



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY
APPLICATION #: OSP - 0565 - 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [X] New [] Renewal

Manufacturer Information

Manufacturer: ABB

Manufacturer's Technical Representative: James Kluck, Product Manager

Mailing Address: PO Box 372, Milwaukee, WI 53201-0372

Telephone: (262) 785-3200 Email: james.e.kluck@us.abb.com

Product Information

Product Name: ACS550

Product Type: Variable Frequency Drives (VFDs)

Product Model Number: ACB530, ACH550, ACQ550, AYK550, ACS550
(List all unique product identification numbers and/or part numbers)

General Description: Wall and Floor mounted Variable Frequency Drives that can control an AC motor with either VFD or Bypass.

Mounting Description: Rigid Floor Mounted; Rigid and Flexible Surface Mounted on a Wall

Applicant Information

Applicant Company Name: The VMC Group

Contact Person: John Giuliano, P.E.

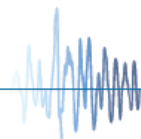
Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: 973-838-1780 Email: john.giuliano@thvmcgroup.com

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

Signature of Applicant: [Handwritten Signature] Date: 3/12/19
Title: President Company Name: The VMC Group

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





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

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

Company Name: 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

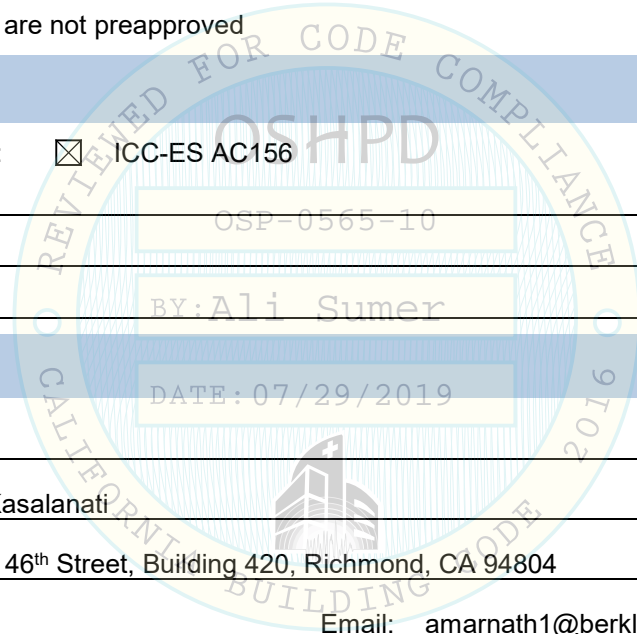
Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

Supports and attachments are not preapproved

Certification Method

Testing in accordance with: ICC-ES AC156

Other (Please Specify): _____



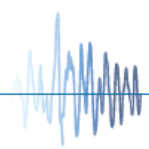
Testing Laboratory

Company Name: UC Berkley

Contact Name: Amarnath Kasalanati

Mailing Address: 1301 South 46th Street, Building 420, Richmond, CA 94804

Telephone: (510) 665-3409 Email: amarnath1@berkeley.edu





OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

Seismic Parameters

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

Design Basis of Equipment or Components (Fp/Wp) = 1.5 (Rp=6.0); 4.5 (Rp=2.0)

Sds (Design spectral response acceleration at short period, g) = 2.0

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

Rp (Equipment or component response modification factor) = 6.0 (Rigid Floor/Wall); 2.0 (Flexible Wall)

Omega_0 (System overstrength factor) = 2.0

Ip (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See Attachment

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

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

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

Sds (Design spectral response acceleration at short period, g) =

Sd1 (Design spectral response acceleration at 1 second period, g) =

R (Response modification coefficient) = OSP-0565-10

Omega_0 (System overstrength factor) =

Cd (Deflection amplification factor) = BY: Ali Sumer

Ip (Importance factor) = 1.5

Height to Center of Gravity above base = DATE: 07/29/2019

Equipment or Component Natural Frequencies (Hz) =

Overall dimensions and weight (or range thereof) =

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

List of Attachments Supporting Special Seismic Certification

[X] Test Report(s) [X] Drawings [] Calculations [X] Manufacturer's Catalog

[] Other(s) (Please Specify):

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

Signature: [Signature] Date: July 28, 2019

Print Name: Ali Sumer Title: DSE

Special Seismic Certification Valid Up to : Sds (g) = 2.0 z/h = 1.0

Condition of Approval (if applicable):

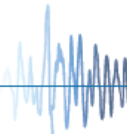


Table 1 - Drive Matrix

System Voltage [V]	Model	Construction	Model Number	Normal Duty		Heavy Duty		Frame Size	Available Enclosure Types	Dimensions for Type 1 H x W x D [in]	Max System Weight Type 1 [lbs]	Dimensions for Type 12 H x W x D [in]	Max System Weight Type 12 [lbs]	MFR	Mounting	UUT
				Current [A]	HP	Current [A]	HP									
208 / 240	ACB530, ACH550, ACQ550, AYK550, ACS550	-01, -UH, -U1, -U0 -OEMUx where OEM = any OEM code	ACx550-XX-04A6-2	4.6	1	3.5	0.75	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	UUT 7A, UUT 7B
			ACx550-XX-06A6-2	6.6	1.5	4.6	1	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-07A5-2	7.5	2	6.6	1.5	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-012A-4	11.8	3	7.5	2	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-017-A2	16.7	5	11.8	3	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-024A-2	24.2	7.5	16.7	5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Interpolated
			ACx550-XX-031A-2	30.8	10	24.2	7.5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Interpolated
			ACx550-XX-046A-2	46.2	15	30.8	10	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	Interpolated
			ACx550-XX-059A-2	59.4	20	46.2	15	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	UUT 1A, UUT 1B
			ACx550-XX-075A-2	74.8	25	59.4	20	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-088A-2	88	30	74.8	25	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-114A-2	114	40	88	30	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-143A-2	143	50	114	40	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated
			ACx550-XX-178A-2	178	60	150	50	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated
ACx550-XX-221A-2	221	75	178	60	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated			
ACx550-XX-248A-2	248	100	192	75	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated			
480	ACB530, ACH550, ACQ550, AYK550, ACS550	-01, -UH, -U1, -U0 -OEMUx where OEM = any OEM code	ACx550-XX-03A3-4	3.3	1.5	2.4	1	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-04A1-4	4.1	2	3.3	1.5	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-06A9-4	6.9	3	5.4	2	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-08A8-4	8.8	5	6.9	3	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-012A-4	11.9	7.5	8.8	5	R1	1,12	14.5 x 4.9 x 8.3	14	18.1 x 8.7 x 9.2	18	ABB	Wall	Interpolated
			ACx550-XX-015A-4	15.4	10	11.9	7.5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Interpolated
			ACx550-XX-023A-4	23	15	15.4	10	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Interpolated
			ACx550-XX-031A-4	31	20	23	15	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	Interpolated
			ACx550-XX-038A-4	38	25	31	20	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	Interpolated
			ACx550-XX-045A-4	44	30	38	25	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	UUT 6A, UUT 6B
			ACx550-XX-059A-4	59	40	44	30	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-072A-4	72	50	59	40	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-078A-4	77	60	65	50	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Interpolated
			ACx550-XX-097A-4	96	75	77	60	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	UUT 5A, UUT 5B
			ACx550-XX-125A-4	124	100	96	75	R5	1,12	29 x 10.5 x 11.2	75	32.1 x 14.5 x 12.1	85	ABB	Wall	Interpolated
			ACx550-XX-157A-4	157	125	124	100	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated
			ACx550-XX-180A-4	180	150	156	125	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Interpolated
			ACx550-XX-246A-4	245	200	192	150	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	UUT 2A, UUT 2B
			ACx550-XX-316A-4	316	250	240	200	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	UUT-3
			ACx550-XX-368A-4	368	300	302	250	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	Interpolated
ACx550-XX-414A-4	414	350	368	300	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	Interpolated			
ACx550-XX-486A-4	486	400	414	350	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	Interpolated			
ACx550-XX-526A-4	526	450	477	400	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	Interpolated			
ACx550-XX-602A-4	602	500	515	450	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	Interpolated			
ACx550-XX-645A-4	645	550	590	500	R8	1,12	83.7 x 31.7 x 25.2	780	93.6 x 31.5 x 23	827	ABB	Floor	UUT-4			

NOTE: Drive enclosures are installed inside NEMA 1, 12, or 3R cabinet (See Table 2)

01-Standard wall mount
 UH-Same as U1 except SW for HVAC applications
 All models identical from a hardware perspective; only difference in drives is software
 07/29/2019

02-PC ver 02-PC version
 U0-Same as U1/UH/01 except generic version to be mounted inside enclosure
 No frame or subcomponent differences between 530 & 550; only difference is software
 OSP-0565-10

U1-01 with US version SW (defaults to 60Hz and HP instead 50
 OEMUx-OEM version of the ones listed above with OEM specific SW/configuration (addition of option modules where applicable)
 Difference between 600V, 480V, & 208/240V drives is the scaling of the components in the main circuit to match supply voltage; all electronic functionality is the same between voltage classes

Table 1 - Drive Matrix (Continued)

System Voltage [V]	Model	Construction	Model Number	Normal Duty Ratings		Heavy Duty Ratings		Frame Size	Available Enclosure Types	Dimensions for Type 1 H x W x D [in]	Max System Weight Type 1 [lbs]	Dimensions for Type 12 H x W x D [in]	Max System Weight Type 12 [lbs]	MFR	Mounting	UUT
				Current [A]	HP	Current [A]	HP									
600	ACB530, ACH550, ACQ550, AYK550, ACS550	-01, -UH, -U1, -OEMUx where OEM = any OEM code	ACx550-XX-02A7-6	2.7	2	2.4	1.5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-03A9-6	3.9	3	2.7	2	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-06A1-6	6.1	5	3.9	3	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-09A0-6	9	7.5	6.1	5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-011A-6	11	10	9	7.5	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-017A-6	17	15	11	10	R2	1,12	18.5 x 4.9 x 8.7	20	22.1 x 8.7 x 9.6	25	ABB	Wall	Extrapolated
			ACx550-XX-022A-6	22	20	17	15	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	Extrapolated
			ACx550-XX-027A-6	27	25	22	20	R3	1,12	23 x 8 x 9.1	35	24.8 x 10.5 x 10	41	ABB	Wall	Extrapolated
			ACx550-XX-032A-6	32	30	27	25	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Extrapolated
			ACx550-XX-041A-6	41	40	32	30	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Extrapolated
			ACx550-XX-052A-6	52	50	41	40	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Extrapolated
			ACx550-XX-062A-6	62	60	52	50	R4	1,12	27.1 x 8 x 10.3	53	29.9 x 10.5 x 11.2	58	ABB	Wall	Extrapolated
			ACx550-XX-077A-6	77	75	62	60	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Extrapolated
			ACx550-XX-099A-6	99	100	77	75	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Extrapolated
ACx550-XX-125A-6	125	125	99	100	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Extrapolated			
ACx550-XX-144A-6	144	150	125	125	R6	1,12	34.7 x 11.9 x 15.8	152	38.7 x 16.1 x 16.6	190	ABB	Wall	Extrapolated			

NOTE: Drive enclosures are installed inside NEMA 1, 12, or 3R cabinet (See Table 2)

01-Standard wall mount

UH-Same as U1 except SW for HVAC applications

All models identical from a hardware perspective; only difference in drives is software

02-PC ver 02-PC version

U0-Same as U1/UH/01 except generic version to be mounted inside enclosure

No frame or subcomponent differences between 530 & 550; only difference is software

U1-01 with US version SW (defaults to 60Hz and HP instead 50

OEMUx-OEM version of the ones listed above with OEM specific SW/configuration (addition of option modules where applicable)

Difference between 600V, 480V, & 208/240V drives is the scaling of the components in the main circuit to match supply voltage; all electronic functionality is the same between voltage classes

Table 2 - Cabinet Matrix

Cabinet ID	Drive Frame	Max Height [in]	Max Width [in]	Max Depth [in]	Max Cabinet Weight [lbs]	Type Rating	Panel Material / Thickness [mm]	Mounting	MFR	UUT
VX1-1	R1	40.2	5.4	10.1	32	1	Carbon Steel / 1.5	Wall	ABB	Extrapolated
PX1-1 PX12-1	R1	29.3	8.7	11.2	37	1 12	Carbon Steel / 1.5	Wall	ABB	Extrapolated
VX1-2	R2	44.1	5.4	10.3	40	1	Carbon Steel / 1.5	Wall	ABB	Extrapolated
PX1-2 PX12-2	R2	33.2	8.7	11.6	46	1 12	Carbon Steel / 1.5	Wall	ABB	Extrapolated
VX1-3	R2 / R3	47.7	8.4	10.9	70	1	Carbon Steel / 1.5	Wall	ABB	UUT 1A, UUT 1B
BX1-1 BX12-1	R1	33.2	17.4	13.5	78	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX1-3 PX12-3	R3	40.6	10.5	11.9	79	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX1-2 BX12-2	R2	33.2	17.4	13.5	84	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX1-3 BX12-3	R2	33.2	17.4	13.5	84	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
VX1-4	R4	51.8	8.4	12.1	92	1	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX1-4 PX12-4	R4	45.8	10.5	13.1	99	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX1-3 BX12-3	R3	37.4	20.5	15.3	120	1 12	Carbon Steel / 1.5	Wall	ABB	UUT 6A, UUT 6B
PX3R-1	R1	34	17.8	13.5	128	3R	Carbon Steel / 1.5	Wall	ABB	UUT 7A, UUT 7B
BX3R-1	R1	34	17.8	13.5	128	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX3R-2	R2	34	17.8	13.5	134	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX3R-2	R2	34	17.8	13.5	134	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX1-4 BX12-4	R4	37.4	20.5	15.3	138	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX3R-3	R2 / R3	38.1	20.9	15.3	176	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX3R-3	R2	38.1	20.9	15.3	176	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX3R-4	R4	38.1	20.9	15.3	194	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX3R-4	R4	38.1	20.9	15.3	194	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX3R-5	R4	39	30	15.5	203	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated

Table 2 - Cabinet Matrix

Cabinet ID	Drive Frame	Max Height [in]	Max Width [in]	Max Depth [in]	Max Cabinet Weight [lbs]	Type Rating	Panel Material / Thickness [mm]	Mounting	MFR	UUT
BX3R-5	R4	39	30	15.5	213	3R	Carbon Steel / 1.5	Wall	ABB	Interpolated
PX1-5 PX12-5	R4 / R5	54.3	28.1	19	267	1 12	Carbon Steel / 1.5	Wall	ABB	UUT 5A, UUT 5B
BX1-5 BX12-5	R4	54.3	28.1	19	267	1 12	Carbon Steel / 1.5	Wall	ABB	Interpolated
BX1-6 BX12-6	R6	54.3	28.1	19	359	1 12	Carbon Steel / 1.5	Wall	ABB	UUT 2A, UUT 2B
PX1-6 PX12-6	R6	54.3	28.1	19	359	1 12	Carbon Steel / 1.5	Wall	ABB	Extrapolated
BX3R-6	R4	51	36	21.5	409	3R	Carbon Steel / 1.5	Wall	ABB	Extrapolated
PX1-8 PX12-8	R8	93.6	31.7	25.9	1045	1 12	Carbon Steel / 1.5	Floor	ABB	UUT-4
BX1-8 BX12-8	R8	83.7	31.7	25.9	838	1 12	Carbon Steel / 1.5	Floor	ABB	UUT-3

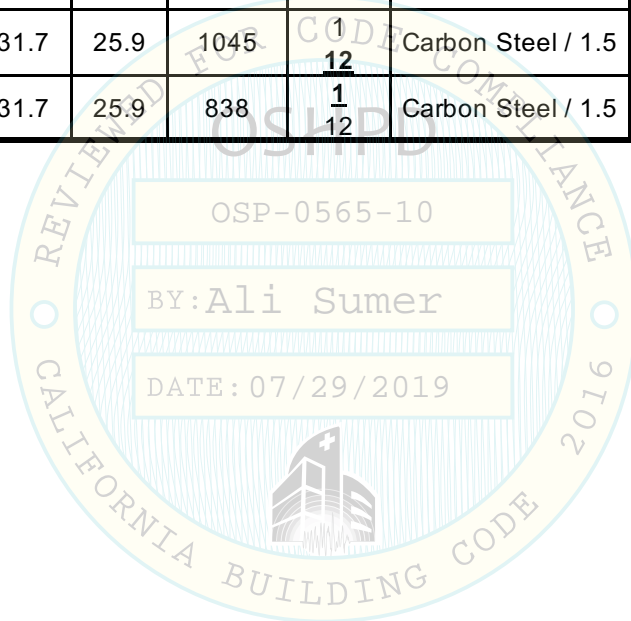


Table 3 - Fuses

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000015604	Fuse, Class CC, Rejection	15A, 600V	< 0.2	Bussmann Cooper	N/A	UUT 7A, UUT 7B
3AUA0000015606	Fuse, Class T, Rejection	60A, 600V	< 0.2	Bussmann Cooper		UUT 6A, UUT 6B
3AUA0000015607	Fuse, Class T, Rejection	100A, 600V	< 0.2	Bussmann Cooper		UUT 1A, UUT 1B
3AUA0000004429	Drive Fuse, 170M1372, 315A	315A	0.3	Bussmann Cooper		UUT 2A, UUT 2B
64690647	Drive Fuse	400A	0.5	Bussmann Cooper	UUT 3	N/A
3AUA0000005226	Drive Fuse	800A	1.7	Bussmann Cooper	UUT 4	

Table 4 - Terminal Blocks

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000025549	Terminal Block	85A	0.2	Curtis	N/A	UUT 6A, UUT 6B
3AUA0000014810	Terminal Block	115A	0.4	Bussmann Cooper		UUT 5A, UUT 5B
3AUA266001B144	Terminal Block	175A	0.4	Bussmann Cooper		UUT 1A, UUT 1B

Table 5 - Fans

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000000148	Fan for Top of Bypass Skeleton (B1 & B2 box)	38-40 CFM	< 0.2	NMB Technologies Corp.	N/A	UUT 5A, UUT 5B
3AUA0000012736	For Cab & Drive Skeleton	38-40 CFM	< 0.2	Delta Products Corp.		UUT 7A, UUT 7B
3AUA0000012849	BXR Cab Only	38-40 CFM	0.4	Delta Products Corp.		UUT 2A, UUT 2B
3AUA648001B20	Fan, ACS607, 115V/60HZ	718 CFM	9.7	Delta Products Corp.	UUT 4	N/A

Table 6 - Contactors

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AXD50000017471	Contacto r A9-30-10-84	9A / 21A	0.7	ABB	N/A	Extrapolated
3AUA0000014843	Contacto r A9-30-10-84	9A / 21A	0.7	ABB		Extrapolated
3AXD50000017472	Contacto r A12-30-10-84	11A / 25A	0.7	ABB		Extrapolated
3AUA0000014844	Contacto r A12-30-10-84	11A / 25A	0.7	ABB		Extrapolated
3AXD50000017473	Contacto r A26-30-10-84	28A / 40A	1.0	ABB		Extrapolated
3AUA0000014846	Contacto r A26-30-10-84	28A / 40A	1.0	ABB		Extrapolated
3AXD50000017474	Contacto r A30-30-10-84	34A / 50A	1.2	ABB		Extrapolated
3AUA0000014857	Contacto r A30-30-10-84	34A / 50A	1.2	ABB		UUT 6A, UUT 6B
3AXD50000017475	Contacto r A40-30-10-84	42A / 60A	2.3	ABB		Interpolated
3AUA0000014847	Contacto r A40-30-10-84	42A / 60A	2.3	ABB		UUT 6A, UUT 6B
3AXD50000050428	Contacto r A50-30-00-84	45A / 80A	2.3	ABB		Interpolated
3AUA0000014848	Contacto r A50-30-00-84	45A / 80A	2.3	ABB		UUT 1A, UUT 1B
3AXD50000017477	Contacto r A75-30-00-84	80A / 105A	2.3	ABB		Interpolated
3AUA0000014850	Contacto r A75-30-00-84	80A / 105A	2.3	ABB		UUT 1A, UUT 1B
3AUA0000019449	Contacto r A95-30-00-84	95A / 125A	3.5	ABB		Interpolated
3AUA0000019450	Contacto r A110-30-00-84	110A / 140A	5.0	ABB		Interpolated
3AUA0000019451	Contacto r A145-30-00-84	130A / 230A	7.1	ABB		Interpolated
3AXD50000050113	Contacto r A145-30-00-84	130A / 230A	7.1	ABB		Interpolated
3AUA0000019452	Contacto r A185-30-00-84	156A / 250A	7.1	ABB		UUT 2A, UUT 2B
3AXD50000050114	Contacto r A185-30-00-84	156A / 250A	7.1	ABB		Interpolated
3AUA0000019453	Contacto r A210-30-00-84	192A / 300A	13.0	ABB		Interpolated
3AXD50000050115	Contacto r A210-30-00-84	192A / 300A	13.0	ABB		Interpolated
3AUA0000019454	Contacto r A260-30-00-84	248A / 350A	13.0	ABB		UUT 2A, UUT 2B
3AUA0000004886	Contacto r AF400-30-11-70	400A	26.0	ABB		UUT 3
3AUA0000004888	Contacto r AF460-30-11-70	460A	26.0	ABB	UUT 3	

Note: Only difference between AUA & AXD is a software difference

Table 7 - Circuit Breakers

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000065223	T1N025TL Circuit Breaker for PCR	25A	2.3	ABB	N/A	UUT 7A, UUT 7B
3AXD50000049168	T1N025TL Circuit Breaker for PCR	25A	2.3	ABB		UUT 7A, UUT 7B
3AUA0000065224	T1N040TL Circuit Breaker for PCR	40A	2.3	ABB		Interpolated
3AXD50000049169	T1N040TL Circuit Breaker for PCR	40A	2.3	ABB		Interpolated
3AUA0000065225	T1N080TL Circuit Breaker Kit for PCR	80A	2.3	ABB		Interpolated
3AUA0000065226	T1N100TL Circuit Breaker Kit for PCR	100A	2.3	ABB		Interpolated
3AXD50000049170	T1N100TL Circuit Breaker Kit for PCR	100A	2.3	ABB		Interpolated
3AUA0000026218	T2 Circuit Breaker (SACE)	15A	2.8	ABB		Interpolated
3AXD50000049164	T2 Circuit Breaker (SACE)	15A	2.8	ABB		Interpolated
3AUA0000026219	T2 Circuit Breaker (SACE)	40A	2.7	ABB		Interpolated
3AXD500000136520	T2 Circuit Breaker (SACE)	70A	2.8	ABB		Interpolated
3AXD500000136513	XT2L	100A	2.7	ABB		Interpolated
3AUA0000026220	T2 Circuit Breaker (SACE)	60A	2.8	ABB		UUT 6A, UUT 6B
3AUA0000026221	T2 Circuit Breaker (SACE)	100A	2.8	ABB		UUT 1A, UUT 1B
3AXD500000136537	T2 Circuit Breaker (SACE)	100A	2.8	ABB		UUT 1A, UUT 1B
3AXD50000049923	XT3S125A	125A	3.4	ABB		Interpolated
3AUA0000019628	T4 Circuit Breaker, T4N150E5W	150A	6.2	ABB		UUT 5A, UUT 5B
3AXD50000049924	T4 Circuit Breaker, T4N150E5W	150A	6.2	ABB		UUT 5A, UUT 5B
3AUA0000019629	T4 Circuit Breaker, T4N250E5W	250A	6.2	ABB		Interpolated
3AXD50000049924	T4 Circuit Breaker, T4N150E5W	150A	6.2	ABB		UUT 5A, UUT 5B
3AUA0000019630	T5 Circuit Breaker, T5N400E5W	400A	8.6	ABB	UUT 2A, UUT 2B	
3AUA0000108996	Circuit Breaker, Type S, T6S600E5W	600A	20.9	ABB	UUT 3	N/A
3AUA0000108997	Circuit Breaker, Type S, T6S800E5W	800A	20.9	ABB	UUT 4	
3AUA0000108998	Circuit Breaker, Type H, T6H800E5W	600A	20.9	ABB	Extrapolated	

Table 8 - Fuse Blocks

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000031820	Fuse Block, Mount in Enclosure Frame	30A, 600V	0.2	Mersen USA	N/A	UUT 7A, UUT 7B
3AUA0000016636	Fuse Block, 3P, Class T	31-60A, 600V	0.5	Bussmann Cooper		UUT 6A, UUT 6B
BG56790001-4	Fuse Block, Mount in Enclosure Frame	60A, 600V	0.5	Bussmann Cooper		Interpolated
3AUA567003A59	Drive Fuse Holder 400A	400A, 1000V	0.7	Bussmann Cooper		UUT 2A, UUT 2B
3AUA0000142380	Fuse Block, 600VAC, 400A, Class T, 1 Pole	400A, 600V	0.7	Bussmann Cooper		Interpolated
68909635	Fuse Block, Class T60200-1C	30A, 600V	0.7	Bussmann Cooper		Interpolated
3AUA567003A95	Fuse Block, 3P, Class T	100A, 600V	1.0	Bussmann Cooper		UUT 1A, UUT 2B

Table 9 - Transformers

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
BG56720008-9	Transformer, Primary Fusing BC/BD	3A, 600V	< 0.2	Bussmann Cooper	N/A	UUT7A, UUT7B
3AUA0000019997	Transformer for Control and/or Fan	500VA, 380-500V / 115V	15.0	Hammond Power Solutions Inc.	UUT 4	N/A

Table 10 - Disconnect Switches

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration		
					Floor	Wall	
3AXD50000049831	Disconnect Switch	30A	0.8	ABB	N/A	Interpolated	
3AUA0000049775	Disconnect Switch	40A	0.2	ABB		UUT 7A, UUT 7B	
3AXD50000049832	Disconnect Switch	60A	0.8	ABB		Interpolated	
3AUA0000049774	Disconnect Switch	63A	0.6	ABB		Interpolated	
3AUA0000049776	Disconnect Switch	80A	0.6	ABB		UUT1A, UUT 1B, UUT 6A, UUT 6B	
3AUA0000049777	Disconnect Switch	100A	0.8	ABB		Interpolated	
3AXD50000139828	Disconnect Switch	125A	1.2	ABB		Interpolated	
3AUA0000019627	Disconnect Switch	200A	1.2	ABB		Interpolated	
3AUA0000016618	Disconnect Switch	125A	2.4	ABB		Interpolated	
3AUA0000019631	Disconnect Switch	400A	8.6	ABB		UUT 2A, UUT 2B	
3AUA0000014729	Disconnect Switch	800A	20.9	ABB		UUT 4	N/A
3AUA0000109909	Disconnect Switch	800A	20.9	ABB		UUT 4	

Table 11 - Filters

ABB Part Number	Description	Rating or Material	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000004887	Filter, Air Pre-Cut 150x300xx12.5	Polyester / Plastic	< 0.2	Tex Air	N/A	UUT 2A, UUT 2B, UUT5A, UUT 5B
3AUA0000006722	Filter, 500MM UL Type 12	Polyester / Plastic	< 0.2	Tex Air	UUT 4	N/A
3AUA0000006723	Filter Material, Main Doors, R7-8	Polyester / Plastic	< 0.2	Tex Air	UUT 4	N/A

Table 12 - Current Transducers

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000014759	Current Transformer (CT)	25A	0.4	ABB	N/A	UUT 7A, UUT 7B
3AUA0000014760	Current Transformer (CT)	75A	0.4	ABB		UUT 1A, UUT 1B, UUT 6A, UUT 6B
3AUA0000004443	Current Transformer (CT)	300:5	0.4	Amran Inc.		Extrapolated
3AUA476001B24	Current Transformer (CT)	200:5	0.4	Amran Inc.		UUT 5A, UUT 5B
3AUA476001B25	Current Transformer (CT)	500:5	1.0	Amran Inc.		UUT 3, UUT 4

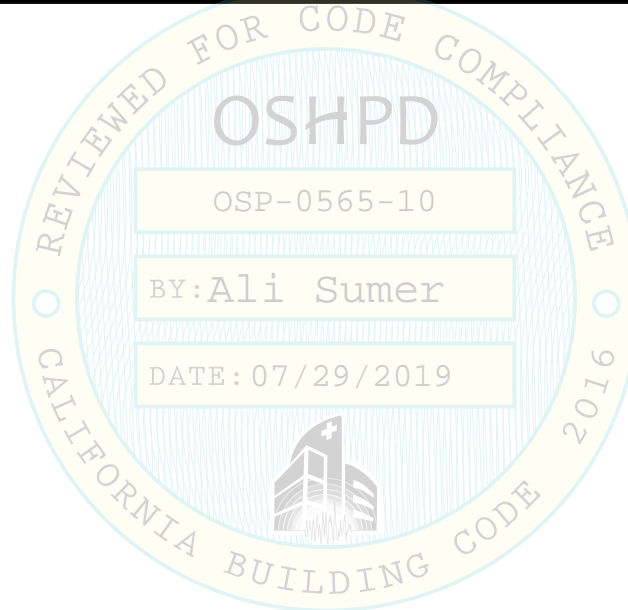


Table 13 - Service Switches - Type Code +F267

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA0000049775	Disconnect Switch P B&V	40A	0.2	ABB	N/A	UUT 7A, UUT 7B
3AUA0000049776	Disconnect Switch P B&V	80A	0.6	ABB		UUT 1A, UUT 1B, UUT 6A, UUT 6B
3AUA0000049777	Disconnect Switch P B&V	100A	0.8	ABB		Interpolated
3AXD50000049831	Service Switch OT30F	30A	0.8	ABB		Interpolated
3AXD50000049832	Service Switch OT60F	60A	0.8	ABB		Interpolated
3AXD50000140640	XT3D	225A	1.2	ABB		Interpolated
3AUA0000016618	Disconnect Switch P B&V	125A	2.4	ABB		Interpolated
3AUA0000014378	Service Switch, T3S225DW	225A	5.5	ABB		Interpolated
3AUA0000019631	Disconnect Molded Case CB, T5H400DW	400A	8.6	ABB		UUT 2A, UUT 2B
3AUA0000109909	Disconnect Switch, Type DW T6H800DW	800A	20.9	ABB	UUT 3	N/A

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Table 14 - Reactors - Type Code +E213

ABB Part Number	Description	Rating	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
3AUA266001B144	Terminal Block to Plate, BX	3 pole, 175A	0.4	Bussmann Cooper	N/A	UUT 5A, UUT 5B
68587344	Line Reactor, Choke	290 / 220 UH, 125A	< 0.2	ABB		UUT 7A, UUT 7B
3AUA0000008409	For New 230V Line Reactor	230 Volts at 240 Joules	0.4	ABB		Interpolated
3AUA0000008410	For New 480V Line Reactor	480 Volts at 470 Joules	0.4	ABB		Interpolated
3AUA0000008411	For New 600V Line Reactor	600 Volts at 300 Joules	0.4	ABB		Interpolated
3AUA0000015536	AC Line Reactor R1, 1.2mH,12A Continuous, New Type 12	1.2mH, 12A	5.4	ABB		UUT 7A, UUT 7B
3AUA0000015537	AC Line Reactor R2, 0.42mH,31A Continuous, New Type 12	0.42mH, 31A	6.6	ABB		Interpolated
3AUA0000015538	AC Line Reactor R3, 0.33mH,59A Continuous, New Type 12	0.33mH, 59A	15.8	ABB		UUT 6A, UUT 6B
3AUA0000015539	AC Line Reactor R4, 0.18mH,75A Continuous, New Type 12	0.18mH, 75A	16.0	ABB		Extrapolated

Table 15 - Options

ABB Part Number	Description	Type Code	Weight [lbs]	Manufacturer	Mounting Configuration	
					Floor	Wall
64606891	DeviceNet (non-byp only)	K451	< 0.2	ABB	Extrapolated	Extrapolated
68469341	DeviceNet Redwood	K451	< 0.2	ABB	Extrapolated	UUT 1A, UUT 1B
3AUA0000037539	Lonworks Redwood	K452	< 0.2	ABB	Extrapolated	Interpolated
64606883	Lonworks	K452	< 0.2	ABB	UUT 4	Interpolated
64606859	Profibus (non-byp only)	K454	< 0.2	ABB	Interpolated	UUT 5A, UUT 5B
68469325	Profibus Redwood	K454	< 0.2	ABB	Interpolated	Interpolated
64751727	ACH Software RETA New (non-byp only)	K466	< 0.2	ABB	UUT 4	UUT 7A, UUT 7B
68469422	ACH Software FENA New	K466	< 0.2	ABB	UUT 3	Interpolated
3AUA0000002051	Pulse Encoder for UH & PX Only	L502	< 0.2	ABB	Extrapolated	UUT 5A, UUT 5B
3AUA0000002040	Relay Output Extension	L511	< 0.2	ABB	Extrapolated	UUT 1A, UUT 1B
3AUA0000003489	115/230V Input (non-byp only)	L512	< 0.2	ABB	Extrapolated	UUT6A, UUT6B
64751701	RCNA-01 Software Kit	K462	< 0.2	ABB	Software only	
68840830	ACS/H Software RETA-02 New	K467	< 0.2	ABB	Software only	

