



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OSP – 0032 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: ASCO Power Technologies, LP

Manufacturer's Technical Representative: Ronald Schroeder

Mailing Address: 160 Park Avenue, Florham Park, NJ 07932

Telephone: (973) 966-2508

Email: Ronald.schroeder@ascopower.com

Product Information

Product Name: Transfer Switches

Product Type: Electrical Power Switch

Product Model Number: See Attached Approved Product Listing

(List all unique product identification numbers and/or part numbers)

General Description: Cabinets are powder-coated carbon steel or stainless steel, NEMA 1, 3R, 3RX, 12, or 4X rating (304 stainless steel used on select 3R bases). Units contain controllers, switches, bypasses, circuit breakers, and accessories. 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 floor mounted, Rigid wall mounted

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

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: 

Date: 12/20/19

Title: President

Company Name: The VMC Group

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

OSHPD



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

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

Company Name: The VMC Group

Name: Mr. Ken Tarlow

California License Number: SE2851

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: Ken.Tarlow@thevmcgroup.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: Dynamic Certification Laboratories, LLC

Contact Name: Kelly Laplace, Quality Manager

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Testing Laboratory

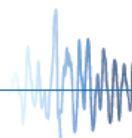
Company Name: Wyle Laboratories

Contact Name: Don Smith

Mailing Address: 7800 Highway 20 West, P.O. Box 077777, Huntsville, Alabama 35807-7777

Telephone: (256) 837-4411

Email: don.smith@wyle.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) = 1.88

S_{DS} (Design spectral response acceleration at short period, g) = 2.50

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

Equipment or Component Natural Frequencies (Hz) = See Attachments

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

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) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

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): _____

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025

Signature: _____

Date: January 17, 2020

Print Name: Timothy J. Piland

Title: SSE

Special Seismic Certification Valid Up to: S_{DS} (g) = 2.50

z/h = 1

Condition of Approval (if applicable): _____

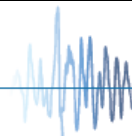


Table 1.1 - Base Mounted Certified Components - 300 Models

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT										
				Material	NEMA Rating		Width	Height	Depth													
H	600-1000	120-600V	Open / Delayed	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	30.0-34.0	72.0-77.0	20.0-31.0	525-720	Rigid Base	Extrapolated										
						3-Pole						Extrapolated										
						4-Pole						Extrapolated										
H	1200	120-600V	Open / Delayed			Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	4-Pole	34.0	77.0		31.0	720	Rigid Base	22a							
								2-Pole	38.0-41.0	87.0-95.5		23.0-33.5	972		Interpolated							
								3-Pole							Interpolated							
								4-Pole							Interpolated							
								G	1600-3000	120V-600V		Open / Delayed	Carbon Steel / Stainless Steel		NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	4-Pole	38.0	87.0	24.0	972	Rigid Base	6
																2-Pole	38.0-41.0	87.0-94.5	23.0-74.5	3,110		Interpolated
3-Pole	Interpolated																					
4-Pole	Interpolated																					
G	1600-3000	120V-600V	Open / Delayed			Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X							4-Pole		41.0	94.5	74.5	3,110	Rigid Base		12

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

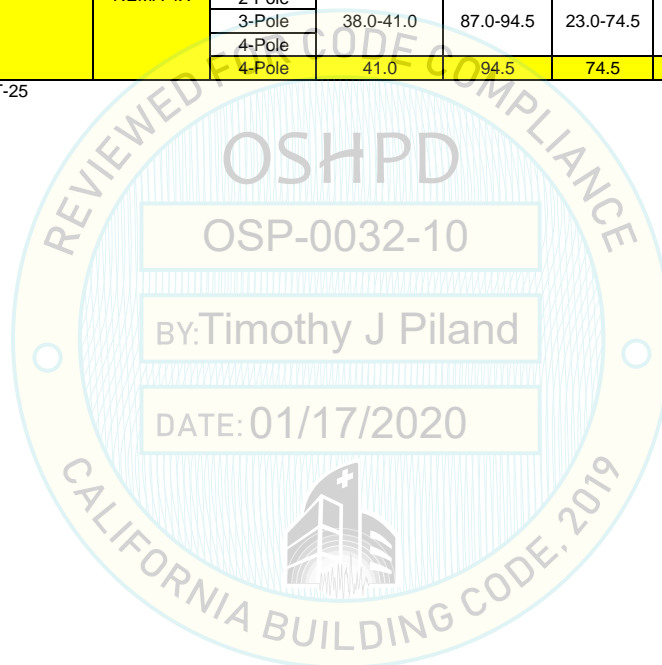


Table 1.2 - Base Mounted Certified Components- 4000 Models

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT
				Material	NEMA Rating		Width	Height	Depth			
D	30-230	120V-600V	Open	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	18.0	48.0	13.0	130	Rigid Base	Extrapolated
E	260-400		Open			3-Pole						Extrapolated
						4-Pole						Extrapolated
						2-Pole	24.0	56-63.0	14-18.8	227		Extrapolated
						3-Pole						Extrapolated
4-Pole	Extrapolated											
J	150-600		Open / Delayed / Closed			4-Pole	24.0	56.0	14.5	227		39a
						2-Pole	28.0	69.0	22.0	375		Interpolated
						3-Pole						Interpolated
K	150-600		Open / Delayed / Closed			4-Pole						28.0
						2-Pole	Interpolated					
						3-Pole	Interpolated					
H	600-1000		Open / Delayed / Closed			4-Pole	34.0	72.0-77	20.0-31.5	480		Interpolated
						2-Pole						Interpolated
						3-Pole						Interpolated
						H	1200	Open / Delayed / Closed	4-Pole	34.0		72.0
2-Pole	38.0-41.0		87.0-95.5						23.0-33.5	972		Interpolated
3-Pole		Interpolated										
G		1200-4000		Open / Delayed / Closed	4-Pole	38.0-60.0	87.0-95.5	23.0-74.0			3,110	Interpolated
	2-Pole		Interpolated									
	3-Pole		Interpolated									
	G		1200-4000		Open / Delayed / Closed	4-Pole	41.0	94.5	74.5	3,110	12	

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

Table 1.3 - Base Mounted Certified Components - 7000 Models

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT	
				Material	NEMA Rating		Width	Height	Depth				
D	30-230	120V-600V	Open Transition	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	18.0	48.0	13.0	130	Rigid Base	Extrapolated	
			3-Pole			Extrapolated							
			4-Pole			Extrapolated							
E	260-400		Open Transition			2-Pole	24.0	63.0	18.8	295		Extrapolated	
			3-Pole			Extrapolated							
			4-Pole			Extrapolated							
J	150-600		Open / Delayed / Closed			2-Pole	28.0	69.0	22.0	375		Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
						4-Pole						23a	
K	150-600		Open / Delayed / Closed			2-Pole	28.0	69.0	22.0	375		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
H, P	600-1000		Open / Delayed / Closed			2-Pole	34.0	75.0	31.5	850		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
						4-Pole						38a	
H, P	1200		Open / Delayed / Closed			2-Pole	38.0-41.0	87.0-95.5	23.0-33.5	972		Interpolated	
						3-Pole						Interpolated	
			4-Pole	Interpolated									
G, Q, S, U	1200-4000	Open / Delayed / Closed	2-Pole	38.0-41.0	87.0-95.5	23.0-94.0	3110-3370		Interpolated				
			3-Pole						Interpolated				
			4-Pole						Interpolated				
			4-Pole	41.0	95.5	74.0	3,370		16				

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

OSP-0032-10

Table 1.4 - Base Mounted Certified Components - 300, 4000, 7000 Models, Service Entrance

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT
				Material	NEMA Rating		Width	Height	Depth			
E	260-400	120V-600V	Open / Service Entrance			2-Pole	36.0-42.0	48.3-54.5	13.3-19.5	420-570	Rigid Base	Extrapolated
						3-Pole						Extrapolated
						4-Pole						Extrapolated
						4-Pole	42.0	54.5	19.5	570		28a
J	150-600		Open / Delayed / Service Entrance			2-Pole	36.25-42.0	54.0-95.5	18.5-33.0	1,230		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
K	150-600		Open / Delayed / Service Entrance			2-Pole						Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
H	600-1000, 1200		Open / Delayed / Service Entrance			2-Pole	38.0-41.0	91.0-96.0	28.0-62.0	1,980		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
G	1200-4000		Open / Delayed / Service Entrance			2-Pole	38.0-41.0	91.0-95.4	28.0-74.0	3,240		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
						4-Pole	41.0	95.4	74.0	3,240		15

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

Table 1.5 - Base Mounted Certified Components - 7000 Models, Bypass

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT
				Material	NEMA Rating		Width	Height	Depth			
J	150-600	120V-600V	Open / Delayed / Closed	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	34.0-45.5	85.0-97.5	28.0-29.0	1,726	Rigid Base	Extrapolated
						3-Pole						Extrapolated
						4-Pole						Extrapolated
						4-Pole	45.5	97.5	29.0	1,726		10
K	150-600		Open / Delayed / Closed			2-Pole	34.0-49.12	85.0-96.0	28.0-36.65	1,724		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
H, P	600-1000		Open / Delayed / Closed			2-Pole	38.0-41.1	91.0-96.0	32.0-34.0	1,675		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
H, P	600-1000, 1200		Open / Delayed / Closed			2-Pole	38.0-57.0	91.0-96.1	62.0	2,180		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
G, Q, S, U	1200-4000		Open / Delayed / Closed			2-Pole	60.0-63.0	91.0-99.6	91.0-114.8	7,520		Interpolated
						3-Pole						Interpolated
						4-Pole						Interpolated
						4-Pole	63.0	99.6	114.8	7,520		5

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

Table 1.6 - Base Mounted Certified Components - 7000 Models, Service Entrance Bypass

Mounting Configuration - Rigid Base Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT	
				Material	NEMA Rating		Width	Height	Depth				
J	150-600	120V-600V	Open / Delayed / Closed / Service Entrance	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	34.0-45.5	85.0-97.5	28.0-29	1,726	Rigid Base	Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
						4-Pole	45.5	97.5	29.0	1,726		10	
K	150-600		Open / Delayed / Closed / Service Entrance			2-Pole	34.0-57.13	85.0-96.1	28.0-35.89	1,726		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
H, P	600-1000, 1200		Open / Delayed / Closed / Service Entrance			2-Pole	38.0-57.0	91.0-96.1	62.0	2,335		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
G, Q, S, U	1200-4000		Open / Delayed / Closed / Service Entrance			2-Pole	60.0-63.0	91.0-99.6	91.0-114.8	7,520		Interpolated	
						3-Pole						Interpolated	
		4-Pole		Interpolated									
		4-Pole		63.0	99.6	114.8	7,520	5					

Notes: 1) Includes up to 62" wide pull box per test of UUT-24 and UUT-25

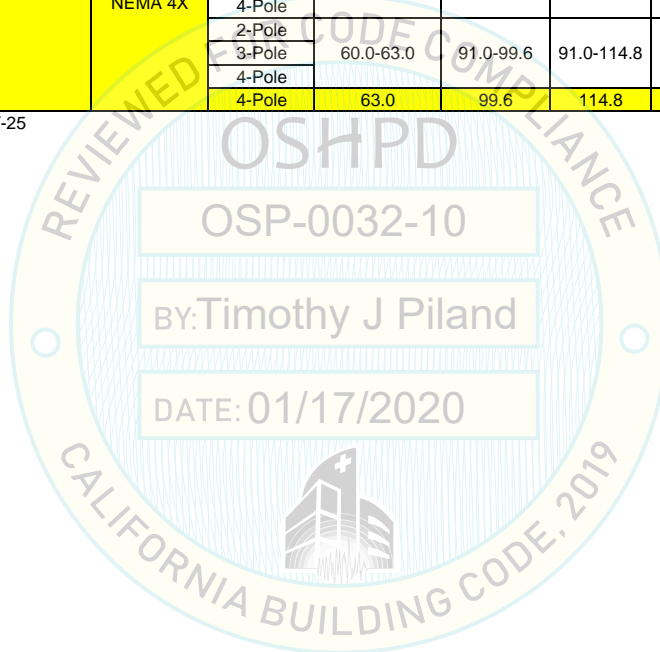


Table 1.7 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Mechanisms

Mechanism							Switch Type	Mounting	UUT
Amps	Volts	Poles	Transition Type	MFR	Frame	Part Number			
260-400A	115-600V	2, 3, 4	Open	ASCO	E	736004	TS	Rigid Base	18b
1000-4000A			Open, Closed, Delayed	ASCO	G	607103	TS		4
				ASCO	G	605795	TS		4
			Open, Closed, Delayed	ASCO	G	824474	BS		3, 5
				ASCO	G	605993			15
				ASCO	G	607102			15
				ASCO	G	607041			4, 12
				ASCO	G	828745			3, 5
				ASCO	G	605981			4, 12
600-1200A			Open, Closed, Delayed	ASCO	H & P	627386	TS		6, 11, 22a
			Open, Closed, Delayed	ASCO	H & P	729318	BS		24
ASCO				H & P	730061	24			
150-600A			Open, Closed, Delayed	ASCO	J	773110	TS		7, 8, 26a, 28a, 39a
			Open, Closed, Delayed	ASCO	J	800814	BS		10
ASCO				J	804205	10			
600-1600A			Open, Closed, Delayed	ASCO	Q	985155			15
800-2000A				ASCO	S	891144			16
2600-4000A				ASCO	U	912437			17
				ASCO	U	914647			17

Notes: 1) TS = Transfer Switch, BS = Bypass Switch

BY: Timothy J Piland

DATE: 01/17/2020

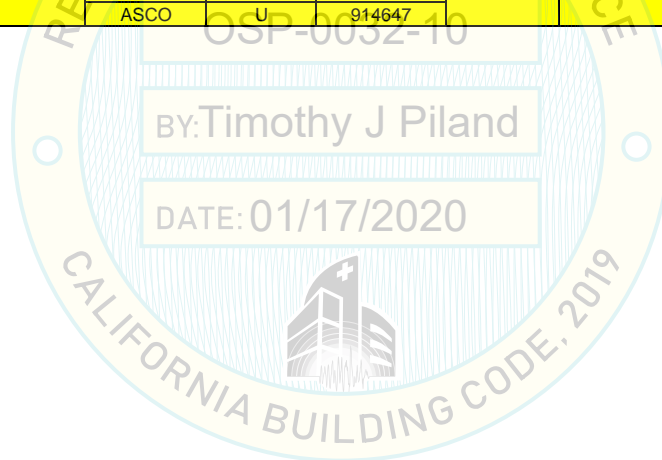


Table 1.8 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Enclosures

Enclosure Options					MFR	Mounting	UUT
Type	Material	Max Dimensions [in]					
		Depth	Width	Height			
NEMA 4X	Stainless Steel	31.0	34.0	77.0	ASCO	Rigid Base	36a
NEMA 1	Carbon Steel	96.0	60.0	91.0			3, 6, 7, 16, 18b, 24, 26a
NEMA 3R (Secure)		115.0	63.0	100.0			4, 8, 10, 38a, 39a
NEMA 3R (Non-Secure)		74.0	41.0	96.0			15, 16, 17
NEMA 4		74.0	41.0	96.0			4, 8, 10, 38a, 39a
NEMA 12		74.0	41.0	96.0			4, 8, 10, 38a, 39a
NEMA 3R	Carbon Steel w/ Stainless Steel Legs	115.0	63.0	100.0			5
NEMA 4X	Stainless Steel	62.0	44.0	97.0			11, 12, 13b, 14b, 19, 22a, 23a, 28a, 36a

Notes: 1) Above enclosures are approved for ganged configurations based on the testing of UUT-24 and UUT-25

Table 1.9 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Controllers

Controller			Mounting	UUT	
Part Number	Transition Type	MFR			
798923	Open, Closed, Delayed	ASCO	Rigid Base	6	
601800-002				3, 4, 5, 7, 8, 10, 11, 12, 15, 16, 17, 18b, 19	
733275-B				5	
894000-002				13b, 14b	
629140-008		Precision Graphics, Inc.		5	
629140-009				Same ¹	

Notes: 1) Identical to controller tested in UUT 5, only difference is software.

Table 1.10 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Breakers

Breakers				Mounting	UUT
Amps	Model Number	Poles	MFR		
15-100A	724801-xxx	2, 3, 4	Square D	Rigid Base	Extrapolated
250A	724801-010				4
600A	724801-xxx				Interpolated
800A	724801-xxx				Interpolated
1200A	724801-xxx				Interpolated
1600A	724801-xxx				Interpolated
2000A	724801-xxx				Interpolated
2000A	762450-000				4
2500A	724801-xxx				Interpolated
3000A	724801-xxx				Interpolated
4000A	724801-xxx				Interpolated
4000A	758952-001				5

Table 1.11 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Accessories


Accessory	Type	Part No.	MFR	Mounting	UUT	
Switches	Selector Switches	609570	American Solenoid / Benedikt & Jager	Rigid Base	10, 12, 22a, 38a	
		609950			11, 19	
		706978	Square D / Telemecanique		11, 19, 26a	
		706991			11, 19, 39a	
		706992			38a	
		707010			22a, 26a	
		611246	IDEC		22a, 24, 26a, 38a	
		299552	Electroswitch / Shallco		16	
706996	Square D / Telemecanique	22a, 24				
Relays	Plug-in Relay Assembly	619014	ASCO		12, 16, 22a	
	LCR Relay	401612	Telemecanique		12, 16	
	LDCR Relay	197660	Deltrol Controls/ Siemens Electromechanical Comp.		16, 22a, 38a	
	Lockout Relay	441070-001	Shallco / Electroswitch		26a	
	Reverse Pwr Relay	459020-010	Basler		24	
	Protective Relay	451227	General Electric		26a	
Test Block	Test Block	451226	General Electric		26a	
Transformers	Control Transformers	22-002,383925	ASCO		16, 23a, 38a	
	Current Transformers	711951	General Electric / ITI		22a	
	DC-DC Converters	423016	VICOR			
Power Supply	AC/DC Power Supply	621859	ABB		23a, 26a	
Diodes	Bridge Diode Rectifiers	423192	ABB-IXYS		16, 23a, 24	
	Bridge Diode Rectifiers	629570	ABB-IXYS			
	Diode Board Assembly	297865	ASCO			
Control Line Fuses	Fuse Blocks	199832	Eaton	Rigid Base	16, 23a, 22a, 24	
	Fuse	203987	Bussman		22a, 24, 26a, 38a	
Indicating Lights	LED Indicating Lights	707016, 716750	Square D / Telemecanique	Rigid Base	3, 4, 5, 6, 7, 8, 10, 11, 12, 13b, 14b, 15, 16, 17, 18b, 19	
Electrical Controllers	Input for Ext Control Pwr Source	297865	 ASCO		22a	
	Ext Control Pwr Source	903401			13b, 14b	
	Ext Control Pwr Source	621859			22a, 23a	
	Engine Exerciser, Event Log	937842			13b, 14b	
	Touch Display Interface(TDI)	988000-001			23a	
	Serial Comm Module	629750			16	
	Ethernet Comm Module	629800			11, 16	
	Grp G Quad Ethernet Comm Module	987100-004, 006			13b, 14b	
	Grp 5 Quad Ethernet Comm Module	987100-204			23a	
	PC Board	750453			11	
	Moxa E1212 I/O Module	E1212			Moxa	23a, 24
	Moxa IMC-21-M-ST Ethernet to Fiber Converter	IMC21MST			Moxa	28a
	Moxa EDS-308-MM-ST-T Ethernet Switch	EDS-308-MM-ST-T			Moxa	22a
	CPMS	1193630			ASCO	38a
	Zelio PLC	834087			Cunny & Guerber	39a
	Alarm Module	219527-001			Mid-Coast Electric	22a
	Soft Load Controller	629140			ASCO	5
	Sequential Controller	A345173				22a

Table 1.12 - Base Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Accessories Continued

Accessory	Type	Part No.	MFR	Mounting	UUT
Meters	Metering Card	894020	ASCO	Rigid Base	13b
	Power Meter	627115			11, 16
	Power Meter	798920-001			14b, 19, 24, 38a
	PQ Meter	932588			22a
	Power Logics PQ Meter	785544-003 / 785544-004	Square D / Schneider		23a, 26a
	Cutler Hammer PQ Meter	804996	Cutler Hammer		26a
Strip Heater	Strip Heater & Thermostat	832401-001	ASCO		12, 13b, 16
Timers	Time Cube	733494	Relco		26a
	Time Delay Module	387227, 401355	Omron		22a, 28a
Voltage Surge Arrestor	TVSS	387200-931	ASCO		14b, 28a
Protective ANSI Relays	Reverse Pwr Relay	625986-020	Basler		24
IR Window	IR Window	FLK-075-CLKT	Fluke		38a
SPD	73D Surge Protective Device	TE04XRS30X	ASCO		25
Separable Connectors ¹	Single Pole Separable Connectors 400A - 5000A	HBLMRBO	Hubble		25
Bus ²	Section Bus	600A - 6000A	ASCO		25
	Branch Bus	600A - 6000A	ASCO		25
	Main Bus	600A - 6000A	ASCO		25
Tie Links	Tie-Links	600A - 6000A	ASCO		25
Fuses	Class J 200A	JKS-200	Bussman		25
	Class L 5000A	A4BQ5000	Mersen/Ferraz		25
Panelboard	I-Line Panelboard	CF20R63C	Square D		25
Panelboard Breakers	15A Breaker	HGA36015	Square D		25
	1200A Breaker	PJA36120U31A	Square D		25
ERMS	119M Energy Reduction Maintenance Switch	9001K11J35LLL	Square D		25

Notes: 1) Each 400A is one (1) Separable connector and the 5000A is (13) thirteen single separable connectors, both configurations were tested.
2) Bus sections were tested in a 600A and 6000A configuration and are limited to 62" length and 6" width vertically and 62" length and 5" width horizontally.

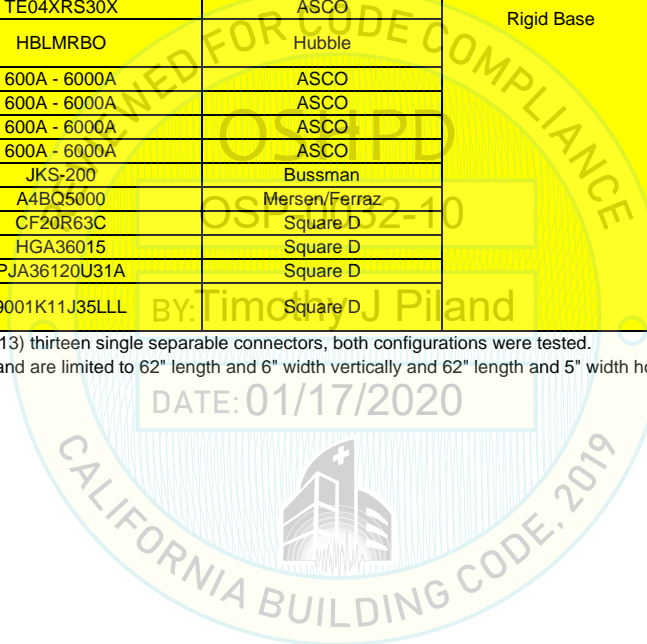


Table 2.1 - Wall Mounted Certified Components - 185 Models (Including Service Entrance)

Mounting Configuration - Rigid Wall Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT
				Material	NEMA Rating		Width	Height	Depth			
D	30-230	120V-600V	Open / Service Entrance	Carbon Steel	NEMA 1, NEMA 3R	2-Pole	16.4	16.4	12.0	43	Rigid Wall	20a, 20b
D	30-230					2-Pole	16.4-36.0	16.4-36	7.5-12.0	60		Interpolated
J	260-400					2-Pole	16.4-22.5	16.4-45	7.5-12.0	60-136		Interpolated
K	260-400					2-Pole	16.4-22.5	16.4-22.5	7.5-12.0	136		Interpolated
E	260-400					2-Pole	22.5	45.0	7.5	136		2
E	260-400					2-Pole	22.5	45.0	7.5	136		2

Table 2.2 - Wall Mounted Certified Components - 300 Models

Mounting Configuration - Rigid Wall Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT				
				Material	NEMA Rating		Width	Height	Depth							
D	30-230	120V-600V	Open	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	12.0-36.0	16.4-48.0	6.0-16.0	130-341	Rigid Wall	Extrapolated				
E	260-400		Open			3-Pole						Extrapolated				
						4-Pole						Extrapolated				
						4-Pole	36.0	48.0	16.0	341		27				
J	150-600		Open / Delayed			2-Pole	24.0	56-63.0	14-18.8	295		Interpolated				
						3-Pole						Interpolated				
						4-Pole						Interpolated				
K	150-600		Open / Delayed			2-Pole	28.0	69.00	22.0	375		Interpolated				
						3-Pole						Interpolated				
						4-Pole						Interpolated				
H	600-1000		Open / Delayed			2-Pole						30.0-34.0	72.0-77.0	20.0-31.0	525-720	Interpolated
						3-Pole										Interpolated
						4-Pole										Interpolated
								4-Pole	34.0	77.0		31.0	720	22b		

Table 2.3 - Wall Mounted Certified Components - 4000 Models

Mounting Configuration - Rigid Wall Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT	
				Material	NEMA Rating		Width	Height	Depth				
D	30-230	120V-600V	Open	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	18.0	48.0	13.0	130	Rigid Wall	Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
E	260-400		Open			2-Pole	24.0	56-63.0	14-18.8	227		Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
						4-Pole	24.0	56.0	14.5	227		39b	
J	150-600		Open / Delayed / Closed			2-Pole	28.0	69.0	22.0	375		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
K	150-600		Open / Delayed / Closed			2-Pole						Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
H	600-1000		Open / Delayed / Closed			2-Pole	34.0	72.0-77	20.0-31.5	480		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
						4-Pole	34.0	72.0	20.0	480		26b	

Table 2.4 - Wall Mounted Certified Components - 7000 Models

Mounting Configuration - Rigid Wall Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT	
				Material	NEMA Rating		Width	Height	Depth				
D	30-230	120V-600V	Open Transition	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	18.0	48.0	13.0	130	Rigid Wall	Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
E	260-400		Open Transition			2-Pole	24.0	63.0	18.8	295		Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
J	150-600		Open / Delayed / Closed			2-Pole	28.0	69.0	22.0	375		Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
						4-Pole	28.0	69.0	22.0	375		23b	
K	150-600		Open / Delayed / Closed			2-Pole	28.0	69.0	22.0	375		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
						2-Pole	34.0	75.0	31.5	850		Interpolated	
						3-Pole						Interpolated	
						4-Pole						Interpolated	
H, P	600-1000		Open / Delayed / Closed			4-Pole	34.0	75.0	31.5	540		38b	

Table 2.5 - Wall Mounted Certified Components - 300, 4000, 7000 Models, Service Entrance

Mounting Configuration - Rigid Wall Mounted

Frame	Amps	Voltage	Transition Type	Enclosure		Switch Type	Max Dimensions [in]			Max Weight [lbs]	Mounting	UUT	
				Material	NEMA Rating		Width	Height	Depth				
D	30-230	120V-600V	Open / Service Entrance	Carbon Steel / Stainless Steel	NEMA 1, NEMA 3R, NEMA 3RX, NEMA 4, NEMA 12, NEMA 4X	2-Pole	36.0	48.25-49.25	13.25-16.0	341	Rigid Wall	Extrapolated	
						3-Pole						Extrapolated	
						4-Pole						Extrapolated	
E	260-400		Open / Service Entrance			2-Pole	36.0-42.0	48.3-54.5	13.3-19.5	420-570		27	
												3-Pole	Interpolated
												4-Pole	Interpolated
							4-Pole	42.0	54.5	19.5		570	28b

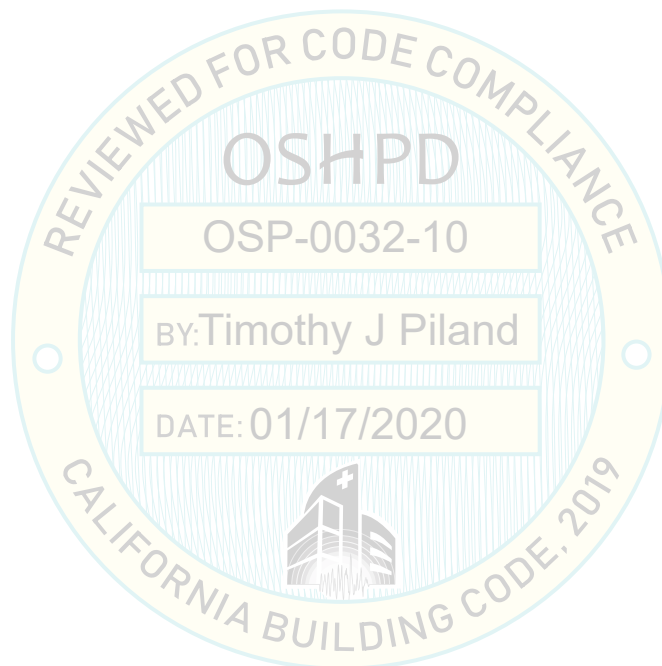


Table 2.6 - Wall Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Mechanisms

Mechanism							Switch Type	Mounting	UUT
Amps	Volts	Poles	Transition Type	MFR	Frame	Part Number			
30-230A	115-600V	2, 3, 4	Open	ASCO	D	720935	TS	Rigid Wall	1, 20a, 20b, 27
	115-600V	2, 3, 5		ASCO	D	720936			34
260-400A	115-600V	2, 3, 6	Open, Closed, Delayed	ASCO	E	736004			2, 18a
150-600A	115-600V	2, 3, 18		ASCO	J	773110			9, 26b, 28b, 39b

Notes: 1) TS = Transfer Switch, BS = Bypass Switch

Table 2.7 - Wall Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Enclosures

Enclosure Options					Mounting	UUT	
Type	Material	Max Dimensions [in]					MFR
		Depth	Width	Height			
NEMA 1	Carbon Steel	13.0	23.0	48.0	ASCO	1, 2, 20a, 20b, 26b, 34	
NEMA 3R		22.0	36.0	67.3		9, 18a, 27, 38b, 39b	
NEMA 4		22.0	24.0	67.3		9, 18a, 27, 38b, 39b	
NEMA 12		22.0	24.0	67.3		9, 18a, 27, 38b, 39b	
NEMA 4X	Stainless Steel	31.0	34.0	77.0		13a, 14a, 23b, 28b, 22b	

Table 2.8 - Wall Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Controllers

Controller			Mounting	UUT
Part Number	Transition Type	MFR		
493540	Open, Closed, Delayed	ASCO	Rigid Wall	1
767113-001-A				2
601800-002				9, 18a
894000-002				13a, 14a, 20a, 20b

Table 2.9 - Wall Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Accessories


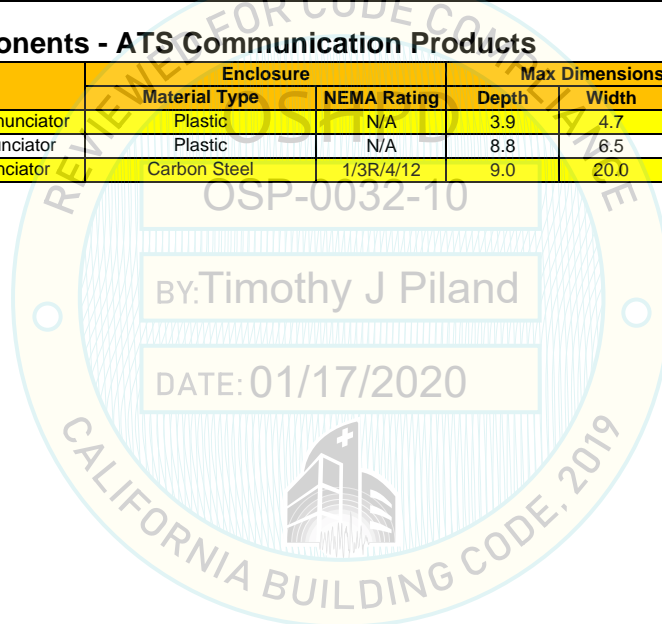
Accessory	Type	Part No.	MFR	Mounting	UUT
Switches	Selector Switches	609570	American Solenoid / Benedikt & Jager	Rigid Wall	22b, 38b
	Selector Switches	706978	Square D / Telemecanique		26b
	Selector Switches	706991			39b
	Selector Switches	706992			38b
	Selector Switches	707010			22b, 26b
	Selector Switches	611246	IDEC		22b, 26b, 38b
	Selector Switches	706996	Square D / Telemecanique		22b
Relays	Plug-in Relay Assembly	619014	ASCO		22b
	LDCR Relay	197660	Deltrol Controls/ Siemens Electromechanical Comp.		22b, 38b
	Lockout Relay	441070-001	Shallco / Electros witch		26b
	Protective Relay	451227	General Electric		26b
Test Block	Test Block	451226	General Electric		26b
Transformers	Control Transformers	22-002,383925	ASCO		23b, 38b
	Current Transformers	711951	General Electric / ITI		22b
	DC-DC Converters	423016	VICOR		
	DC-DC Converters	1124299	Allied Electric		32
Power Supply	AC/DC Power Supply	621859	ABB		23b, 26b
	AC/DC Power Supply	621859	Thomas & Betts		32
Diodes	Bridge Diode Rectifiers	423192	ABB-IXYS		23b
	Bridge Diode Rectifiers	629570	ABB-IXYS		
	Diode Board Assembly	297865	ASCO		
Control Line Fuses	Fuse Blocks	199832	Eaton		23b, 22b
	Fuse	203987	Bussman		22b, 26b, 38b
Indicating Lights	LED Indicating Lights	707016, 716750	Square D / Telemecanique	1, 2, 9, 13a, 13ai, 14a, 18a, 20a, 20b	
	LED Indicating Lights	XB6AV5BB	Schneider Electric	32	
Electrical Controllers	Input for Ext Control Pwr Source	297865		22b	
	Ext Control Pwr Source	903401		13a, 14a	
	Ext Control Pwr Source	621859		23b, 22b	
	Engine Exerciser, Event Log	937842		13a, 14a	
	Accessory 18MS(Special Acc)	1064901		20a, 20b	
	Accessory 29MS(Special Acc)	1084901		20a, 20b	
	Touch Display Interface(TDI)	988000-001		23b	
	Grp G Quad Ethernet Comm Module	987100-004, 006		13a, 14a	
	Grp 5 Quad Ethernet Comm Module	987100-204		23b	
	Group 1 Retrofit Kit	955717		27	
	Moxa E1212 I/O Module	E1212	Moxa	23b	
	Moxa IMC-21-M-ST Ethernet to Fiber Converter	IMC21MST	Moxa	28b	
	Moxa EDS-308-MM-ST-T Ethernet Switch	EDS-308-MM-ST-T	Moxa	22b	
	CPMS	1193630	ASCO	38b	
	Zelio PLC	834087	Cunny & Guerber	39b	
	Alarm Module	219527-001	Mid-Coast Electric	22b	
	Alarm Module	SC628	Mallory	32	
	Sequential Controller	A345173	ASCO	22b	

Table 2.10 - Wall Mounted Certified Subcomponents - 185, 300, 4000, 7000 Models, Certified Accessories Continued

Accessory	Type	Part No.	MFR	Mounting	UUT
Meters	Metering Card	894020	ASCO	Rigid Wall	13a
	Power Meter	798920-001			14a, 38b
	PQ Meter	932588			22b
	Power Logics PQ Meter	785544-003 / 785544-004	Square D / Schneider		23b, 26b
	Cutler Hammer PQ Meter	804996	Cutler Hammer		26
Strip Heater	Strip Heater & Thermostat	832401-001	ASCO		13a
Timers	Time Cube	733494	Releco		26b
	Time Delay Module	387227, 401355	Omron		22b, 28b
Voltage Surge Arrestor	TVSS	387200-931	ASCO		14a, 28b
Frame Monitor	Embedded Frame Monitor	1123226	Advantech		32
Circuit Breaker	Circuit Breaker	CC-4101	Thomas & Betts		32
Handle Assembly	Manual Operating Handle Assembly	711649	ASCO		34
IR Window	IR Window	FLK-075-CLKT	Fluke		38b

Table 2.11 - Wall Mounted Certified Subcomponents - ATS Communication Products

Model	Manufacturer	Description	Enclosure		Max Dimensions (in)			Max Weight (lbs)	Mounting	UUT
			Material Type	NEMA Rating	Depth	Width	Height			
5310	ASCO	Single Remote Channel Annunciator	Plastic	N/A	3.9	4.7	4.5	2	Rigid Wall	13ai
5350		(8) Channel Remote Annunciator	Plastic	N/A	8.8	6.5	2.5	2		Interpolated
5705		(8) Device Remote Annunciator	Carbon Steel	1/3R/4/12	9.0	20.0	20.0	54		32





UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-01

57674R10-2; UUT 2

Model Line	Model Number	Manufacturer
Series 185	D00300C30230N10C	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
120	13.5	18.5	48.0	N/A	N/A	N/A

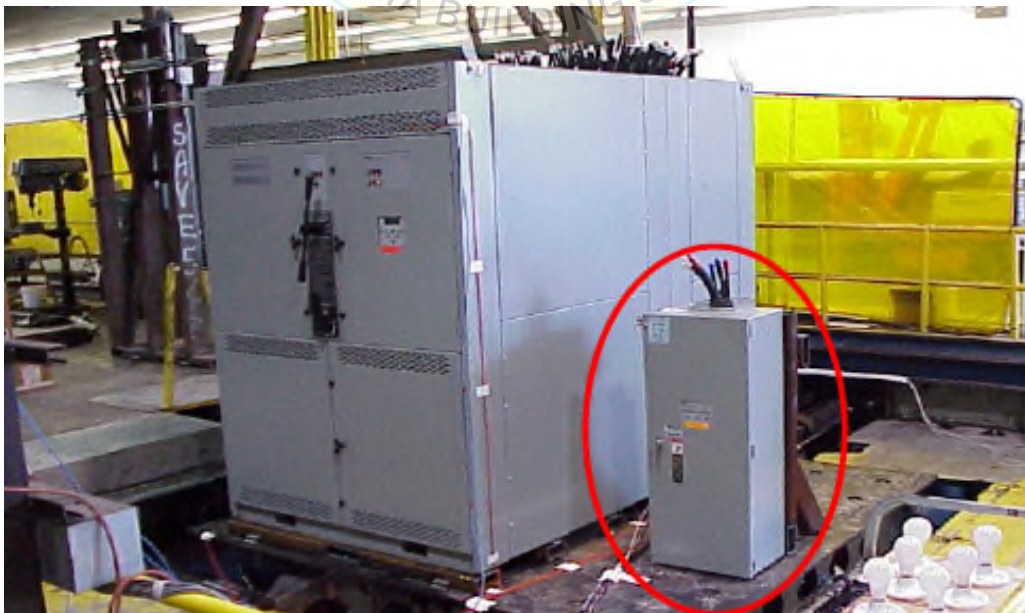
UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT (on right) was wall-mounted to the wall fixture using four (4) 5/16" grade 5 bolts and flat washers. The wall fixture was rigidly mounted to the shake table.

UUT-01



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-02

57525R10-3; UUT 3

Model Line	Model Number	Manufacturer
Series 185	E00185A20400F40C	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
136	7.5	22.5	45.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall-mounted to the wall fixture using four (4) 3/8" grade 5 bolts and flat washers. The wall fixture was rigidly mounted to the shake table.

UUT-02



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-03

57674R10-1; UUT 1

Model Line	Model Number	Manufacturer
Series 7000	G7ADTB34000R50C	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Bypass Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
6,435	95.0	60.0	96.0	9.8	6.1	24.0

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT (on left) was mounted to the test fixture using seventeen (17) 1/2" grade 5 bolts and flat washers.

UUT-03



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-04

58168R10-3; UUT 3

Model Line	Model Number	Manufacturer
Series 7000	G07AUBB32000N5ZM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Bypass Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
4,390	62.0	37.5	97.0	7.1	4.7	24.0

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using six (6) 1/2" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers.

UUT-04



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-05

58791R11; UUT 1

Model Line	Model Number	Manufacturer
Series 7000	G7ASLB34000N5XM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Bypass Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
7,520	114.8	63.0	99.6	7.5	4.2	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using twelve (12) 1/2" grade 5 bolts and flat washers.

UUT-05



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-06

57525R10-1; UUT 1

Model Line	Model Number	Manufacturer
Series 4000	H04ATSB31200N5XC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
972	24.0	38.0	87.0	7.3	12.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts, flat washers, and 2"x2"x1/4" carbon steel plate washers.

UUT-06



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-07

57525R10-2; UUT 2

Model Line	Model Number	Manufacturer
Series 7000	J07ATSC30600N50C	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
402	24.0	17.0	63.0	9.4	18.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers.

UUT-07



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-08

58168R10-1A; UUT 1

Model Line	Model Number	Manufacturer
Series 7000	J7ACTSA30600N5XQ	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R/12 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
516	20.0	26.5	68.0	9.8	18.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts, flat washers, and 2"x2"x1/4" carbon steel plate washers.

UUT-08



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-09

58168R10-1B; UUT 1

Model Line	Model Number	Manufacturer
Series 7000	J7ACTSA30600N5XQ	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R/12 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
516	20.0	26.5	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 1.5"x1.5"x3/16" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-09



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-10

58168R10-2; UUT 2

Model Line	Model Number	Manufacturer
Series 7000	J7ACTBB30600N5XM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Bypass Switch: ASCO; Enclosure: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
1,726	29.0	45.5	97.5	8.6	9.5	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using eight (8) 1/2" grade 5 bolts, flat washers, and 2"x2"x1/4" carbon steel plate washers.

UUT-10



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-11

97015-1401g; UUT 11

Model Line	Model Number	Manufacturer
Series 7000	H04ADTSB31000N5XH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Manual Control Switch: Square D; Enclosure: ASCO; Controller: ASCO; Ethernet Module: Emerson; Relay Expansion Module: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
560	20.0	34.0	77.0	8.0	14.3	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts and flat washers.

UUT-11



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-12

97015-1401b; UUT 12

Model Line	Model Number	Manufacturer
Series 7000	G07ATBB32000N5XR	ASCO

Product Construction Summary

Stainless Steel, NEMA 3RX Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Load Disconnecting Circuit: Emerson; Enclosure: ASCO; Controller: ASCO; Strip Heater: Emerson; Relay Expansion Module: Emerson; Relay: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
3,110	74.5	41.0	94.5	7.8	5.3	22.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using twelve (12) 1/2" grade 5 bolts and flat washers.

UUT-12



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-13A

97015-1401c; UUT 13A

Model Line	Model Number	Manufacturer
Series 185	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Load Current Monitor: Emerson; Enclosure: ASCO; Controller: ASCO; Strip Heater: Emerson; Relay Expansion Module: Emerson; UPS: Emerson; Connectivity Module: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
273	18.5	24.0	67.3	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-13A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-13A-i

97015-1401c; UUT 13A

Model Line	Model Number	Manufacturer
Annunciator	ATS Remote Annunciator	ASCO

Product Construction Summary

Plastic

Options / Subcomponent Summary

ATS Remote Annunciator: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
2	3.9	4.7	4.5	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using two (2) 1/4" grade 5 bolts, flat washers, and 1.5"x1.5"x3/16" plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-13A-i



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-13B

97015-1401c; UUT 13B

Model Line	Model Number	Manufacturer
Series 185	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Load Current Monitor: Emerson; Enclosure: ASCO; Controller: ASCO; Strip Heater: Emerson; Relay Expansion Module: Emerson; UPS: Emerson; Connectivity Module: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
273	18.5	24.0	67.3	10.3	15.8	6.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 3/8" grade 5 bolts and flat washers.

UUT-13B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-14A

97015-1401d; UUT 14A

Model Line	Model Number	Manufacturer
Series 185	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Load Surge Suppressor: Emerson; Enclosure: ASCO; Controller: ASCO; UPS: Emerson; Relay Expansion Module: Emerson; Power Meter: Emerson; Connectivity Module: Emerson; Expanded Program Controller: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
277	18.5	24.0	67.3	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} [g]	z/h	I_P	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-14A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-14B

97015-1401d; UUT 14B

Model Line	Model Number	Manufacturer
Series 185	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Load Surge Suppressor: Emerson; Enclosure: ASCO; Controller: ASCO; UPS: Emerson; Relay Expansion Module: Emerson; Power Meter: Emerson; Connectivity Module: Emerson; Expanded Program Controller: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
277	18.5	24.0	67.3	9.8	17.3	17.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 3/8" grade 5 bolts and flat washers.

UUT-14B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-15

97015-1401e; UUT 15

Model Line	Model Number	Manufacturer
Series 7000	Q07ATBB1600N5XM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
3,240	74.0	41.0	95.4	5.5	9.8	22.0

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} [g]	z/h	I_P	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using twelve (12) 1/2" grade 5 bolts and flat washers.

UUT-15



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-16

97015-1401f; UUT 16

Model Line	Model Number	Manufacturer
Series 7000	S07ATBB32000N5XM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Strip Heater: Emerson; Relay: Emerson; Relay Expansions Module: Emerson; Connectivity Module: Emerson; Data Monitor Display: Emerson; Load Shedding Circuit: Emerson; Load Disconnecting Circuit: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
3,370	74.0	41.0	95.5	7.0	5.3	21.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using twelve (12) 1/2" grade 5 bolts and flat washers.

UUT-16



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-17

97015-1401a; UUT 17

Model Line	Model Number	Manufacturer
Series 7000	U07ATBB34000N5XM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
6,070	115.0	63.0	100.0	4.8	4.5	4.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using eighteen (18) 1/2" grade 5 bolts and flat washers.

UUT-17



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-18A

36501-1501; UUT 18A

Model Line	Model Number	Manufacturer
Series 7000	K03ATSB30400NG0F	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
176	15.4	22.5	50.3	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-18A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-18B

36501-1501; UUT 18B

Model Line	Model Number	Manufacturer
Series 7000	K03ATSB30400NG0F	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
176	15.4	22.5	50.3	16.0	29.8	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts and flat washers.

UUT-18B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-19

97015-1401h; UUT 19

Model Line	Model Number	Manufacturer
Series 7000	P7ADTB31200N5XP	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Manual Control Switch: Square D; Pilot Lights: Square D; Power Meter: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
2,380	62.0	44.0	97.0	8.8	7.8	28.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using twelve (12) 1/2" grade 5 bolts and flat washers.

UUT-19



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-20A/B

36766-1501; UUT 20A/B

Model Line	Model Number	Manufacturer
Series 185	D03ATSB30030KGZC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R/12 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Manual Inhibit / Automatic Control Switch: Emerson; Preferred Source / Automatic Control Switch: Emerson

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
43	12.0	16.4	16.4	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

Each UUT was wall mounted to the wall fixture using four (4) 1/4" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-20A/B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-22A

60216-1701-22; UUT 22A

Model Line	Model Number	Manufacturer
Series 300	HY7ACTSB31000N5ZH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: Square D / Telemecanique / IDEC; Relays: Deltrol Controls / Siemens Electromechanical Comp.; Current Transformers: GE / ITI; DC-DC Converters: Vicor; Fuse: Bussman; PQ Meter: ASCO; Power Logistics PQ Meter: Square D / Schneider; Time Delay Module: Omron; Electrical Controllers: ASCO / MOXA / Mid-Coast Electric

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
720	31.0	34.0	77.0	18.0	12.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using six (6) 1/2" grade 5 bolts and washers.

UUT-22A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-22B

60216-1701-22; UUT 22B

Model Line	Model Number	Manufacturer
Series 300	HY7ACTSB31000N5ZH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: Square D / Telemecanique / IDEC; Relays: Deltrol Controls / Siemens Electromechanical Comp.; Current Transformers: GE / ITI; DC-DC Converters: Vicor; Fuse: Bussman; PQ Meter: ASCO; Power Logistics PQ Meter: Square D / Schneider; Time Delay Module: Omron; Electrical Controllers: ASCO / MOXA / Mid-Coast Electric

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
720	31.0	34.0	77.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{Ds} [g]	z/h	I_p	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using six (6) 1/2" grade 5 bolts, washers, and 3"x3"x1/4" plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-22B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-23A

60216-1601b; UUT 23A

Model Line	Model Number	Manufacturer
Series 7000	J4ADTSB30600N5XP	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: Jabil; Auxillary Contacts: ASCO; Communication Module: ASCO / Derrison; Strip Heater: ASCO; Touch Display Interface: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
375	22.0	28.0	69.0	15.3	8.5	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts and flat washers.

UUT-23A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-23B

60216-1601b; UUT 23B

Model Line	Model Number	Manufacturer
Series 7000	J4ADTSB30600N5XP	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: Jabil; Auxillary Contacts: ASCO; Communication Module: ASCO / Derrison; Strip Heater: ASCO; Touch Display Interface: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
375	22.0	28.0	69.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 1/2" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-23B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-24

60216-1701-24; UUT 24

Model Line	Model Number	Manufacturer
Series 7000	H7ACTBB31200N5ZC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: IDEC / Deltrol Controls; Reverse Power Relay: Basler; Diodes: ABB-IXYS / ASCO; Control Line Fuses: Eaton / Bussman; Electrical Controllers: MOXA; Power Meter: ASCO; Protective Relays: Basler; Pullbox: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
2,050	34.0	57.0	91.0	10.0	8.6	22.0

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using eleven (11) 1/2" grade 5 bolts and flat washers.

UUT-24



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-25

79249-1801, UUT-25

Model Line	Model Number	Manufacturer
4000 Series	879080-058	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Enclosure: ASCO; I-Line Panelboard: Square D; Panelboard Breakers: Square D; Fuses: Bussman & Mersen/Ferraz; Tie Links: ASCO; Branch Bus: ASCO; Section Bus: ASCO; Main Bus: ASCO; Seperable Connectors: Hubble; ERMS: Square D

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
12,450	95.0	205.0	99.0	5.5	7.0	10.5

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to an I beam interface test fixture using thirty (30) 1/2" grade 5 bolts and flat washers.

UUT-25



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-26A

60216-1701-26; UUT 26A

Model Line	Model Number	Manufacturer
4000 Series	J7ACTSB30150N5XC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: Square D / Telemecanique / IDEC; Lockout Relay: Shallco / Electrosch; Protective Relay: General Electric; Test Block: General Electric; Power Supply: ABB; Control Line Fuses: Bussman; Power Logics PQ Meter: Square D / Schneider; PQ Meter: Cutler Hammer; Timers: Relco

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
480	20.0	34.0	72.0	26.5	22.8	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using five (5) 1/2" grade 5 bolts and flat washers.

UUT-26A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-26B

60216-1701-26; UUT 26B

Model Line	Model Number	Manufacturer
4000 Series	J7ACTSB30150N5XC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: Square D / Telemecanique / IDEC; Lockout Relay: Shallco / Electroschick; Protective Relay: General Electric; Test Block: General Electric; Power Supply: ABB; Control Line Fuses: Bussman; Power Logics PQ Meter: Square D / Schneider; PQ Meter: Cutler Hammer; Timers: Relco

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
480	20.0	34.0	72.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} [g]	z/h	I_p	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 1/2" grade 5 bolts, flat washers, and 3"x3"x1/4" plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-26B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-27

60216-1701-27; UUT 27

Model Line	Model Number	Manufacturer
300 Series	D03APSA30150NIXM	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 3R Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Group 1 Retrofit Kit: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
341	16.0	36.0	48.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using six (6) 1/2" grade 5 bolts, flat washers, 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-27



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-28A

60216-1701-28; UUT 28A

Model Line	Model Number	Manufacturer
4000 Series	J07APSB30400N5ZP	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: American Solenoid / Benedikt & Jager; Electrical Controller: MOXA; Time Delay Module: Omron; Voltage Surge Arrestor: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
570	19.5	42.0	54.5	23.5	9.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using six (6) 1/2" grade 5 bolts and flat washers.

UUT-28A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-28B

60216-1701-28; UUT 28B

Model Line	Model Number	Manufacturer
4000 Series	J07APSB30400N5ZP	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switches: American Solenoid / Benedikt & Jager; Electrical Controller: MOXA; Time Delay Module: Omron; Voltage Surge Arrestor: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
570	19.5	42.0	54.5	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using six (6) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-28B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-32

60216-1701-32; UUT 32

Model Line	Model Number	Manufacturer
Annunciator	5075	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 / 3R / 4 / 12 Rating

Options / Subcomponent Summary

LED Indicating Light: Schneider Electric; Alarm Module: Mallory; Power Supply: Thomas & Betts; Circuit Breaker: Thomas & Betts; DC-DC Converter: Allied Electric; Monitor: Advantech

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
54	9.0	20.0	20.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} [g]	z/h	I_P	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 1/4" grade 5 bolts, flat washers, and 3"x3"x1/4" plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-32



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-34

60216-1701-34; UUT 34

Model Line	Model Number	Manufacturer
Annunciator	D07MTSB0070000C	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Manual Operating Handle Assembly: ASCO

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
89	15.0	18.0	48.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS} [g]	z/h	I_P	A_{FLX-H} [g]	A_{RIG-H} [g]	A_{FLX-V} [g]	A_{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was rigidly mounted to the shake table.

UUT-34



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-36A

60216-1601c; UUT 36A

Model Line	Model Number	Manufacturer
Series 7000	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Logic Meter: Schneider; Backup Power Source: ASCO; UPS: ASCO; Relay Expansions Module: ASCO; Load Current Monitor: ASCO; Strip Heater: ASCO; Connectivity Module: ASCO; Ethernet Switch: MOXA

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
276	19.0	24.0	67.0	20.3	9.5	15.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 1/2" grade 5 bolts and flat washers.

UUT-36A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-36B

60216-1601c; UUT 36B

Model Line	Model Number	Manufacturer
Series 7000	J03ATSB30600NGXH	ASCO

Product Construction Summary

Stainless Steel, NEMA 4X Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Logic Meter: Schneider; Backup Power Source: ASCO; UPS: ASCO; Relay Expansions Module: ASCO; Load Current Monitor: ASCO; Strip Heater: ASCO; Connectivity Module: ASCO; Ethernet Switch: MOXA

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
276	19.0	24.0	67.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 1/2" grade 5 bolts, flat washers, and 3"x3"x1/4" plate washers. The wall fixture was mounted rigidly to the shake table.

UUT-36B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-38A

60216-1701-38; UUT 38A

Model Line	Model Number	Manufacturer
Series 7000	J7ADTSO30400NSZG	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switch: Square D / IDEC; LCDR Relay: Deltrol Controls; Control Line Fuses: Bussman; Electrical Controller: MOXA; Power Meter: ASCO; IR Window: Fluke

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
540	31.5	34.0	75.0	20.0	26.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using (6) 3/8" grade 5 bolts and flat washers.

UUT-38A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-38B

60216-1701-38; UUT 38B

Model Line	Model Number	Manufacturer
Series 7000	J7ADTSO30400NSZG	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Selector Switch: Square D / IDEC; LCDR Relay: Deltrol Controls; Control Line Fuses: Bussman; Electrical Controller: MOXA; Power Meter: ASCO; IR Window: Fluke

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
540	31.5	34.0	75.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using six (6) 1/2" grade 5 bolts, flat washers, and 3"x3"x1/4" carbon steel plate washers. The wall fixture was mounted rigidly to the shake table.

UUT-38B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-39A

60216-1701-39; UUT 39A

Model Line	Model Number	Manufacturer
Series 4000	J07ATSB30400NSXC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Electronic Controller: Cunny & Guerber

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
227	14.5	24.0	56.0	10.0	7.0	>33.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was mounted to the test fixture using four (4) 3/8" grade 5 bolts and flat washers.

UUT-39A



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-39B

60216-1701-39; UUT 39B

Model Line	Model Number	Manufacturer
Series 4000	J07ATSB30400NSXC	ASCO

Product Construction Summary

Powder-Coated Carbon Steel, NEMA 1 Rating

Options / Subcomponent Summary

Transfer Switch: ASCO; Controller: ASCO; Electronic Controller: Cunny & Guerber

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
227	14.5	24.0	56.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) 3/8" grade 5 bolts, flat washers, and 3"x3"x1/4" plate washers. The wall fixture was mounted rigidly to the shake table.

DATE: 01/17/2020

UUT-39B



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



UNIT UNDER TEST (UUT) SUMMARY SHEET

UUT-40

60216-1601d; UUT 40

Model Line	Model Number	Manufacturer
Annunciator	8114400	ASCO

Product Construction Summary

Plastic

Options / Subcomponent Summary

Annunciator

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Depth	Width	Height	F-B	S-S	V
2	8.8	6.5	2.5	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} [g]	z/h	I _P	A _{FLX-H} [g]	A _{RIG-H} [g]	A _{FLX-V} [g]	A _{RIG-V} [g]
CBC 2016	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details

UUT was wall mounted to the wall fixture using four (4) #14 TEK screws and manufacturer provided mounting tabs. The wall fixture was mounted rigidly to the shake table.

UUT-40



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