



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0340

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: La Marche Manufacturing

Manufacturer's Technical Representative: Mark Wong

Mailing Address: 106 Bradrock Drive, Des Plaines, IL 60018

Telephone: (847) 299-1188 Email: mwong@lamarchemfg.com

Product Information

Product Name: UPS and Batteries

Product Model Number(s): TPSD 1-Phase, TPSD 3-Phase, A75D(E) 1-Phase, A75D(E) 3-Phase, ESCR 1-Phase

Product Category: UPS and Batteries

Product Sub-Category: Battery Chargers

General Description: Cataloged Battery Charger, Power Supplies, and Battery Eliminator Units.

Mounting Description: Rigid Wall, Isolated Wall, Rigid Floor (See Tables 1, 2, 3)

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: The VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thevmcgroup.com

Title: President



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

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

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

Testing Laboratory

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)

Contact Person: Wesley Neighbor

Mailing Address: 325 Davis Hall, Berkeley CA 94720-1729

Telephone: (510) 642-3437 Email: wdn@berkeley.edu

BY: Mohammad Karim

DATE: 11/24/2025



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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = Base [Isolated] 4.34 ($z/h=1.0$), 1.45 ($z/h=0.0$); [Rigid] 1.39 ($z/h=1.0$), 0.87 ($z/h=0.0$)

S_{DS} (Design spectral response acceleration at short period, g) = 1.93 ($z/h=1$); 1.93 ($z/h=0$)

a_p (Amplification factor) = 2.5 (Isolated) ; 1.0 (Rigid)

R_p (Response modification factor) = 2.0 (isolated) ; 2.5 (Rigid)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

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

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 11/24/2031

Date: 11/24/2025

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: S_{DS} (g) = 1.93

z/h = 1

Condition of Approval (if applicable): BY: Mohammad Karim

DATE: 11/24/2025

Table 1 - Certified Products - TPSD Battery Chargers/Power Supplies/Battery Eliminators

Model No.	Encl. UL Rating	Input Voltage [V]	Phase	Output Rating [A]	Output Voltage [V]	Cabinet Dimensions W x D x H [in]	Max. Weight [lb]	Cabinet Case No.	Cabinet Material Gauge	Mounting			UUT
										Isolated Wall	Rigid Wall	Rigid Floor	
TPSD-6-24V	UL 1012	208, 220, 240	1	6	24	19 x 15 x 12	70	4B	14	X			UUT-01a
TPSD-6-24V	UL 1012		1	6	24	19 x 15 x 12	70	4B	14		X		UUT-01b
TPSD-6-24V	UL 1012		1	6	24	19 x 15 x 12	70	4B	14			X	UUT-01c
TPSD-6-24V	UL 1012	120, 208, 220, 240, 380, 480	1	6	24	19 x 15 x 12.25	90	4B	14	X	X	X	Interpolated
TPSD-12-24V	UL 1012		1	12	24	19 x 15 x 12.25	90	4B	14	X	X	X	Interpolated
TPSD-20-24V	UL 1012		1	20	24	19 x 15 x 24	110	4	14	X	X	X	Interpolated
TPSD-25-24V	UL 1012		1	25	24	19 x 15 x 24	138	4	14	X	X	X	Interpolated
TPSD-30-24V	UL 1012		1	30	24	19 x 15 x 24	165	4	14	X	X	X	Interpolated
TPSD-35-24V	UL 1012		1	35	24	19 x 15 x 24	170	4	14	X	X	X	Interpolated
TPSD-50-24V	UL 1012		1	50	24	19 x 15 x 24	193	4	14	X	X	X	Interpolated
TPSD-75-24V	UL 1012		1	75	24	19 x 15 x 24	233	4	14	X	X	X	Interpolated
TPSD-100-24V	UL 1012		1	100	24	23 x 15 x 36	248	9	14	X	X	X	Interpolated
TPSD-6-48V	UL 1012		1	6	48	19 x 15 x 12.25	90	4B	14	X	X	X	Interpolated
TPSD-12-48V	UL 1012		1	12	48	19 x 15 x 12.25	110	4B	14	X	X	X	Interpolated
TPSD-20-48V	UL 1012		1	20	48	19 x 15 x 24	165	4	14	X	X	X	Interpolated
TPSD-25-48V	UL 1012		1	25	48	19 x 15 x 24	165	4	14	X	X	X	Interpolated
TPSD-30-48V	UL 1012		1	30	48	19 x 15 x 24	171	4	14	X	X	X	Interpolated
TPSD-35-48V	UL 1012		1	35	48	19 x 15 x 24	198	4	14	X	X	X	Interpolated
TPSD-50-48V	UL 1012		1	50	48	19 x 15 x 24	225	4	14	X	X	X	Interpolated
TPSD-75-48V	UL 1012		1	75	48	23 x 15 x 36	325	9	14	X	X	X	Interpolated
TPSD-100-48V	UL 1012		1	100	48	23 x 15 x 36	354	9	14	X	X	X	Interpolated
TPSD-6-130V	UL 1012		1	6	130	19 x 15 x 24	154	4	14	X	X	X	Interpolated
TPSD-12-130V	UL 1012		1	12	130	19 x 15 x 24	193	4	14	X	X	X	Interpolated
TPSD-20-130V	UL 1012		1	20	130	19 x 15 x 24	233	4	14	X	X	X	Interpolated
TPSD-25-130V	UL 1012		1	25	130	19 x 15 x 24	275	4	14	X	X	X	Interpolated
TPSD-30-130V	UL 1012		1	30	130	23 x 15 x 36	352	9	14	X	X	X	Interpolated
TPSD-35-130V	UL 1012		1	35	130	23 x 15 x 36	390	9	14	X	X	X	Interpolated
TPSD-50-130V	UL 1012		1	50	130	23 x 15 x 36	390	9	14	X	X	X	Interpolated
TPSD-50-130V	UL 1012	208, 220, 240	1	50	130	23 x 15 x 36	390	9	14	X			UUT-02a
TPSD-50-130V	UL 1012		1	50	130	23 x 15 x 36	390	9	14		X		UUT-02b

Table 1 - Certified Products - TPSD Battery Chargers/Power Supplies/Battery Eliminators (Cont.)

Model No.	Encl. UL Rating	Input Voltage [V]	Phase	Output Rating [A]	Output Voltage [V]	Cabinet Dimensions W x D x H [in]	Max. Weight [lb]	Cabinet Case No.	Cabinet Material Gauge	Mounting			UUT
										Isolated Wall	Rigid Wall	Rigid Floor	
TPSD-75-24V	UL 1012	120, 208, 220, 240, 380, 480	3	75	24	27 x 23.5 x 44.5	400	72	14			X	Interpolated
TPSD-100-24V	UL 1012		3	100	24	27 x 23.5 x 44.5	475	72	14			X	Interpolated
TPSD-150-24V	UL 1012		3	150	24	27 x 23.5 x 44.5	530	72	14			X	Interpolated
TPSD-200-24V	UL 1012		3	200	24	27 x 23.5 x 44.5	600	72	14			X	Interpolated
TPSD-50-48V	UL 1012		3	50	48	27 x 23.5 x 44.5	400	72	14			X	Interpolated
TPSD-75-48V	UL 1012		3	75	48	27 x 23.5 x 44.5	575	72	14			X	Interpolated
TPSD-100-48V	UL 1012		3	100	48	27 x 23.5 x 44.5	600	72	14			X	Interpolated
TPSD-150-48V	UL 1012		3	150	48	27 x 23.5 x 44.5	700	72	14			X	Interpolated
TPSD-200-48V	UL 1012		3	200	48	27 x 23.5 x 44.5	755	72	14			X	Interpolated
TPSD-25-130V	UL 1012		3	25	130	27 x 23.5 x 44.5	420	72	14			X	Interpolated
TPSD-30-130V	UL 1012		3	30	130	27 x 23.5 x 44.5	490	72	14			X	Interpolated
TPSD-35-130V	UL 1012		3	35	130	27 x 23.5 x 44.5	550	72	14			X	Interpolated
TPSD-50-130V	UL 1012		3	50	130	27 x 23.5 x 44.5	600	72	14			X	Interpolated
TPSD-75-130V	UL 1012		3	75	130	27 x 23.5 x 44.5	660	72	14			X	Interpolated
TPSD-100-130V	UL 1012		3	100	130	27 x 23.5 x 44.5	800	72	14			X	Interpolated
TPSD-125-130V	UL 1012		3	125	130	24 x 19 x 72	850	44	14			X	Interpolated
TPSD-150-130V	UL 1012		3	150	130	24 x 19 x 72	900	44	14			X	Interpolated
TPSD-150-130V	UL 1012	208, 220, 240	3	150	130	24 x 19 x 72	1060	44	14			X	UUT-03

Notes:

1. All UUTs tested to $S_{DS}=1.93$ at $z/h = 1.0$
2. All Enclosures NEMA 1 Rating

3. Cabinets made of Carbon Steel
4. Cabinet Manufacturer: LaMarche

5. All Models Capable of 60/50 Hz

Table 2 - Certified Products - A75D & A75DE Battery Charger/Eliminator

Model No.		Encl. UL Rating	Input Voltage [V]	Phase	Output Rating [A]	Output Voltage [V]	Cabinet Dimensions W x D x H [in]	Max. Weight [lb]	Cabinet Case No.	Cabinet Material Gauge	Mounting			UUT
											Isolated Wall	Rigid Wall	Rigid Floor	
A75D-6-24V	A75DE-6-24V	UL 1012	120, 208, 240, 480	1	6	24	19 x 15 x 12.25	82	4B75	14		X		Extrapolated
A75D-12-24V	A75DE-12-24V	UL 1012		1	12	24	19 x 15 x 12.25	92	4B75	14		X		Extrapolated
A75D-16-24V	A75DE-16-24V	UL 1012		1	16	24	19 x 15 x 12.25	98	4B75	14		X		Extrapolated
A75D-20-24V	A75DE-20-24V	UL 1012		1	20	24	19 x 15 x 12.25	100	4B75	14		X		Extrapolated
A75D-25-24V		UL 1012	120, 208, 240	1	25	24	19 x 15 x 12	80	4B75	14		X		UUT-04
A75D-25-24V	A75DE-25-24V	UL 1012	120, 208, 240, 480	1	25	24	19 x 15 x 12.25	104	4B75	14		X		Interpolated
A75D-30-24V	A75DE-30-24V	UL 1012		1	30	24	19 x 15 x 24	130	475	14		X		Interpolated
A75D-35-24V	A75DE-35-24V	UL 1012		1	35	24	19 x 15 x 24	150	475	14		X		Interpolated
A75D-40-24V	A75DE-40-24V	UL 1012		1	40	24	19 x 15 x 24	160	475	14		X		Interpolated
A75D-50-24V	A75DE-50-24V	UL 1012		1	50	24	19 x 15 x 24	185	475	14		X		Interpolated
A75D-60-24V	A75DE-60-24V	UL 1012		1	60	24	19 x 15 x 24	208	475	14		X		Interpolated
A75D-75-24V	A75DE-75-24V	UL 1012		1	75	24	20 x 15 x 38	240	975	14			X	Interpolated
	A75DE-75-24V	UL 1012	240	1	75	24	20 x 15 x 38	330	975	14			X	UUT-05
A75D-100-24V	A75DE-100-24V	UL 1012	120, 208, 240, 480	1	100	24	20 x 15 x 38	275	975	14			X	Interpolated
A75D-6-48V	A75DE-6-48V	UL 1012		1	6	48	19 x 15 x 12.25	84	4B75	14		X		Interpolated
A75D-12-48V	A75DE-12-48V	UL 1012		1	12	48	19 x 15 x 12.25	96	4B75	14		X		Interpolated
A75D-16-48V	A75DE-16-48V	UL 1012		1	16	48	19 x 15 x 24	137	475	14		X		Interpolated
A75D-20-48V	A75DE-20-48V	UL 1012		1	20	48	19 x 15 x 24	158	475	14		X		Interpolated
A75D-25-48V	A75DE-25-48V	UL 1012		1	25	48	19 x 15 x 24	170	475	14		X		Interpolated
A75D-30-48V	A75DE-30-48V	UL 1012		1	30	48	19 x 15 x 24	190	475	14		X		Interpolated
A75D-35-48V	A75DE-35-48V	UL 1012		1	35	48	19 x 15 x 24	220	475	14		X		Interpolated
A75D-40-48V	A75DE-40-48V	UL 1012		1	40	48	19 x 15 x 24	240	475	14		X		Interpolated
A75D-50-48V	A75DE-50-48V	UL 1012		1	50	48	19 x 15 x 24	260	475	14		X		Interpolated
A75D-60-48V	A75DE-60-48V	UL 1012		1	60	48	20 x 15 x 38	300	975	14			X	Interpolated
A75D-75-48V	A75DE-75-48V	UL 1012		1	75	48	20 x 15 x 38	350	975	14			X	Interpolated
A75D-100-48V	A75DE-100-48V	UL 1012		1	100	48	21 x 15 x 38	448	975	14			X	Interpolated
A75D-6-130V	A75DE-6-130V	UL 1012		1	6	130	19 x 15 x 24	178	475	14		X		Interpolated
A75D-12-130V	A75DE-12-130V	UL 1012		1	12	130	19 x 15 x 24	185	475	14		X		Interpolated
A75D-16-130V	A75DE-16-130V	UL 1012		1	16	130	19 x 15 x 24	191	475	14		X		Interpolated
A75D-20-130V	A75DE-20-130V	UL 1012		1	20	130	19 x 15 x 24	235	475	14		X		Interpolated
A75D-25-130V	A75DE-25-130V	UL 1012		1	25	130	19 x 15 x 24	255	475	14		X		Interpolated
A75D-30-130V	A75DE-30-130V	UL 1012		1	30	130	19 x 15 x 24	260	475	14		X		Interpolated
A75D-30-130V		UL 1012	480	1	30	130	19 x 15 x 24	260	475	14		X		UUT-06

Notes:

 1. All UUTs tested to $S_{DS}=1.93$ at $z/h = 1.0$

3. Cabinets made of Carbon Steel

5. All Models Capable of 60/50 Hz

11/24/2024 All Enclosures NEMA 1 Rating

4. Cabinet Manufactured in the U.S.A.

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Table 2 - Certified Products - A75D & A75DE Battery Charger/Eliminator (Continued)

Model No.		Encl. UL Rating	Input Voltage [V]	Phase	Output Rating [A]	Output Voltage [V]	Cabinet Dimensions W x D x H [in]	Max. Weight [lb]	Cabinet Case No.	Cabinet Material Gauge	Mounting			UUT
											Isolated Wall	Rigid Wall	Rigid Floor	
A75D-40-130V	A75DE-40-130V	UL 1012	120, 208, 240, 480	1	40	130	20 x 15 x 38	422	975	14			X	Interpolated
A75D-50-130V	A75DE-50-130V	UL 1012		1	50	130	20 x 15 x 38	480	975	14			X	Interpolated
A75D-75-130V	A75DE-75-130V	UL 1012		1	75	130	27 x 23.5 x 44.5	735	72	14			X	Interpolated
A75D-75-24V	A75DE-75-24V	N/A	208, 240, 480	3	75	24	23 x 15 x 38	400	975	14			X	Interpolated
A75D-100-24V	A75DE-100-24V	N/A		3	100	24	23 x 15 x 38	475	975	14			X	Interpolated
A75D-125-24V	A75DE-125-24V	N/A		3	125	24	27 x 23.5 x 44.5	530	72	14			X	Interpolated
A75D-150-24V	A75DE-150-24V	N/A		3	150	24	27 x 23.5 x 44.5	600	72	14			X	Interpolated
A75D-200-24V	A75DE-200-24V	N/A		3	200	24	27 x 23.5 x 44.5	675	72	14			X	Interpolated
A75D-250-24V	A75DE-250-24V	N/A		3	250	24	30 x 30 x 72	800	46	12			X	Interpolated
A75D-300-24V	A75DE-300-24V	N/A		3	300	24	30 x 30 x 72	875	46	12			X	Interpolated
A75D-400-24V	A75DE-400-24V	N/A		3	400	24	38 x 39.4 x 70	1050	47	14			X	Interpolated
A75D-50-48V	A75DE-50-48V	N/A		3	50	48	23 x 15 x 38	400	975	14			X	Interpolated
A75D-75-48V	A75DE-75-48V	N/A		3	75	48	23 x 15 x 38	575	975	14			X	Interpolated
A75D-100-48V	A75DE-100-48V	N/A		3	100	48	23 x 15 x 38	600	975	14			X	Interpolated
A75D-125-48V	A75DE-125-48V	N/A		3	125	48	27 x 23.5 x 44.5	680	72	14			X	Interpolated
A75D-150-48V	A75DE-150-48V	N/A		3	150	48	27 x 23.5 x 44.5	700	72	14			X	Interpolated
A75D-200-48V	A75DE-200-48V	N/A		3	200	48	30 x 30 x 72	755	46	12			X	Interpolated
A75D-250-48V	A75DE-250-48V	N/A		3	250	48	30 x 30 x 72	800	46	12			X	Interpolated
A75D-300-48V	A75DE-300-48V	N/A		3	300	48	38 x 39.4 x 70	900	47	14			X	Interpolated
A75D-400-48V	A75DE-400-48V	N/A		3	400	48	38 x 39.4 x 70	1200	47	14			X	Interpolated
A75D-25-130V	A75DE-25-130V	N/A		3	25	130	23 x 15 x 38	305	975	14			X	Interpolated
A75D-30-130V	A75DE-30-130V	N/A		3	30	130	23 x 15 x 38	315	975	14			X	Interpolated
A75D-40-130V	A75DE-40-130V	N/A		3	40	130	23 x 15 x 38	330	975	14			X	Interpolated
A75D-50-130V	A75DE-50-130V	N/A		3	50	130	23 x 15 x 38	475	975	14			X	Interpolated
A75D-75-130V	A75DE-75-130V	N/A		3	75	130	27 x 23.5 x 44.5	660	72	14			X	Interpolated
A75D-100-130V	A75DE-100-130V	N/A		3	100	130	27 x 23.5 x 44.5	800	72	14			X	Interpolated
A75D-125-130V	A75DE-125-130V	N/A		3	125	130	30 x 30 x 72	850	46	12			X	Interpolated
A75D-150-130V	A75DE-150-130V	N/A		3	150	130	30 x 30 x 72	900	46	12			X	Interpolated
A75D-200-130V	A75DE-200-130V	N/A		3	200	130	38 x 39.4 x 70	1800	47	14			X	Interpolated
A75D-250-130V	A75DE-250-130V	N/A		3	250	130	38 x 39.4 x 70	1980	47	14			X	Interpolated
A75D-300-130V	A75DE-300-130V	N/A	3	300	130	38 x 39.4 x 70	1980	47	14			X	Interpolated	
	A75DE-300-130V	N/A	208	3	300	130	38 x 39 x 70	1980	47	14			X	UUT-07

Notes:

1. All UUTs tested to $S_{DS}=1.93$ at $z/h = 1.0$
2. All Enclosures NEMA 1 Rating

3. Cabinets made of Carbon Steel
4. Cabinet Manufacturer: LaMarche

5. All Models Capable of 60/50 Hz

Table 3 - Certified Products - ESCR Engine Starting Battery Charger

Model No.	Encl. UL Rating	Input Voltage [V]	Phase	Output Rating [A]	Output Voltage [V]	Cabinet Dimensions W x D x H [in]	Max. Weight [lb]	Cabinet Case No.	Mounting			UUT
									Isolated Wall	Rigid Wall	Rigid Floor	
ESCR-20/10-12/24V-AV1	UL 1236	120, 208, 240	1	10	12	7.75 x 7 x 11.25	25	D98	X	X		Interpolated
				20	12							
				10	24							
ESCR-20/10-12/24V-AV1	UL 1236	120, 208, 240	1	10	12	8 x 7 x 11	20	D98	X			UUT-08a
				20	12							
				10	24							
ESCR-20/10-12/24V-AV1	UL 1236	120, 208, 240	1	10	12	8 x 7 x 11	20	D98		X		UUT-08b
				20	12							
				10	24							
ESCR-40/20-12/24V-AV1	UL 1236	120, 208, 240	1	40	12	11.4 x 9 x 15	42	D99	X	X		Interpolated
				20	24							
ESCR-40/20-12/24V-AV1	UL 1236	120, 208, 240	1	40	12	11 x 9 x 15	50	D99	X			UUT-09a
				20	24							
ESCR-40/20-12/24V-AV1	UL 1236	120, 208, 240	1	40	12	11 x 9 x 15	50	D99		X		UUT-09b
				20	24							

Notes:

1. All UUTs tested to $S_{DS}=1.93$ at $z/h = 1.0$
2. All Enclosures NEMA 1 Rating

3. Cabinets made of Carbon Steel
4. Cabinet Manufacturer: LaMarche

5. All Models Capable of 60/50 Hz

Table 4 - Certified Subcomponents

Part Description	Part Number	Max. Weight [lb]	Manufacturer	UUT
AC Breaker	219 Series (25-100A, 24V;6-150A, 130V)	1	AIRPAX	UUT-02
	219 Series (6-75A)	1		Interpolated
	AUPG Series (6-12A, 24 & 48V)	1		UUT-01
	QC Series	1	Westinghouse	UUT-04
	HQC Series (100A)	4		Interpolated
	KDB Series (125-300A)	5		UUT-07
AC Terminations	Varies Between Units	1	Altec, Inc.	UUT-04, UUT-05, UUT-06
	Varies Between Units	1	Glastic	UUT-07
Cap	S6-A75DCAP Series	1	La Marche Mfg.	UUT-04, UUT-05, UUT-06, UUT-07
Capacitor	U32D Series (6-25A, 24V & 48V)	1	United Chemi-Con	UUT-01
	U36D & U32D Series (35-50A, 24V & 48V)	1		UUT-02
	U32D441 (6-40A, 24 & 48V)	1		UUT-04
	U36D741 (All 130V)	1		UUT-06
	U32D444 (50-100A, 24 & 48V)	1		UUT-05
	U32D Series (100A-24V; 100A-48V; 6-150A, 130v)	2		UUT-03
	U36D Series (130v, -0 Varies Between Units)	2		UUT-07
Choke	Varies Between Units		La Marche Mfg..	UUT-01, UUT-02, UUT-03, UUT-04, UUT-05, UUT-06, UUT-07
Control Fuse	312500	1	Littelfuse	UUT-01, UUT-02 & UUT-03
DC Breaker	AUPL Series (6-75A, 24V; 48V)	1	AIRPAX	UUT-02
	EHD Series (50, 130V)	1		UUT-02
	ALEL Series (24V & 48V)	1		UUT-04
	A279 Series (130V)	1		UUT-06
	WFD Series (100-150A, 130V)	5		UUT-03
DC Terminations	Varies Between Units	1	Altec, Inc.	UUT-04, UUT-05, UUT-06
	Varies Between Units	1	Glastic	UUT-07
Diode	1N5624	1	GE	UUT-01, UUT-02 & UUT-03
	S1E-1D25-0101	3	La Marche Mfg.	UUT-04 & UUT-05
	S1E-1D38-0101	3		UUT-06
Fuse	A13X80-4 (6-40A, 24&48V)	1	Ferraz Shawmut	UUT-04
	A25X80 (6-40A, 130V)	1		UUT-06
	A13X200-4 (50-100A)	1		UUT-05
	A25X200	<1	Gould	UUT-07

Table 4 - Certified Subcomponents (Continued)

Part Description	Part Number	Max. Weight [lb]	Manufacturer	UUT
Circuit Card	S2A-255	1	La Marche Mfg..	UUT-01, UUT-02, UUT-03
	S2A-220	1		UUT-01, UUT-02, UUT-03
	S2A-296	1		UUT-01, UUT-02, UUT-03
	S2A-205 ¹	1		UUT-01, UUT-02, UUT-03
	S2A-293 (Digital Display)	1		UUT-01, UUT-02, UUT-03
	S2A-198 ²	1		UUT-01, UUT-04, UUT-05, UUT-07
	S2A-149 ³	1		UUT-01, UUT-02, UUT-03
	S2A-360S	1		UUT-04, UUT-05, UUT-06
	S2A-362 ⁴	1		UUT-04, UUT-05, UUT-06
	S2A-364	1		UUT-04, UUT-05, UUT-06
	S2A-172	1		UUT-05
	S2A-302 ⁵	1		UUT-02, UUT-04
	S2A-332 ⁶	1		UUT-07
	S2A-172	1		UUT-07
	S2A-321	1		UUT-07
	S2A-326	1		UUT-07
	FC6	2		UUT-07
	AC58 130V Only ⁷	3		UUT-03

Notes:

1. Includes Digital Display Meter, Regulator, and Switch components
2. Includes Alarm, Annunciator, and Relay components
3. Includes Resistor component
4. Includes Regulator, and Timer Component

5. Includes Data Port, and SCADA Components
6. Includes Timer Component
7. Includes Heat Sink component

Table 4 - Certified Subcomponents (Continued)

Part Description	Part Number	Max. Weight [lb]	Manufacturer	UUT
Heat Sink	S1F-2MX13-0101(6-16A)	7	La Marche Mfg..	UUT-04
	S1E-2MX05-0101(20-25A)	8		UUT-04
	S1E-1M3ET1X-XXXX(30-35) & (40-50)	10		UUT-06
	S1E-3875-J10	20		UUT-07
	S1E-1MES18-0201(75A)	20		UUT-05
LCD Display	ACM1602B	<1	AZ Displays, Inc.	UUT-04, UUT-07
Lighting Arrestor	Z40-3Y	1	DITEK	UUT-02, UUT-04, UUT-07
Ouil Fill Cap (C2)	N50R6601E	1	Aerovox	UUT-01
Regulator	S2C-47A (75-130V)	<1	La Marche Mfg..	UUT-05
	V250LA20AP (25-50A & 300, 130V)	<1	Littelfuse	UUT-07
Relay	KUP-11A15-24	<1	Tyco/P&B	UUT-04, UUT-07
Resistor	FST50-1K	1	Huntington	UUT-07
	FST50-1K	<1		UUT-04, UUT-05, UUT-06
Surge Protector	S2C-47A	1	La Marche Mfg..	UUT-03
	V250LA20AP (6-12A & 100A, 24V)	1	Littelfuse	UUT-01
	V120ZA6P (20A-75A & 150A, 24V)	1		UUT-03
	V100ZA15P (24V, 48V)	1		UUT-04
	V150LA20AP (130V)	1		UUT-06
Temperature Compensation	LM335AH	1	National	UUT-01, UUT-04
Transformer	Varies Between Units		La Marche Mfg.	UUT-01, UUT-02, UUT-03, UUT-07
Varistor	S07K250	1	Siemens	UUT-01



UNIT UNDER TEST (UUT) Summary Sheet

UUT-01a

Test Report: PEER STI 2012-20; UUT01 Setup C; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-6-24V w/ D4B Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; Diode: GE ; OIL FILL CAP: AEROVOX ; Surge Protector: LITTELFUSE ; Temperature Compensation: NATIONAL ; Transformer: La Marche Mfg ; Varistor: SIEMENS

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
70	15.0	19.0	12.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-01a was mounted to the wall fixture using (4) 3/8" diameter Grade 8 bolts. The wall fixture was isolated using (6) VMC M2SSH-1E spring isolators. The isolators were connected to the wall fixture using (1) 3/4" diameter Grade 8 bolt each, and were connected to the shake table using (4) 5/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-01b

Test Report: PEER STI 2012-20; UUT01 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-6-24V w/ D4B Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; Diode: GE ; OIL FILL CAP: AEROVOX ; Surge Protector: LITTELFUSE ; Temperature Compensation: NATIONAL ; Transformer: La Marche Mfg ; Varistor: SIEMENS

UUT Properties

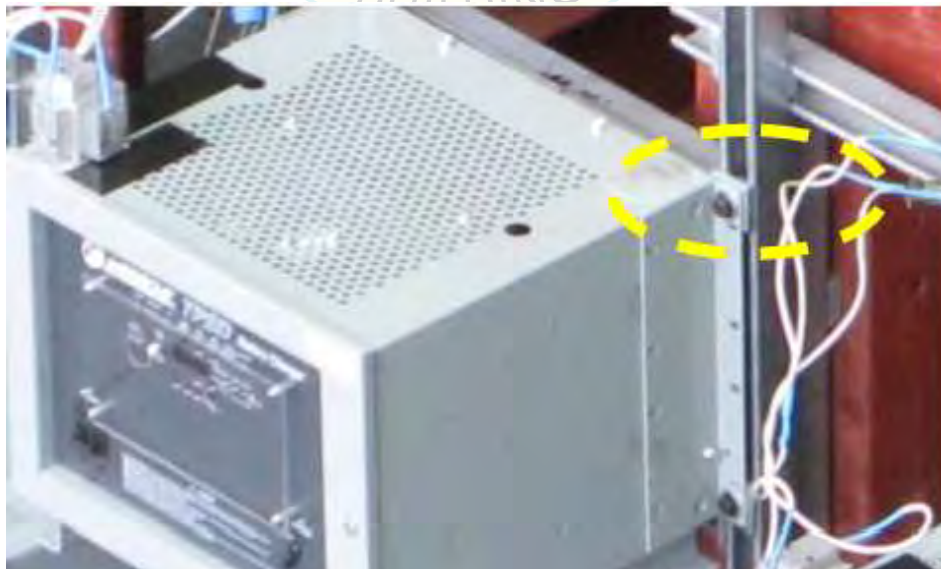
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
70	15.0	19.0	12.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-01b was mounted directly to the wall fixture using (4) 3/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-01c

Test Report: PEER STI 2012-20; UUT01 Setup A; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-6-24V w/ D4B Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; Diode: GE ; OIL FILL CAP: AEROVOX ; Surge Protector: LITTELFUSE ; Temperature Compensation: NATIONAL ; Transformer: La Marche Mfg ; Varistor: SIEMENS

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
70	15.0	19.0	12.0	7.3	5.6	6.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-01c was rigidly mounted to the shake table using (4) 5/16" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-02a

Test Report: PEER STI 2012-20; UUT02 Setup C; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-50-130V w/ D9 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; DC Breaker: AIRPAX ; Diode: GE ; Lighting Arrestor: DITEK ; Transformer: La Marche Mfg ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
390	15.0	23.0	36.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-02a was mounted to the wall fixture using (6) 1/2" diameter Grade 8 bolts. The wall fixture was isolated using (6) VMC M2SSH-1E spring isolators. The isolators were connected to the wall fixture using (1) 3/4" diameter Grade 8 bolt each, and were connected to the shake table using (4) 5/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-02b

Test Report: PEER STI 2012-20; UUT02 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-50-130V w/ D9 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; DC Breaker: AIRPAX ; Diode: GE ; Lighting Arrestor: DITEK ; Transformer: La Marche Mfg ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
390	15.0	23.0	36.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-02b was mounted directly to the wall fixture using (6) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-03

Test Report: PEER STI 2012-20; UUT03 Setup C; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
TPSD Battery Charger	TPSD-150-130V w/ D44 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; Control Fuse: LITTELFUSE ; DC Breaker: La Marche Mfg ; Diode: GE ; Surge Protector: La Marche Mfg ; Transformer: La Marche Mfg

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
1,060	19.0	24.0	72.0	8.8	5.8	6.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-03 was rigidly mounted to the shake table using (4) 3/8" diameter Grade 8 bolts.
DCRs: Remove cross bracing and add two (2) L2x3x3/16in. angles fastened to the inside base of unit, attached with five (5) equally spaced 3/8" diameter Grade 8 Bolts per L.



Post-test Observation for UUT3

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-04

Test Report: PEER STI 2012-20; UUT04 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
A75D SCR Battery Charger	A75D-25-24V w/ D4B75 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: WESTINGHOUSE ; AC TERMINATIONS: ALTEC ; Cap: La Marche Mfg ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; DC Breaker: AIRPAX ; DC TERMINATIONS: ALTEC ; Diode: La Marche Mfg ; Fuse: FERRAZ SHAWMUT ; Heat Sink: La Marche Mfg ; LCD Display: AZ Displays INC ; Lighting Arrestor: DITEK ; Relay: TYCO/P&B ; Resistor: HUNTINGTON ; Surge Protector: LITTELFUSE ; Temperature Compensation: NATIONAL

UUT Properties

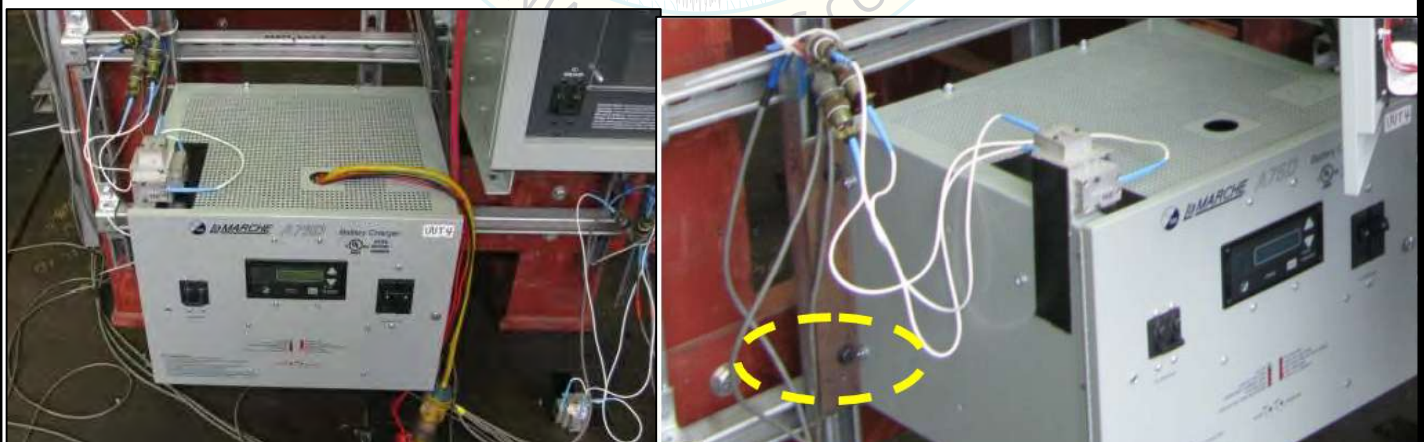
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
80	15.0	19.0	12.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-04 was mounted directly to the wall fixture using (4) 3/8" diameter Grade 8 bolts.
DCRs: Add plate washer strips at bolt locations



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-05

Test Report: PEER STI 2012-20; UUT05 Setup A; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
A75DE SCR Battery Charger	A75DE-75-24V w/ D975 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC TERMINATIONS: ALTEC ; Cap: La Marche Mfg ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; DC TERMINATIONS: ALTEC ; Diode: La Marche Mfg ; Fuse: FERRAZ SHAWMUT ; Heat Sink: La Marche Mfg ; Regulator: La Marche Mfg ; Resistor: HUNTINGTON

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
330	15.0	20.0	38.0	13.5	15.7	6.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-05 was rigidly mounted to the shake table using (4) 5/16" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-06

Test Report: PEER STI 2012-20; UUT06 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
A75D SCR Battery Charger	A75D-30-130V w/ D475 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC TERMINATIONS: ALTEC ; Cap: La Marche Mfg ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; DC Breaker: AIRPAX ; DC TERMINATIONS: ALTEC ; Diode: La Marche Mfg ; Fuse: FERRAZ SHAWMUT ; Heat Sink: La Marche Mfg ; Resistor: HUNTINGTON ; Surge Protector: LITTELFUSE ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
260	15.0	19.0	24.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-06 was mounted directly to the wall fixture using (6) 3/8" diameter Grade 8 bolts.
DCRs: Add plate washer strips at bolt locations



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-07

Test Report: PEER STI 2012-20; UUT07 Setup A; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
A75DE SCR Battery Charger	A75DE-300-130V w/ D47 Casing	La Marche

Product Construction Summary

Base: 14 Gauge galvanized carbon steel; Walls: 14 Gauge galvanized carbon steel; Roof: 14 Gauge galvanized carbon steel

Options / Subcomponent Summary

AC Breaker: AIRPAX ; AC TERMINATIONS: GLASTIC ; Cap: La Marche Mfg ; Capacitor: UNITED CHEMI-CON ; Choke: La Marche Mfg ; Circuit Card: La Marche Mfg ; DC Terminations: GLASTIC ; Fuse: GOULD ; Heat Sink: La Marche Mfg ; LCD Display: AZ DISPLAYS, INC ; Lighting Arrestor: DITEK ; Regulator: LITTELFUSE ; Relay: TYCO/P&B ; Transformer: La Marche Mfg

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
1,980	39.0	38.0	70.0	17.0	14.5	6.0

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-07 was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-08a

Test Report: PEER STI 2012-20; UUT08 Setup C; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
ESCR Engine Starting Battery Charger	ESCR-20/10-12/24V-AV1 w/ D98 Casing	La Marche

Product Construction Summary

Base: 16 Gauge galvanized carbon steel; Walls: 16 Gauge galvanized carbon steel; Roof: 16 Gauge galvanized carbon steel

Options / Subcomponent Summary

CPU, Controller, and Electronics: La Marche Mfg ; Transformer: La Marche Mfg ;

UUT Properties

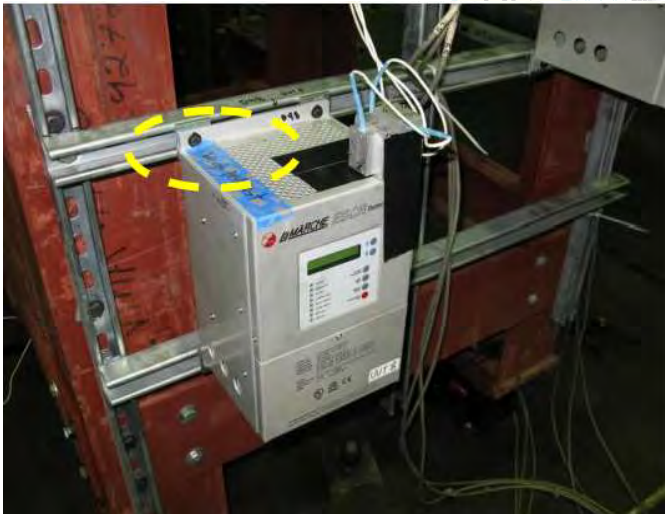
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
20	7.0	8.0	11.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-08a was mounted to the wall fixture using (4) 1/4" diameter Grade 8 bolts. The wall fixture was isolated using (6) VMC M2SSH-1E spring isolators. The isolators were connected to the wall fixture using (1) 3/4" diameter Grade 8 bolt each, and were connected to the shake table using (4) 5/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-08b

Test Report: PEER STI 2012-20; UUT08 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
ESCR Engine Starting Battery Charger	ESCR-20/10-12/24V-AV1 w/ D98 Casing	La Marche

Product Construction Summary

Base: 16 Gauge galvanized carbon steel; Walls: 16 Gauge galvanized carbon steel; Roof: 16 Gauge galvanized carbon steel

Options / Subcomponent Summary

CPU, Controller, and Electronics: La Marche Mfg ; Transformer: La Marche Mfg ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
20	7.0	8.0	11.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-08b was mounted directly to the wall fixture using (4) 1/4" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-09a

Test Report: PEER STI 2012-20; UUT09 Setup C; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
ESCR Engine Starting Battery Charger	ESCR-40/20-12/24V-AV1 w/ D99 Casing	La Marche

Product Construction Summary

Base: 16 Gauge galvanized carbon steel; Walls: 16 Gauge galvanized carbon steel; Roof: 16 Gauge galvanized carbon steel

Options / Subcomponent Summary

CPU, Controller, and Electronics: La Marche Mfg ; Transformer: La Marche Mfg ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
50	9.0	11.0	15.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-09a was mounted to the wall fixture using (4) 1/4" diameter Grade 8 bolts. The wall fixture was isolated using (6) VMC M2SSH-1E spring isolators. The isolators were connected to the wall fixture using (1) 3/4" diameter Grade 8 bolt each, and were connected to the shake table using (4) 5/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-09b

Test Report: PEER STI 2012-20; UUT09 Setup B; Oct 11 & 12, 2012

Model Line	Model Number	Manufacturer
ESCR Engine Starting Battery Charger	ESCR-40/20-12/24V-AV1 w/ D99 Casing	La Marche

Product Construction Summary

Base: 16 Gauge galvanized carbon steel; Walls: 16 Gauge galvanized carbon steel; Roof: 16 Gauge galvanized carbon steel

Options / Subcomponent Summary

CPU, Controller, and Electronics: La Marche Mfg ; Transformer: La Marche Mfg ;

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
50	9.0	11.0	15.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

Test Mounting Details

UUT-09b was mounted directly to the wall fixture using (4) 1/4" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.