



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0131

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Stored Energy Systems

Manufacturer's Technical Representative: Sam Coleman

Mailing Address: 1840 Industrial Circle, Longmont, CO 80501

Telephone: (303) 678-7500

Email: samc@sens-usa.com

Product Information

Product Name: UPS and Batteries

Product Type: Battery Chargers

Product Model Number: See Attachment

General Description: AC powered battery chargers and battery selectors for generator sets

Mounting Description: Rigid wall mounted, may also be rigid wall mounted on equipment(NRG); rigid wall mounted only (BBS,IQ)

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Dynamic Certification Laboratories

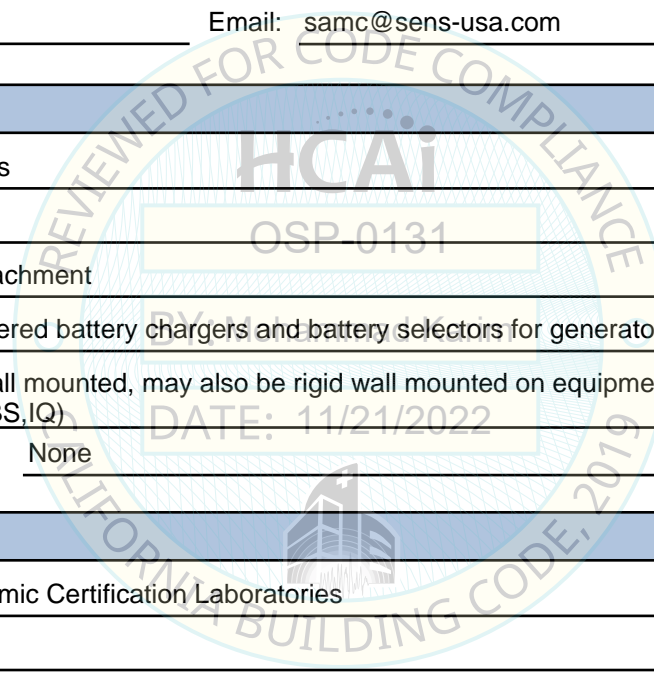
Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Parkway #109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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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

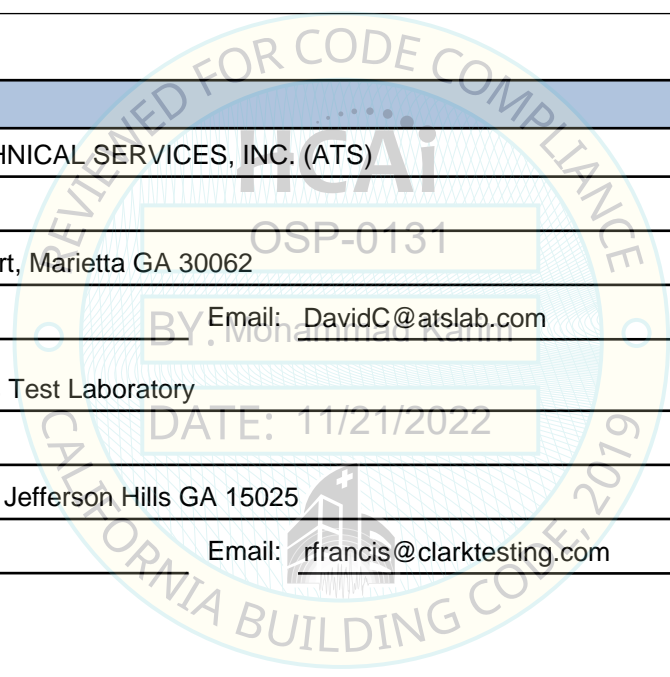
Certification Method

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

Testing Laboratory

Company Name: APPLIED TECHNICAL SERVICES, INC. (ATS)
Contact Person: David Common
Mailing Address: 1049 Triad Court, Marietta GA 30062
Telephone: (888) 287-5227 Email: DavidC@atslab.com

Company Name: Clark Dynamics Test Laboratory
Contact Person: Robert Francis
Mailing Address: 1801 Route 51, Jefferson Hills GA 15025
Telephone: (412) 387-1001 Email: rfrancis@clarktesting.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.5 (sds=2.0g); 1.13 (Sds=2.5g)

SDS (Design spectral response acceleration at short period, g) = 2.0 (z/h=1); 2.5 (z/h=0)

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

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

Natural frequencies (Hz) = N/A (wall mounted)

Overall dimensions and weight = See Attachment

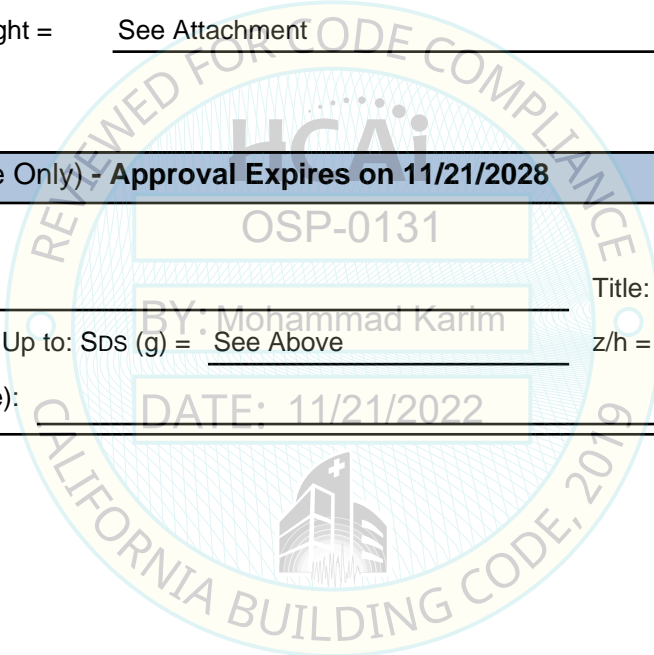
HCAI Approval (For Office Use Only) - Approval Expires on 11/21/2028

Date: 11/21/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 11/21/2022



Special Seismic Certification

Table 1 - Certified Components - NRG



DCL Project Number: 10478-2201
Manufacturer: Stored Energy Systems
Product Family: Battery chargers for gensets
Product Line: NRG Intelligent Engine Start Battery Charger
Mounting Configuration: Rigid and Isolated wall mount
Test Levels: $S_{DS} = 2.00g, z/h=1.0$; $S_{DS} = 2.50g, z/h=0.0$

Model Number	Manufacturer	Max. Dimensions (in)			Max. Weight (lb.)	Unit
		Depth	Width	Height		
NRG12-10-HCE	Stored Energy Systems	6.5	7.7	12.5	22	Interpolated
NRG12-10-RCE		6.5	7.7	12.5	22	Interpolated
NRG24-10-HCE		6.5	7.7	12.5	22	Interpolated
NRG24-10-RCE		6.5	7.7	12.5	22	Interpolated
NRG22-10-HCE		6.5	7.7	12.5	22	Interpolated
NRG22-10-RCE		6.5	7.7	12.5	22	UUT 7, 17
NRG12-20-HCLSE		6.8	14.0	13.1	39	Interpolated
NRG12-20-RCLSE		6.8	14.0	13.1	39	Interpolated
NRG24-20-HCLSE		6.8	14.0	13.1	42	Interpolated
NRG24-20-RCLSE		6.8	14.0	13.1	42	Interpolated
NRG22-20-HCLSE		6.8	14.0	13.1	42	Interpolated
NRG22-20-RCLSE		6.8	14.0	13.1	42	UUT 5, 18

Notes:
 Product Construction: NEMA 1 aluminum enclosure for NRG.
 Options/Subcomponents: Model number uniquely identifies configuration.

Special Seismic Certification

Table 2 - Certified Components - BBS

DCL Project Number: 10478-2201
Manufacturer: Stored Energy Systems
Product Family: Battery chargers for gensets
Product Line: BBS Best Battery Selector
Mounting Configuration: Rigid wall mount
Test Levels: $S_{DS} = 2.00g, z/h=1.0$; $S_{DS} = 2.50g, z/h=0.0$

Model Number	Manufacturer	Max. Dimensions (in)			Max. Weight (lb.)	Unit
		Depth	Width	Height		
BBS-1600E	Stored Energy Systems	8.6	12.3	16.3	30	UUT 6
BBS-800E		8.6	12.3	16.3	31	Interpolated
BBS-4800E		13.0	19.4	17.6	75	UUT 3

Notes:
 Product Construction: NEMA 1 carbon steel enclosure for BBS.
 Options/Subcomponents: Model number uniquely identifies configuration for BBS.

Special Seismic Certification

Table 3 - Certified Components - IQ



DCL Project Number: 10478-2201
Manufacturer: Stored Energy Systems
Product Family: Battery chargers for gensets
Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger
Mounting Configuration: Rigid wall mount
Test Levels: S_{DS} = 2.00g, z/h=1.0 ; S_{DS} = 2.50g, z/h=0.0

Model Number	Manufacturer	Max. Dimensions (in)			Max. Weight (lb.)	Unit
		Depth	Width	Height		
Q0240068L511AE	Stored Energy Systems	13.0	19.4	17.6	63	UUT 10
Q024006XX5XXXE ¹		13.0	19.4	17.6	92	Interpolated
Q012012XX5XXXE		13.0	19.4	17.6	92	Interpolated
Q048006XX5XXXE		13.0	19.4	17.6	96	Interpolated
Q024012XX5XXXE		13.0	19.4	17.6	96	Interpolated
Q012025XX5XXXE		13.0	19.4	17.6	96	Interpolated
Q024016XX5XXXE		13.0	19.4	17.6	104	Interpolated
Q048012XX5XXXE		13.0	19.4	17.6	108	Interpolated
Q024025XX5XXXE		13.0	19.4	17.6	119	Interpolated
Q012050XX5XXXE		13.0	19.4	17.6	120	Interpolated
Q048016XX5XXXE		13.0	19.4	17.6	122	Interpolated
Q024035XX5XXXE		13.0	19.4	17.6	129	Interpolated
Q120006XX5XXXE		13.0	19.4	17.6	130	Interpolated
Q024050XX5XXXE		13.0	19.4	17.6	134	Interpolated
Q048025XX5XXXE		13.0	19.4	17.6	148	Interpolated
Q240006XX5XXXE		13.0	19.4	17.6	150	Interpolated
Q120012XX5XXXE		13.0	19.4	17.6	152	Interpolated
Q048035XX5XXXE		13.0	19.4	17.6	167	Interpolated
Q120016XX5XXXE		13.0	19.4	17.6	186	Interpolated
Q048050XX5XXXE		13.0	19.4	17.6	190	Interpolated
Q240012XX5XXXE		13.0	19.4	17.6	190	Interpolated
Q240012TL534BE		13.0	19.4	17.6	186	UUT 11
Q120025XX5XXXE		13.0	19.4	17.6	190	Interpolated
Q012100XX5XXXE		16.1	23.6	27.8	298	Interpolated
Q024075XX5XXXE		16.1	23.6	27.8	308	Interpolated
Q240016XX5XXXE		16.1	23.6	27.8	320	Interpolated
Q024100XX5XXXE		16.1	23.6	27.8	320	Interpolated
Q120035XX5XXXE		16.1	23.6	27.8	322	Interpolated
Q048075XX5XXXE		16.1	23.6	27.8	335	Interpolated
Q024150XX5XXXE		16.1	23.6	27.8	341	Interpolated
Q024150SL511CE		16.1	23.6	27.8	256	UUT 12
Q048100XX5XXXE		16.1	23.6	27.8	341	Interpolated
Q240025XX5XXXE	16.1	23.6	27.8	341	Interpolated	
Q120050XX5XXXE	16.1	23.6	27.8	341	Interpolated	
Q120050SL514BE	16.1	23.6	27.8	334	UUT 1	
Q1200504G511CE	16.1	23.6	27.8	336	UUT 13	
Q1200508L574NE	16.1	23.6	27.8	341	UUT 9	

Notes:
Product Construction: NEMA 1 carbon steel enclosure IQ.
Options/Subcomponents: See note 1 below for IQ options.
1. IQ nomenclature for 'X' digits (**bold** and * indicates tested option, non-bold indicates available interpolated option):
Digit 8 (AC Supply 115V - 480V): **T*** (115V), P, **S***, V, Z, 3, **4***, **8*** (480V)
Digit 9 (Agency Approval): no effect on unit construction or configuration
Digit 11 (Input Breaker Interrupt): **1***, **3***, **7*** (all tested)
Digit 12 (Output Filter/Blocking Diode Configuration): **1***, 2, 3, **4***
Digit 13 (Alarm Relay/Communications Packages): **A***, **B***, **C***, K, L, M, **N***, P, S

Special Seismic Certification
Table 4 - Certified Subcomponents - NRG



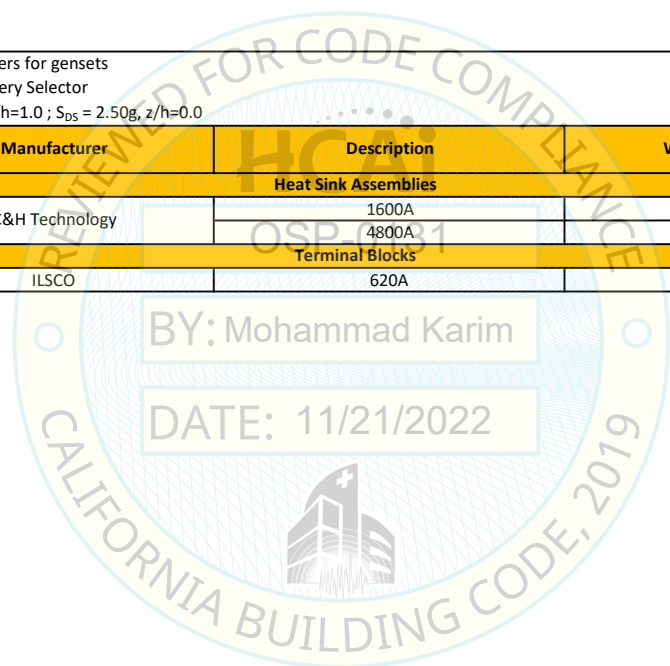
DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: NRG Intelligent Engine Start Battery Charger
 Test Levels: $S_{DS} = 2.00g, z/h=1.0$; $S_{DS} = 2.50g, z/h=0.0$

Model Number	Manufacturer	Description	Weight	Unit
Chokes/Inducers				
602300	Stored Energy Systems	20A	5	UUT 5, 18
Transformers				
600600R	Stored Energy Systems	280VA, copper windings	17	UUT 7, 17
600902R		560VA, copper windings	25	UUT 5, 18
Circuit Boards				
206121	Stored Energy Systems		1	UUT 7, 17
206720			1	UUT 5, 18

Special Seismic Certification
Table 5 - Certified Subcomponents - BBS

DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: BBS Best Battery Selector
 Test Levels: $S_{DS} = 2.00g, z/h=1.0$; $S_{DS} = 2.50g, z/h=0.0$

Model Number	Manufacturer	Description	Weight	Unit
Heat Sink Assemblies				
300603	C&H Technology	1600A	11	UUT 6
209706		4800A	43	UUT 3
Terminal Blocks				
801220	ILSCO	620A	2	UUT 6



Special Seismic Certification
Table 6 - Certified Subcomponents - IQ



DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger
 Test Levels: S_{DS} = 2.00g, z/h=1.0 ; S_{DS} = 2.50g, z/h=0.0

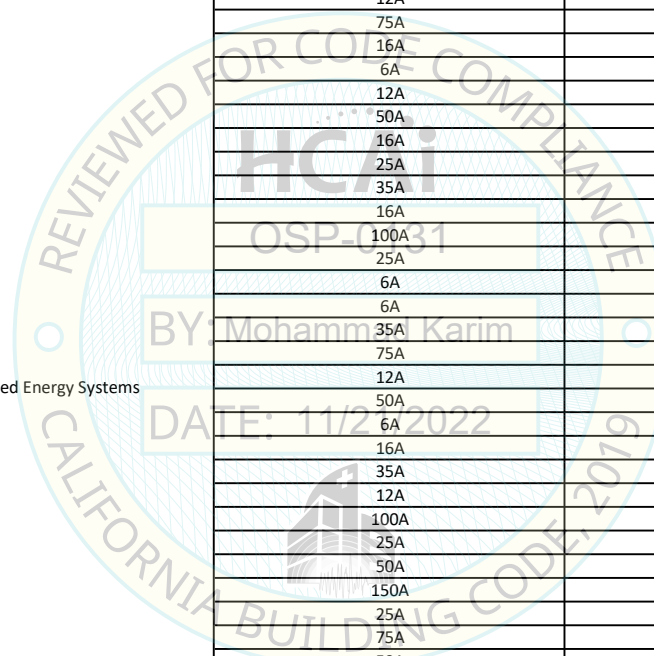
Model Number	Manufacturer	Description	Weight	Unit
Heat Sink Assemblies				
209310	Stored Energy Systems	6A	2	Interpolated
209311		12A	2	Interpolated
209312		16A	2	Interpolated
209313		25A	7	UUT 4
209314		35A	7	Interpolated
209315		50A	7	UUT 1
209319		25A	7	Interpolated
209316		75A	20	Interpolated
209317		100A	20	Interpolated
209318		150A	23	UUT 12
Capacitors				
501129	United Chemi-Con	68,000µF, 50V	1	UUT 10, 12
501134		47,000µF, 63V	1	Interpolated
501140		8,200µF, 200V	1	UUT 1, 4
501151		3,300µF, 350V	1	Interpolated
501151	Vishay	3,300µF, 350V	1	UUT 11
Circuit Boards				
206200	Stored Energy Systems		1	UUT 1, 4
Resistors				
408638	Vishay	155W	1	UUT 9
Contactors				
701026	Square D	30A	1	UUT 9
701027	Eaton Cutler-Hammer	60A	1	UUT 11
Circuit Breakers				
702365	Eaton Cutler-Hammer	15A	2	Interpolated
702366		20A	2	Interpolated
702367		25A	2	Interpolated
702368		30A	2	UUT 9
702369		40A	2	Interpolated
702370		45A	2	Interpolated
702371		50A	2	Interpolated
702372		60A	2	Interpolated
702373		70A	2	Interpolated
702485		200A	3	UUT 12
702520	Square D	10A	1	Interpolated
702360		15A	1	Interpolated
702521		15A	1	Interpolated
702361		20A	1	Interpolated
702522		20A	1	Interpolated
702363		25A	1	Interpolated
702531		25A	1	Interpolated
702364		30A	1	Interpolated
702523		30A	1	Interpolated
702514		35A	1	Interpolated
702524		40A	1	Interpolated
702525		45A	1	Interpolated
702526		50A	1	Interpolated
702532		60A	1	UUT 1, 4
702527		70A	1	Interpolated
702530		100A	1	Interpolated
702578		125A	1	Interpolated
702582		15A	3	UUT 10
702583		20A	3	Interpolated
702854		25A	3	Interpolated
702585		30A	3	Interpolated
702472		35A	3	UUT 4
702587		40A	3	Interpolated
702399		45A	3	Interpolated
702473		50A	3	Interpolated
702592		60A	3	Interpolated
702474		70A	3	UUT 1

Special Seismic Certification
Table 6 - Certified Subcomponents - IQ (continued)



DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger
 Test Levels: S_{D5} = 2.00g, z/h=1.0 ; S_{D5} = 2.50g, z/h=0.0

Model Number	Manufacturer	Description	Weight	Unit
Chokes/Inductors				
602273	Stored Energy Systems	12A	5	Interpolated
602275		16A	5	Interpolated
602212		16A	5	Interpolated
602278		25A	5	Interpolated
602281		35A	5	Interpolated
602270		6A	5	Interpolated
602213		25A	5	Interpolated
602284		50A	5	Interpolated
602271		6A	5	Interpolated
602276		16A	6	Interpolated
602214		35A	7	Interpolated
602225		12A	8	Interpolated
602287		75A	8	Interpolated
602229		16A	9	Interpolated
602221		6A	11	Interpolated
602Q74		12A	12	Interpolated
602215		50A	12	Interpolated
602230		16A	13	Interpolated
602Q79		25A	13	UUT 4
602238		35A	13	Interpolated
602277		16A	13	Interpolated
602289		100A	16	Interpolated
602234		25A	16	Interpolated
602222		6A	16	Interpolated
602223		6A	16	Interpolated
602283		35A	17	Interpolated
602216		75A	17	Interpolated
602226		12A	18	Interpolated
602242		50A	18	Interpolated
602211		6A	18	Interpolated
602231		16A	25	Interpolated
602239		35A	25	Interpolated
602227		12A	25	Interpolated
602217		100A	26	Interpolated
602280		25A	26	Interpolated
602286		50A	26	UUT 1
602291		150A	28	Interpolated
602235		25A	33	Interpolated
602246		75A	33	Interpolated
602243		50A	34	Interpolated
602224		6A	34	Interpolated
602249		100A	34	Interpolated
602240	35A	38	Interpolated	
602247	75A	41	Interpolated	
602232	16A	44	Interpolated	
602228	12A	52	Interpolated	
602236	25A	55	UUT 4	
602244	50A	62	Interpolated	
602250	100A	63	Interpolated	
602248	75A	63	Interpolated	
602241	35A	64	Interpolated	
602233	16A	65	Interpolated	
602253	150A	66	Interpolated	
602251	100A	78	Interpolated	
602237	25A	87	Interpolated	
602245	50A	87	UUT 1	
Transformers				
600Q10T	Stored Energy Systems	168VA, copper windings	2	Interpolated
600Q108		168VA, copper windings	11	Interpolated
600Q10P		168VA, copper windings	12	Interpolated
600Q01T		168VA, copper windings	12	Interpolated
600Q018		168VA, copper windings	12	Interpolated
600Q10V		168VA, copper windings	12	Interpolated
600Q01P		168VA, copper windings	16	Interpolated
600Q01V		168VA, copper windings	16	Interpolated
600Q20P		336VA, copper windings	16	Interpolated
600Q20T		336VA, copper windings	16	Interpolated
600Q208		336VA, copper windings	16	Interpolated
600Q11P		336VA, copper windings	16	Interpolated

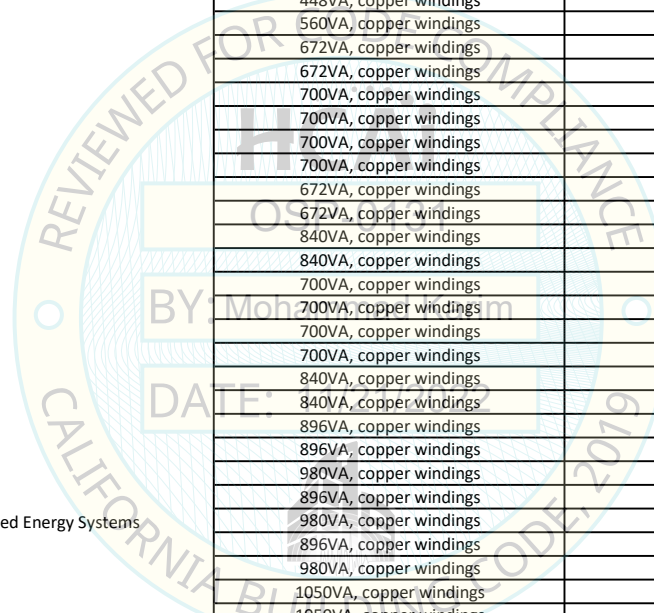


Special Seismic Certification
Table 6 - Certified Subcomponents - IQ (continued)



DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger
 Test Levels: S_{DS} = 2.00g, z/h=1.0 ; S_{DS} = 2.50g, z/h=0.0

Model Number	Manufacturer	Description	Weight	Unit
Transformers (continued)				
600Q11T		336VA, copper windings	16	Interpolated
600Q118		336VA, copper windings	16	Interpolated
600Q11V		336VA, copper windings	16	Interpolated
600Q03V		350VA, copper windings	16	Interpolated
600Q20V		336VA, copper windings	17	Interpolated
600Q03P		350VA, copper windings	17	Interpolated
600Q03T		350VA, copper windings	17	Interpolated
600Q038		350VA, copper windings	17	Interpolated
600600H		280VA, copper windings	17	Interpolated
600Q12T		448VA, copper windings	21	Interpolated
600Q128		448VA, copper windings	22	Interpolated
600Q12V		448VA, copper windings	25	Interpolated
600Q12P		448VA, copper windings	25	Interpolated
600902H		560VA, copper windings	25	Interpolated
600Q21T		672VA, copper windings	26	Interpolated
600Q218		672VA, copper windings	26	Interpolated
600Q13T		700VA, copper windings	26	Interpolated
600Q138		700VA, copper windings	26	Interpolated
600Q05T		700VA, copper windings	27	Interpolated
600Q058		700VA, copper windings	27	Interpolated
600Q21P		672VA, copper windings	28	Interpolated
600Q21V		672VA, copper windings	28	Interpolated
600Q30T		840VA, copper windings	28	Interpolated
600Q308		840VA, copper windings	28	Interpolated
600Q13V		700VA, copper windings	29	Interpolated
600Q13P		700VA, copper windings	30	Interpolated
600Q05P		700VA, copper windings	32	Interpolated
600Q05V		700VA, copper windings	32	Interpolated
600Q30P		840VA, copper windings	33	Interpolated
600Q30V		840VA, copper windings	33	Interpolated
600Q22T		896VA, copper windings	33	Interpolated
600Q228		896VA, copper windings	33	Interpolated
600Q14T		980VA, copper windings	34	Interpolated
600Q22V		896VA, copper windings	35	Interpolated
600Q148	Stored Energy Systems	980VA, copper windings	35	Interpolated
600Q22P		896VA, copper windings	36	Interpolated
600Q14P		980VA, copper windings	39	Interpolated
600Q06P		1050VA, copper windings	40	Interpolated
600Q06T		1050VA, copper windings	40	Interpolated
600Q068		1050VA, copper windings	40	Interpolated
600Q06V		1050VA, copper windings	40	Interpolated
600Q14V		980VA, copper windings	41	Interpolated
600Q408		1680VA, copper windings	42	Interpolated
600Q318		1680VA, copper windings	45	Interpolated
600Q40T		1680VA, copper windings	46	Interpolated
600Q31T		1680VA, copper windings	47	Interpolated
600Q23T		1400VA, copper windings	48	Interpolated
600Q238		1400VA, copper windings	48	Interpolated
600Q15T		1400VA, copper windings	49	Interpolated
600Q158		1400VA, copper windings	49	Interpolated
600Q07T		1400VA, copper windings	51	Interpolated
600Q078		1400VA, copper windings	51	Interpolated
600Q07V		1400VA, copper windings	51	Interpolated
600Q16T		2100VA, copper windings	51	Interpolated
600Q40V		1680VA, copper windings	52	Interpolated
600Q168		2100VA, copper windings	52	Interpolated
600Q16V		2100VA, copper windings	52	Interpolated
600Q40P		1680VA, copper windings	55	Interpolated
600Q248		1960VA, copper windings	55	Interpolated
600Q31V		1680VA, copper windings	56	Interpolated
600Q31P		1680VA, copper windings	57	Interpolated
600Q23P		1400VA, copper windings	58	Interpolated
600Q258		2800VA, copper windings	58	Interpolated
600Q24T		1960VA, copper windings	58	Interpolated
600Q16P		2100VA, copper windings	58	Interpolated
600Q25T		2800VA, copper windings	58	Interpolated
600Q23V		1400VA, copper windings	59	Interpolated
600Q15P		1400VA, copper windings	59	Interpolated
600Q15T		1400VA, copper windings	59	Interpolated
600Q2022		1400VA, copper windings	59	Interpolated



Special Seismic Certification
Table 6 - Certified Subcomponents - IQ (continued)



DCL Project Number: 10478-2201
 Product Family: Battery chargers for gensets
 Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger
 Test Levels: S_{DS} = 2.00g, z/h=1.0 ; S_{DS} = 2.50g, z/h=0.0

Model Number	Manufacturer	Description	Weight	Unit
Transformers (continued)				
600Q32P		2240VA, copper windings	59	Interpolated
600Q17T		2800VA, copper windings	59	Interpolated
600Q178		2800VA, copper windings	59	Interpolated
600Q17V		2800VA, copper windings	59	Interpolated
600Q328		2240VA, copper windings	60	Interpolated
600Q32V		2240VA, copper windings	60	Interpolated
600Q07P		1400VA, copper windings	60	Interpolated
600Q32T		2240VA, copper windings	60	Interpolated
600Q24V		1960VA, copper windings	66	Interpolated
600Q25P		2800VA, copper windings	66	Interpolated
600Q24P		1960VA, copper windings	67	Interpolated
600Q25V		2800VA, copper windings	67	Interpolated
600Q08T		2100VA, copper windings	68	Interpolated
600Q17P		2800VA, copper windings	68	Interpolated
600Q088		2100VA, copper windings	69	Interpolated
600Q08V		2100VA, copper windings	69	Interpolated
600Q338		3500VA, copper windings	70	Interpolated
600Q41T		3360VA, copper windings	70	Interpolated
600Q33T		3500VA, copper windings	70	UUT 4
600Q418		3360VA, copper windings	75	Interpolated
600Q08P		2100VA, copper windings	76	Interpolated
600Q185		4200VA, copper windings	77	Interpolated
600Q265		4200VA, copper windings	77	Interpolated
600Q18Z		4200VA, copper windings	78	Interpolated
600Q26Z		4200VA, copper windings	78	Interpolated
600Q183		4200VA, copper windings	79	Interpolated
600Q263		4200VA, copper windings	79	Interpolated
600Q188		4200VA, copper windings	79	Interpolated
600Q268		4200VA, copper windings	79	Interpolated
600Q18V		4200VA, copper windings	79	Interpolated
600Q26V		4200VA, copper windings	79	Interpolated
600Q41V		3360VA, copper windings	80	Interpolated
600Q33V		3500VA, copper windings	80	Interpolated
600Q41P	Stored Energy Systems	3360VA, copper windings	84	Interpolated
600Q423		4480VA, copper windings	84	Interpolated
600Q33P		3500VA, copper windings	85	Interpolated
600Q343		4900VA, copper windings	85	Interpolated
600Q425		4480VA, copper windings	87	Interpolated
600Q428		4480VA, copper windings	87	Interpolated
600Q42V		4480VA, copper windings	87	Interpolated
600Q264		4200VA, copper windings	88	Interpolated
600Q42Z		4480VA, copper windings	88	Interpolated
600Q345		4900VA, copper windings	88	Interpolated
600Q348		4900VA, copper windings	88	Interpolated
600Q34V		4900VA, copper windings	88	Interpolated
600Q34Z		4900VA, copper windings	89	Interpolated
600Q184		4200VA, copper windings	94	Interpolated
600Q424		4480VA, copper windings	99	Interpolated
600Q344		4900VA, copper windings	102	Interpolated
600Q273		5600VA, copper windings	102	Interpolated
600Q275		5600VA, copper windings	106	Interpolated
600Q278		5600VA, copper windings	106	Interpolated
600Q27V		5600VA, copper windings	106	Interpolated
600Q27Z		5600VA, copper windings	107	Interpolated
600Q274		5600VA, copper windings	116	Interpolated
600Q355		7000VA, copper windings	125	UUT 1
600Q353		7000VA, copper windings	125	Interpolated
600Q433		7000VA, copper windings	125	Interpolated
600Q358		7000VA, copper windings	125	Interpolated
600Q35V		7000VA, copper windings	125	Interpolated
600Q35Z		7000VA, copper windings	128	Interpolated
600Q435		7000VA, copper windings	129	Interpolated
600Q438		7000VA, copper windings	129	Interpolated
600Q43V		7000VA, copper windings	129	Interpolated
600Q43Z		7000VA, copper windings	131	Interpolated
600Q434		7000VA, copper windings	146	Interpolated
600Q354		7000VA, copper windings	146	UUT 13

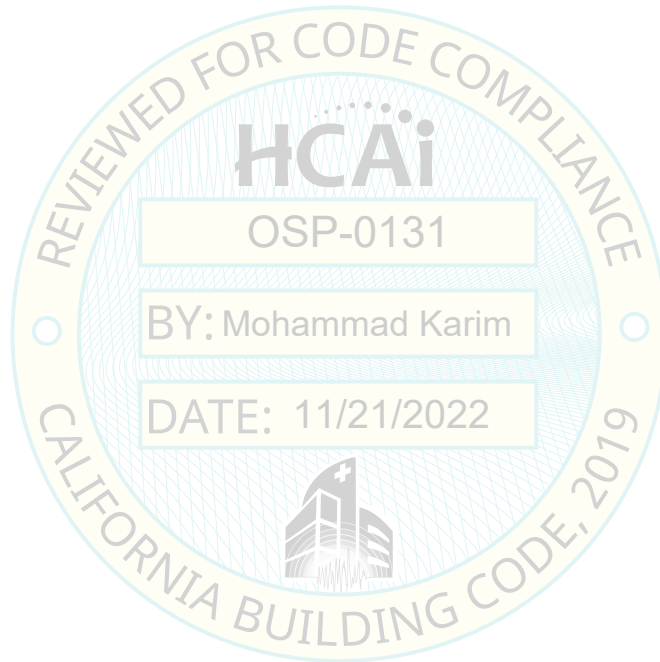
Special Seismic Certification

Table 7 - Tested Units



DCL Project Number: 10478-2201
Manufacturer: Stored Energy Systems
Product Family: Battery chargers for gensets
Test Levels: $S_{D5} = 2.00g, z/h=1.0$; $S_{D5} = 2.50g, z/h=0.0$

Model Number	Manufacturer	Product Line	Dimensions (in)			Weight (lb.)	Mounting Configuration	Unit
			Depth	Width	Height			
Q120050SL514BE	Stored Energy Systems	IQ	16.1	23.6	27.8	334	Rigid wall mount	1
BBS-4800E		BBS	13.0	19.4	17.6	75	Rigid wall mount	3
Q120025TL514BE		IQ	13.0	19.4	17.6	190	Rigid wall mount	4
NRG22-20-RCLSE		NRG	6.8	14.0	13.1	42	Rigid wall mount	5
BBS-1600E		BBS	8.6	12.3	16.3	30	Rigid wall mount	6
NRG22-10-RCE		NRG	6.5	7.7	12.5	22	Rigid wall mount	7
Q1200508L574NE		IQ	16.1	23.6	27.8	341	Rigid wall mount	9
Q0240068L511AE		IQ	13.0	19.4	17.6	63	Rigid wall mount	10
Q240012TL534BE		IQ	13.0	19.4	17.6	186	Rigid wall mount	11
Q024150SL511CE		IQ	16.1	23.6	27.8	256	Rigid wall mount	12
Q1200504G511CE		IQ	16.1	23.6	27.8	336	Rigid wall mount	13
NRG22-10-RCE		NRG	6.5	7.7	12.5	22	Isolated wall mount	17
NRG22-20-RCLSE		NRG	6.8	14.0	13.1	42	Isolated wall mount	18



UUT 1

Clark Test Report EL 8492

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger

Model Number: Q120050SL514BE

Product Construction Summary:

NEMA 1 carbon steel enclosure

Options / Component Summary:

SENS - heat sink (209315), United Chemi-Con - capacitor (501140), SENS - chokes/inductor (602286), SENS - chokes/inductor (602245), SENS - transformer (600Q35S), SENS - circuit board (206200), Square D - circuit breakers (702532 & 702474)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
334	16.1	23.6	27.8	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (8) 1/4" Grade 5 bolts.



Overall view of UUT 1

UUT 3
Clark Test Report EL 8492
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: BBS Best Battery Selector

Model Number: BBS-4800E

Product Construction Summary:
 NEMA 1 carbon steel enclosure

Options / Component Summary:
 C&H Technology - heat sink (209706)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
75	13.0	19.4	17.6	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (4) 1/4" Grade 5 bolts.



Overall view of UUT 3

UUT 4

Clark Test Report EL 8492

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger

Model Number: Q120025TL514BE

Product Construction Summary:

NEMA 1 carbon steel enclosure

Options / Component Summary:

SENS - heat sink (209313), United Chemi-Con - capacitor (501140), SENS - chokes/inductor (602Q79), SENS - chokes/inductor (602236), SENS - transformer (600Q33T), SENS - circuit board (206200), Square D - circuit breakers (702532 & 702472)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
190	13.0	19.4	17.6	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (4) 1/4" Grade 5 bolts.



Overall view of UUT 4

UUT 5
Clark Test Report EL 8492
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: NRG Intelligent Engine Start Battery Charger

Model Number: NRG22-20-RCLSE

Product Construction Summary:

NEMA 1 aluminum enclosure

Options / Component Summary:

SENS - chokes/inductor (602300), SENS - transformer (600902R), SENS - circuit board (206720)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
40	6.8	14.0	13.1	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (4) 1/4" Grade 5 bolts.



Overall view of UUT 5

UUT 6
Clark Test Report EL 8492
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: BBS Best Battery Selector

Model Number: BBS-1600E

Product Construction Summary:
 NEMA 1 carbon steel enclosure

Options / Component Summary:
 C&H Technology - heat sink (300603), ILSCO - terminal block (801220)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
30	8.6	12.3	16.3	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:
 Rigid wall mounted using (4) 1/4" Grade 5 bolts.



Overall view of UUT 6

UUT 7
Clark Test Report EL 8492
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: NRG Intelligent Engine Start Battery Charger

Model Number: NRG22-10-RCE

Product Construction Summary:

NEMA 1 aluminum enclosure

Options / Component Summary:

SENS - transformer (600600R), SENS - circuit board (206121)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

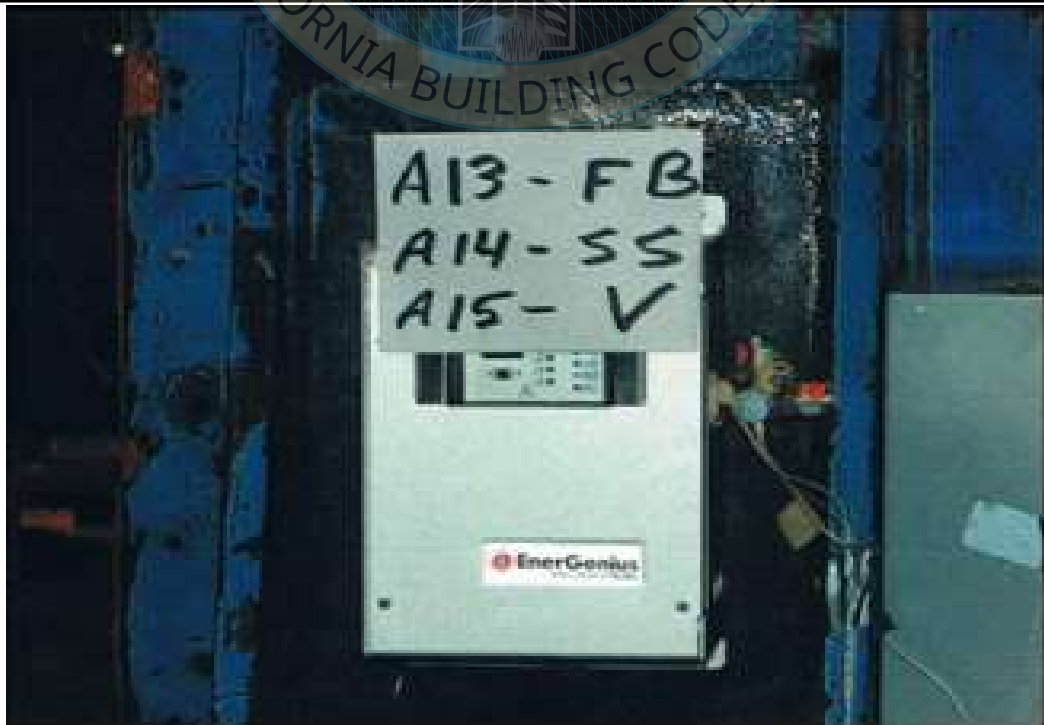
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
21	6.5	7.7	12.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (4) 1/4" Grade 5 bolts.



Overall view of UUT 7

UUT 9

ATS Test Report D212825

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number:	10478-2201
Manufacturer:	Stored Energy Systems
Product Family:	Battery Chargers for Gensets
Product Line:	EnerGenius IQ Automatic DC Power Supply/Battery Charger
Model Number:	Q1200508L574NE
Product Construction Summary:	NEMA 1 carbon steel enclosure

Options / Component Summary:
 Eaton Cutler-Hammer - circuit breaker (702368), Vishay - resistor (408638), Square D - contactor (701026)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties								
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)				
	Depth	Width	Height	Front-Back	Side-Side	Vertical		
341	16.1	23.6	27.8	N/A	N/A	N/A		
Seismic Test Parameters								
Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:
 Rigid wall mounted using (8) 1/4" Grade 8 bolts.



Overall view of UUT 9

UUT 10 ATS Test Report D212825 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number:	10478-2201
Manufacturer:	Stored Energy Systems
Product Family:	Battery Chargers for Gensets
Product Line:	EnerGenius IQ Automatic DC Power Supply/Battery Charger
Model Number:	Q0240068L511AE
Product Construction Summary:	NEMA 1 carbon steel enclosure

Options / Component Summary:
United Chemi-Con - capacitor (501129), Square D - circuit breaker (702582)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties								
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)				
	Depth	Width	Height	Front-Back	Side-Side	Vertical		
63	13.0	19.4	17.6	N/A	N/A	N/A		
Seismic Test Parameters								
Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:
Rigid wall mounted using (4) 1/4" Grade 8 bolts.



Overall view of UUT 10

UUT 11

ATS Test Report D212825

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: EnerGenius IQ Automatic DC Power Supply/Battery Charger

Model Number: Q240012TL534BE

Product Construction Summary:

NEMA 1 carbon steel enclosure

Options / Component Summary:

Vishay - capacitor (501151), Eaton Cutler-Hammer - contactor (701027)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
186	13.0	19.4	17.6	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted using (4) 1/4" Grade 8 bolts.



Overall view of UUT 11

UUT 12

ATS Test Report D212825

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number:	10478-2201
Manufacturer:	Stored Energy Systems
Product Family:	Battery Chargers for Gensets
Product Line:	EnerGenius IQ Automatic DC Power Supply/Battery Charger
Model Number:	Q024150SL511CE
Product Construction Summary:	NEMA 1 carbon steel enclosure

Options / Component Summary:
 SENS - heat sink (209318), United Chemi-Con - capacitor (501129), Eaton Cutler-Hammer - circuit breaker (702485)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties							
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)			
	Depth	Width	Height	Front-Back	Side-Side	Vertical	
256	16.1	23.6	27.8	N/A	N/A	N/A	
Seismic Test Parameters							
Building Code	Test Criteria	Sds (g)	z/h	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68
		2.50	0.0				

Unit Mounting Description:
 Rigid wall mounted using (8) 1/4" Grade 8 bolts.



Overall view of UUT 12

UUT 13

ATS Test Report D212825

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number:	10478-2201
Manufacturer:	Stored Energy Systems
Product Family:	Battery Chargers for Gensets
Product Line:	EnerGenius IQ Automatic DC Power Supply/Battery Charger
Model Number:	Q1200504G511CE
Product Construction Summary:	NEMA 1 carbon steel enclosure

Options / Component Summary:
SENS - transformer (600Q354)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
336	16.1	23.6	27.8	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:
Rigid wall mounted using (8) 1/4" Grade 8 bolts.



Overall view of UUT 13

UUT 17 (Originally 3B) ATS Test Report D212825 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 10478-2201

Manufacturer: Stored Energy Systems

Product Family: Battery Chargers for Gensets

Product Line: NRG Intelligent Engine Start Battery Charger

Model Number: NRG22-10-RCE

Product Construction Summary:
NEMA 1 aluminum enclosure

Options / Component Summary:
SENS - transformer (600600R), SENS - circuit board (206121)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
22	6.5	7.7	12.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68	0.68
		2.50	0.0					

Unit Mounting Description:

Isolated wall mounted (rigid mounted to isolated fixture using (4) 1/4" Grade 8 bolts).



Overall view of UUT 17

UUT 18 (Originally 4B) ATS Test Report D212825 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number:	10478-2201
Manufacturer:	Stored Energy Systems
Product Family:	Battery Chargers for Gensets
Product Line:	NRG Intelligent Engine Start Battery Charger
Model Number:	NRG22-20-RCLSE
Product Construction Summary:	NEMA 1 aluminum enclosure

Options / Component Summary:
SENS - chokes/inductor (602300), SENS - transformer (600902R), SENS - circuit board (206720)

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties						
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
42	6.8	14.0	13.1	N/A	N/A	N/A

Seismic Test Parameters							
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.68
		2.50	0.0				

Unit Mounting Description:
Isolated wall mounted (rigid mounted to isolated fixture using (4) 1/4" Grade 8 bolts).



Overall view of UUT 18