

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **3**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

CONSTRUCTION SUMMARY: TEST PARAMETERS:

Painted galvanized cold-rolled carbon steel enclosure.

Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
Test Criteria: AC-156

OPTIONS SUMMARY:

ABB T1N050TL, TS3N150TW, T4N250BW Capacitors. ABB S201-K3, S281UC-K2 Capacitors. Bussmann FNQ-R-1 1/2, KLM-1 Capacitors. ABB CAL5-11, A63-30-11-84 Contactors/Relays. IDEC RR2BA-UDC12V Contactors/Relay. Transtronics BVUPS12FPA-10 Contactors/Relay. Citel DS250VGT-300 Surge Suppressor. Cutler Hammer E22PB3, E22EB2 Switches. ABB ML1-20G10L1 Indicator. Square D 9070-T300D40 Control Transformer. Power-Sonic 3115FS23TB30A00 Power Supply. Pulspower 3115FS23TB30A00 Power Supply.

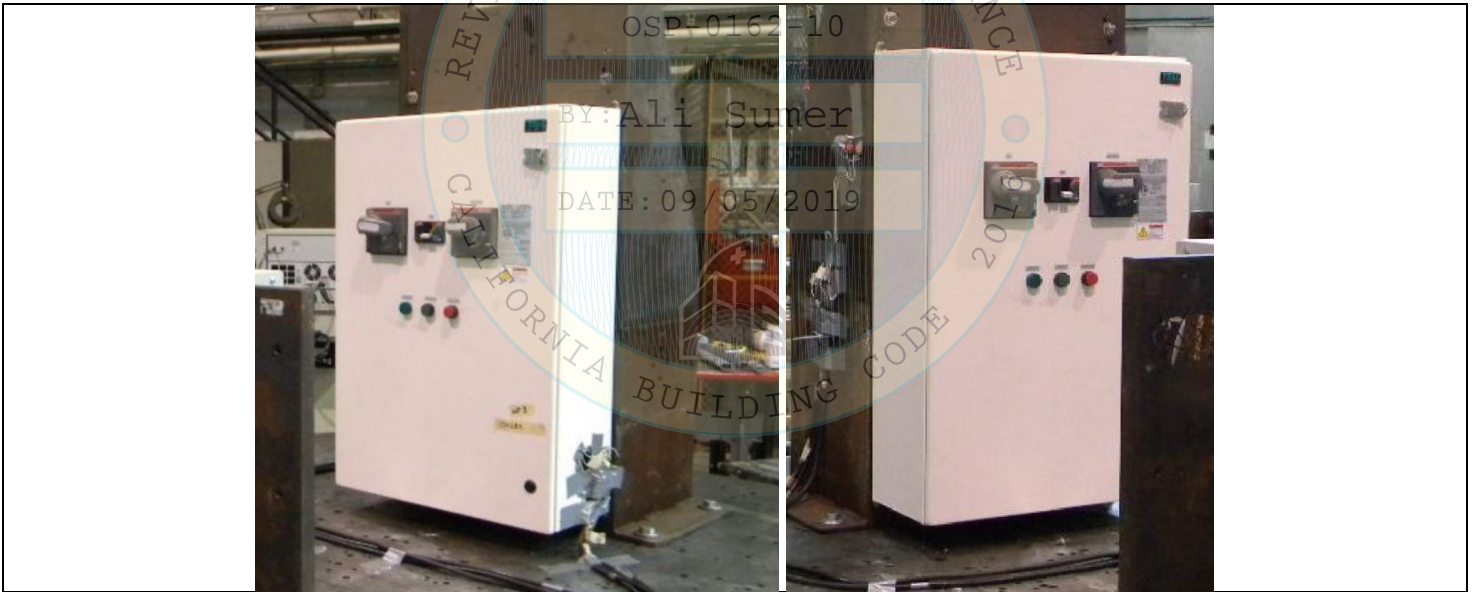
MOUNTING SUMMARY:

Rigid Wall mounted. Unit mounted to test fixture with a total of four (4) 5/16"-18 socket head cap screws and washers.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)			Weight (lb)	First Natural Frequency (Hz)		
Depth	Width	Height		F-B	S-S	Vert
9.8	21.5	35.5	130	N/A	N/A	N/A

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

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

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **4**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

CONSTRUCTION SUMMARY:	TEST PARAMETERS:
Painted galvanized cold-rolled carbon steel enclosure.	Building Code: CBC 2016
OPTIONS SUMMARY: ABB T3N070TW Capacitor. ABB S202-K8,S202U-K13 Capacitors. Bussmann FNQ-30.0,MDA 2.0 Capacitors. Phoenix Contact VAL-MS 500 ST,VAL-MS BE Surge Suppressors. TEAL Tealwave Filter. Allen Bradley 800-FP-P3PN3G Indicator. TEAL 0720401 Transformer.	Component Importance Factor: $I_p = 1.5$
MOUNTING SUMMARY: Rigid Wall mounted. Unit mounted to test fixture with a total of six (6) 3/8"-18 socket head cap screws with washers.	Test Criteria: AC-156
	NOTES: Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)			Weight (lb)	First Natural Frequency (Hz)		
Depth	Width	Height		F-B	S-S	Vert
9.0	26.5	24.0	150	N/A	N/A	N/A

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL
PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

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

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

 UUT **5**

MANUFACTURER: MTE Corporation / TEAL Electronics Corporation
MODEL LINE: PDU / PCDU / VRDU Floor Mount & Wall Mount Power Distribution Units
MODEL NUMBER: Custom Prototype Test Unit

CONSTRUCTION SUMMARY: TEST PARAMETERS:

Painted galvanized cold-rolled carbon steel enclosure.

Building Code: CBC 2016

OPTIONS SUMMARY:

Capacitors: ABB XT4NU3250EFF, XT1NU3050AAA, XT1NU3030AAA, XT4NU3150AFF, S201-K3, S201MUC-K2, S201-K2; Bussmann FNQ-R-1 ½, KLM-1. **Contactors / Relays:** ABB AF65-30-11-13, CAL4-11. **Switches:** Cutler Hammer E22B1, E22B2. **Indicators:** Allen Bradley 800FM-G4, 800F-AHA1. **Control Transformers:** Square D 9070-T300D40

Component Importance Factor: $I_p = 1.5$
Test Criteria: AC-156

MOUNTING SUMMARY:

Rigid Wall mounted. Unit mounted to test fixture with a total of six (6) 3/8"-18 socket head cap screws with washers.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE

UUT PROPERTIES

Dimensions (in)			Weight (lb)	First Natural Frequency (Hz)		
Depth	Width	Height		F-B	S-S	Vert
10.0	40.0	42.0	133.0	N/A	N/A	N/A

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S_{Ds} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	1.0	4.00	3.00	1.67	0.67