



APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.
OSP – 0292 – 10

Check whether application is: NEW RENEWAL

1.0	Alpha Industrial Power	Philip Knighton
	<i>Manufacturer</i>	<i>Manufacturer's Technical Representative</i>
	1075 Satellite Blvd., Suite 400	Suwanee, GA 30024
	<i>Mailing Address</i>	
	800 996-6104	pknighton@alpha.com
	<i>Telephone</i>	<i>E-mail Address</i>

2.0	ACS Battery Charger (Standard)	Battery Chargers
	<i>Product Name:</i>	<i>Product Type</i>
	<i>See attached list for included models</i>	
	<i>Product model No (List all unique product identification numbers and/or serial numbers)</i>	

General Description: Rigid Floor Mounted industrial grade battery chargers with a formed steel NEMA 1 enclosure and provisions for local or remote control and monitoring. Chargers can be single or 3 phase, have a wide input and output range, and accommodate up to five hot swappable, fan cooled rectifiers. for charging all types of stationary batteries (flooded lead acid, VRLA and Nickel cadmium) for industrial, utility, petrochemical and fire/utility applications. Modifications made to test units before/during test and modifications made to address anomalies observed during test shall be incorporated into the production units.

3.0	ZFA Structural Engineers	David R. Cooper, SE
	<i>Applicant Company Name</i>	<i>Contact Person</i>
	1212 Fourth Street, Suite Z	Santa Rosa, CA 95404
	<i>Mailing Address</i>	
	707 526-0992	davidc@zfa.com
	<i>Telephone</i>	<i>E-mail Address</i>

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.



Signature of Applicant
Senior Applications Engineer

Title

8-14-2012

Date
Alpha Industrial Power, Inc.

Company Name



Registered Design Professional Preparing the Report

4.0 ZFA Structural Engineers, Inc

<i>Company Name</i>	<i>California License Number</i>
David R. Cooper, SE	S 2768
<i>Contact Name</i>	<i>California License Number</i>
1212 Fourth Street, Suite Z	Santa Rosa, CA 95404
<i>Mailing Address</i>	
707 526-0992	davidc@zfa.com
<i>Telephone</i>	<i>E-mail Address</i>

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 ZFA Structural Engineers, Inc

<i>Company Name</i>	<i>California License Number</i>
David R. Cooper, SE	S 2768
<i>Contact Name</i>	<i>California License Number</i>
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Anchorage Pre-Approval

- 6.0**
- Anchorage is pre-approved under OPA-
(Separate application for anchorage pre-approval is required)
- Anchorage is not Pre-approved

Certification Method

- 7.0** Testing in accordance with: ICC-ES AC-156 Other (Please Specify):
-
- Analysis
- Experience data
- Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

<i>Company Name</i>	<i>Contact Name</i>
Anco Engineers, Inc.	Conor Byrne
<i>Company Name</i>	<i>Contact Name</i>
1965A 33rd Street	Boulder, CO 80301
<i>Mailing Address</i>	
303 443-7580	conor@ancoengineers.com
<i>Telephone</i>	<i>E-mail:</i>



Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 0.6

S_{DS} (Spectral response acceleration at short period) = 2.5

a_p (In-structure equipment or component amplification factor) = 1.0

R_p (Equipment or component response modification factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 0

Equipment or Component fundamental period(s) = See Attachments

Building period limits (if any) = n/a Sec

Overall dimensions and weight (or range thereof) = 23.5" x 27.0" x 40.5 (+ or - 1/2") x 268 pounds maximum

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

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

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

10.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report
- Drawings
- Manufacturer's Catalog
- Calculations
- Others (Please Specify):

11.0 OSHPD Approval (For Office Use Only)


Signature & Date

Timothy J. Piland, SSE

Name & Title

12/04/2012

December 31, 2016

Approval Expiration Date

S_{DS} (g) = 2.5 z/h = 0.0

Special Seismic Certification Valid Up to

Condition of Approval (if any):



1965A 33rd Street
Boulder, CO 80301
(303)443-7580

UUT #3

Unit Under Test (UUT) Summary Sheet

ANCO Project Number: 3325.01

Manufacturer:	Alpha Industrial Power Inc
Model Line:	AlphaRac Battery Racks and Cabinets
Model Number:	ACS16175208416107
Product Construction Summary:	120V backup battery bank charger system contained in a manufacturer rack housing
Options/ Subcomponent Summary:	Standard input and output breakers with 5 charger modules and controller installed for full wattage charging. 208VAC/1PH, 125VDC, 175A, ACS

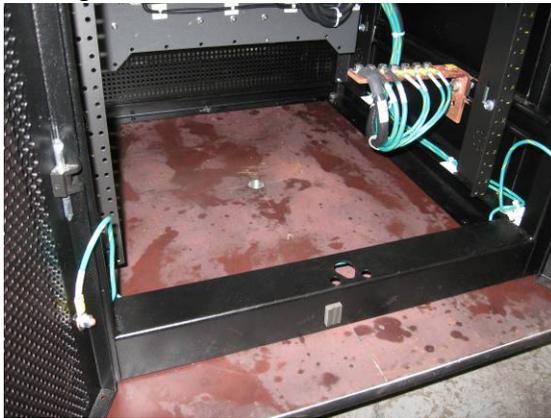
UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
268	23.5	27	40.5	22.5	16	>33

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 2012	ICC-ES AC-156	2.5	0	1.5	2.5	1.0	1.68	0.68

Test Mounting Details:



Rack bolted to plate using four 3/8"-16 bolts with standard washers (one bolt in each corner)



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UUT #3

Unit Under Test (UUT) Summary Sheet

ANCO Project Number: 3325.01

Test Setup:	Setup #1	
UUT Function:	Emergency backup battery bank charging	
Restrictions:	Rigid Floor Mount Only (As Tested)	
Functionality Test Results:	Pre-Test	Post-Test
	Pass	Pass
Component Serial Numbers:	OSHPDACs	

UUT Properties

Weight (lb)	CG Location (in)			Coordinate System Origin
	Depth	Width	Height	
268	12	14.75	24	Bottom Back Left Anchor (see drawing Below)

Additional Notes/Comments:

None.

Coordinate Origin (Noted by Red Dot):



Table 1. Alpha Industrial Power Certified Product Matrix

Part Number	Dimensions (mm/in)			Weight (kg/lb)	Tested/ Interpolated
	Length mm/ in.	Width mm/ in.	Height mm/ in.		
ACS 125HP Charger					
ACS16175208416107	600/23.62	679/26.75	1,031/40.58	121/268	Tested
ACS16025208416107	600/23.62	679/26.75	1,031/40.58	103/227	Interpolated ^a
ACS16035208416107	600/23.62	679/26.75	1,031/40.58	103/227	Interpolated ^a
ACS16070208416107	600/23.62	679/26.75	1,031/40.58	107/237	Interpolated ^a
ACS16105208416107	600/23.62	679/26.75	1,031/40.58	112/248	Interpolated ^a
ACS16140208416107	600/23.62	679/26.75	1,031/40.58	117/258	Interpolated ^a
ACS36035208416107	600/23.62	679/26.75	1,031/40.58	103/227	Interpolated ^a
ACS36070208416107	600/23.62	679/26.75	1,031/40.58	107/237	Interpolated ^a
ACS36105208416107	600/23.62	679/26.75	1,031/40.58	112/248	Interpolated ^a
ACS36140208416107	600/23.62	679/26.75	1,031/40.58	117/258	Interpolated ^a
ACS36175208416107	600/23.62	679/26.75	1,031/40.58	121/268	Interpolated ^a

a) See Table 2 below for non-structural interpolations

Table 2

ACS Charger Part Number Convention

Tested Unit	ACS	1	6	175	208	4	1	6	1	0	7
Generic Unit	ACS	A	B	C	D	E	F	G	H	I	J

Table J2: ACS Options

If a space has no option selected, a zero must be inserted.			
Box	ST	Description	Interpolation
A		Phase	
	1	Single Phase	Tested
	3	3 Phase	Wiring
B		Nominal DC Output Voltage	
	1	12 Vdc	N/A
	2	24 Vdc	N/A
	3	36 Vdc	N/A
	4	48 Vdc	N/A
	5	72 Vdc	N/A
	6	125 Vdc	Tested
	7	144 Vdc	N/A
	8	250 Vdc	N/A
	9	380 Vdc	N/A
	0	480 Vdc	N/A
	A	600 Vdc	N/A
B	Dual Chargers	N/A	
C		Nominal DC Output Current	
		Output ADC=xxx	Number of modules* (max was tested)
D		Input Voltage	
		Input VAC=xxx	Software
E		Options	
	1	DC Breaker	Omitted
	2	Individual Alarm Relays	Omitted
	3	High Voltage Shutdown	Omitted
	4	DC Breaker + Indiv. Alarm Relays + High Voltage Shutdown	Tested
	5	DC Breaker + High Voltage Shutdown	Omitted
	6	DC Breaker + Individual Alarm Relays	Omitted
	7	High Voltage Shutdown + Individual Alarm Relays	Omitted
	0	None of these	Omitted
F		Parallel Capability	
	1	Parallel Capability	Tested
	0	Single Capability	N/A

G		Options	
	1	AC Input Meters + RS232 + Load Disconnect	N/A
	2	AC Input Meters + RS232	N/A
	3	AC Input Meters + Load Disconnect	N/A
	4	RS 232 + Load Disconnect	N/A
	5	AC Input Meters	N/A
	6	RS 232	Tested
	7	Load Disconnect	N/A
	0	None of these	Omitted
H		Cabinet Type	
	1	NEMA 1 with built-in battery compartment & DC panel	Tested
	2	NEMA 3R with built-in battery compartment & DC panel	N/A
	3	NEMA 12 with built-in battery compartment & DC panel	N/A
	4	NEMA 1 with built-in battery compartment	N/A
	5	NEMA 3R with built-in battery compartment	N/A
	6	NEMA 12 with built-in battery compartment	N/A
	7	NEMA 1 with DC panel	N/A
	8	NEMA 3R with DC panel	N/A
	9	NEMA 12 with DC panel	N/A
	0	NEMA 3R or 12 Cabinet	N/A
	S	Standard NEMA 1 Cabinet	N/A
I		Number of Circuit Breakers	
	A	2	N/A
	B	6	N/A
	C	4	N/A
	D	8	N/A
	E	10	N/A
	F	12	N/A
	G	3	N/A
	H	5	N/A
	J	7	N/A
	K	9	N/A
	L	11	N/A
	M	21	N/A
	N	22	N/A
	P	24	N/A
0	No Circuit Breaker	Tested	
J		Cabinet Size	
	6	XL ACS	N/A
	7	Standard ACS	Tested

