



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0252

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Climatec

Manufacturer's Technical Representative: Cory Amick

Mailing Address: 2150 S. Towne Center Place, Suite 200, Anaheim, CA 92806

Telephone: (949) 474-0955

Email: CoryA@Climatec.com

Product Information

Product Name: Industrial Control Panels

Product Type: HVAC Control Panels

Product Model Number: See Attachments

General Description: Configurable control panels for HVAC applications.

Mounting Description: Wall mounted with wall base both rigid & isolated., Wall mounted with wall base both rigid & isolated.

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Dynamic Certification Laboratories

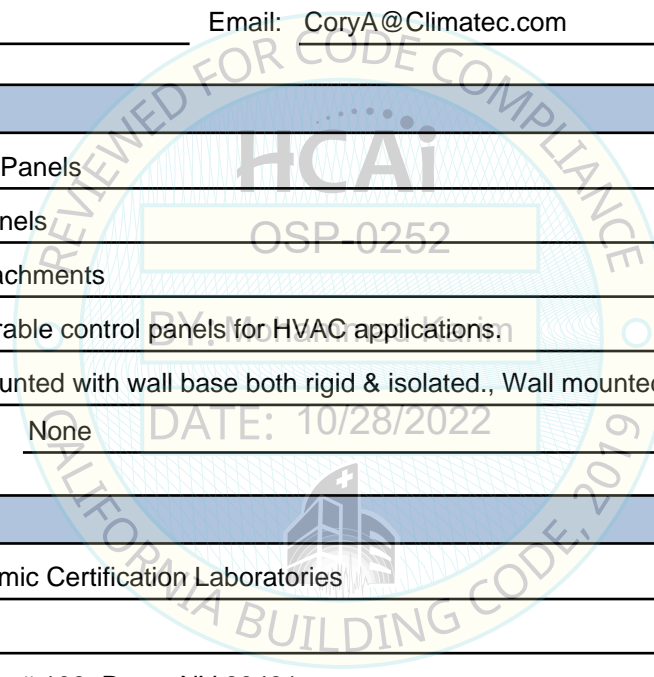
Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Pkwy # 109, Reno, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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

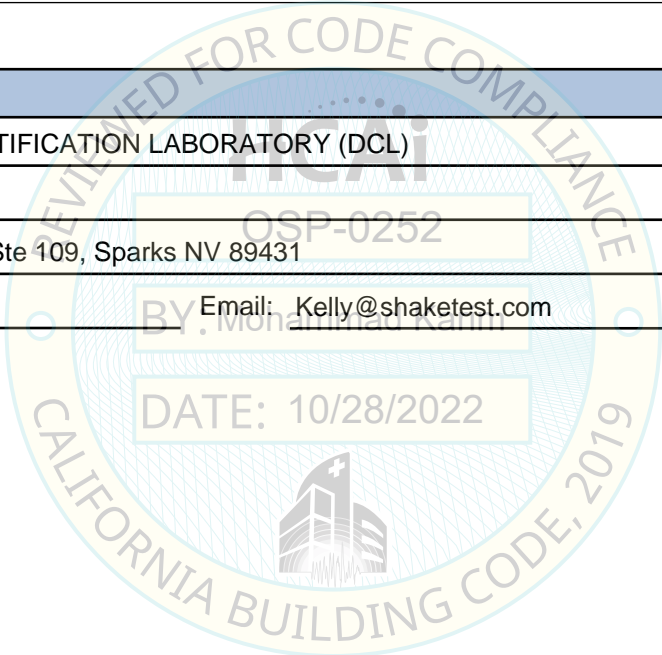
Company Name: THE VMC GROUP
Name: Kenneth Tarlow California License Number: S2851
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

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

Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)
Contact Person: Kelly Laplace
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431
Telephone: (775) 358-5085 Email: Kelly@shaketest.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.45 (rigid); 4.35 (isolated)

SDS (Design spectral response acceleration at short period, g) = 1.93

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0 (rigid); 2.5 (isolated)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

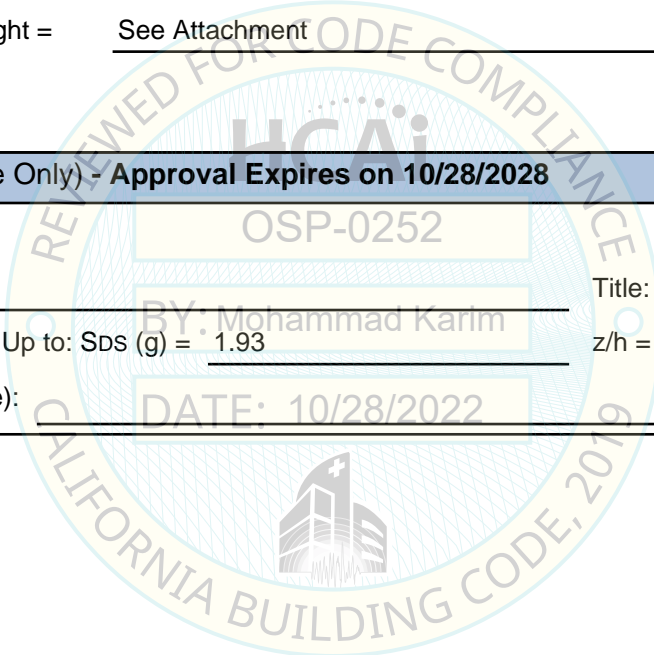
HCAI Approval (For Office Use Only) - Approval Expires on 10/28/2028

Date: 10/28/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 1.93 z/h = 1

Condition of Approval (if applicable): DATE: 10/28/2022



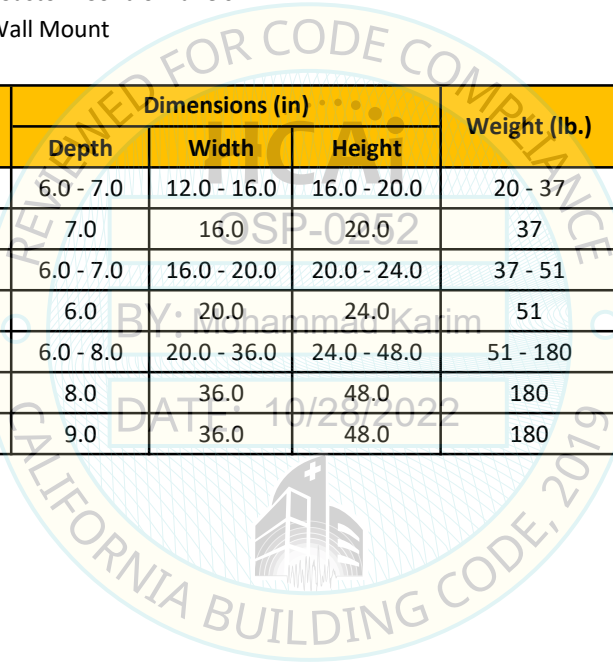
Special Seismic Certification
Table 1 - Certified Components



DCL Project Number: 00383-2201

Manufacturer: Climatec
Product Line: Honeywell Custom Custom Control Panels
Mounting Description: Rigid and Isolated Wall Mount
Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Model Line (Manufacturer)	Model	Dimensions (in)			Weight (lb.)	Notes	UUT
		Depth	Width	Height			
Honeywell Custom Control Panels (Climatec)	aaa-XXXX	6.0 - 7.0	12.0 - 16.0	16.0 - 20.0	20 - 37		Extrapolated
	CHW-1100	7.0	16.0	20.0	37	<i>UUT: A20N16ALP - NEMA 1</i>	UUT1a,b
	aaa-XXXX	6.0 - 7.0	16.0 - 20.0	20.0 - 24.0	37 - 51		Interpolated
	PLM-1100	6.0	20.0	24.0	51	<i>UUT: A24H20ALP - NEMA 4/12</i>	UUT3a,b
	aaa-XXXX	6.0 - 8.0	20.0 - 36.0	24.0 - 48.0	51 - 180		Interpolated
	AHU-1100	8.0	36.0	48.0	180	<i>UUT: A48H36BLP - NEMA 4/12</i>	UUT4a,b
	HHW-1100	9.0	36.0	48.0	180	<i>UUT: A48N36O9 - NEMA 1</i>	UUT2a,b



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Table 2 - Nomenclature Chart



DCL Project Number: 00383-2201

Manufacturer: Climatec
Product Line: Honeywell Custom Custom Control Panels
Mounting Description: Rigid and Isolated Wall Mount
Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Nomenclature: aaa-XXXX			
Nomenclature	Allowable Value	Allowable Value Description	Unit
aaa ¹	CHW	Chilled Water System	UUT1a,b
	HHW	Heating Hot Water System	UUT2a,b
	PLM	Plumbing Systems	UUT3a,b
	AHU	Air Handling Unit	UUT4a,b
	FCU	Fan Coil Unit	Same as UUT1, 2, 3, 4
	EXH	Exhaust Fan System	Same as UUT1, 2, 3, 4
	ELC	Electrical Systems	Same as UUT1, 2, 3, 4
XXXX	0000-9999	Internally Applied Serial Number	All interpolated, extrapolated, and tested units

Notes:

1. AHU, CHW, HHW, FCU, EXH, ELC, PLM only differ by software

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Table 3 - Certified Subcomponents: Type 1 Enclosures



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Model Line (Manufacturer)	Model	Dimension (in)			Material	UUT
		Depth	Width	Height		
Type 1 Enclosures (Hoffman)	A16N12ALP	6.6	12	16	Carbon steel, NEMA 1	Extrapolated
	A16N16ALP	6.6	16	16	Carbon steel, NEMA 1	Extrapolated
	A16N20ALP	6.6	20	16	Carbon steel, NEMA 1	Extrapolated
	A20N16ALP	6.6	16	20	Carbon steel, NEMA 1	UUT1a,b
	A20N20ALP	6.6	20	20	Carbon steel, NEMA 1	Interpolated
	A24N16ALP	6.6	16	24	Carbon steel, NEMA 1	Interpolated
	A24N20ALP	6.6	20	24	Carbon steel, NEMA 1	Interpolated
	A24N24ALP	6.6	24	24	Carbon steel, NEMA 1	Interpolated
	A30N24ALP	6.6	24	30	Carbon steel, NEMA 1	Interpolated
	A36N24ALP	6.6	24	36	Carbon steel, NEMA 1	Interpolated
	A36N30ALP	6.6	30	36	Carbon steel, NEMA 1	Interpolated
	A16N12BLP	8.6	12	16	Carbon steel, NEMA 1	Interpolated
	A20N12BLP	8.6	12	20	Carbon steel, NEMA 1	Interpolated
	A20N16BLP	8.6	16	20	Carbon steel, NEMA 1	Interpolated
	A20N20BLP	8.6	20	20	Carbon steel, NEMA 1	Interpolated
	A24N20BLP	8.6	20	24	Carbon steel, NEMA 1	Interpolated
	A24N24BLP	8.6	24	24	Carbon steel, NEMA 1	Interpolated
	A30N20BLP	8.6	20	30	Carbon steel, NEMA 1	Interpolated
	A30N24BLP	8.6	24	30	Carbon steel, NEMA 1	Interpolated
	A30N30BLP	8.6	30	30	Carbon steel, NEMA 1	Interpolated
	A36N24BLP	8.6	24	36	Carbon steel, NEMA 1	Interpolated
	A36N30BLP	8.6	30	36	Carbon steel, NEMA 1	Interpolated
	A42N3009	9.3	30	42	Carbon steel, NEMA 1	Interpolated
	A42N3609	9.3	36	42	Carbon steel, NEMA 1	Interpolated
	A48N3609	9.3	36	48	Carbon steel, NEMA 1	UUT2a,b

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Table 4 - Certified Subcomponents: Type 4 Enclosures



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Model Line (Manufacturer)	Model	Dimension (in)			Material	UUT
		Depth	Width	Height		
Type 4 Enclosures (Hoffman)	A16H12ALP	6	12	16	Carbon steel, NEMA 4/12	Extrapolated
	A16H16ALP	6	16	16	Carbon steel, NEMA 4/12	Extrapolated
	A16H20ALP	6	20	16	Carbon steel, NEMA 4/12	Extrapolated
	A20H16ALP	6	16	20	Carbon steel, NEMA 4/12	Extrapolated
	A20H20ALP	6	20	20	Carbon steel, NEMA 4/12	Extrapolated
	A24H12ALP	6	12	24	Carbon steel, NEMA 4/12	Extrapolated
	A24H16ALP	6	16	24	Carbon steel, NEMA 4/12	Extrapolated
	A24H20ALP	6	20	24	Carbon steel, NEMA 4/12	UUT3a,b
	A24H24ALP	6	24	24	Carbon steel, NEMA 4/12	Interpolated
	A30H20ALP	6	20	30	Carbon steel, NEMA 4/12	Interpolated
	A30H24ALP	6	24	30	Carbon steel, NEMA 4/12	Interpolated
	A36H24ALP	6	24	36	Carbon steel, NEMA 4/12	Interpolated
	A16H12BLP	8	12	16	Carbon steel, NEMA 4/12	Interpolated
	A20H16BLP	8	16	20	Carbon steel, NEMA 4/12	Interpolated
	A20H20BLP	8	20	20	Carbon steel, NEMA 4/12	Interpolated
	A20H24BLP	8	24	20	Carbon steel, NEMA 4/12	Interpolated
	A24H20BLP	8	20	24	Carbon steel, NEMA 4/12	Interpolated
	A24H24BLP	8	24	24	Carbon steel, NEMA 4/12	Interpolated
	A24H30BLP	8	30	24	Carbon steel, NEMA 4/12	Interpolated
	A30H20BLP	8	20	30	Carbon steel, NEMA 4/12	Interpolated
	A30H24BLP	8	24	30	Carbon steel, NEMA 4/12	Interpolated
	A30H30BLP	8	30	30	Carbon steel, NEMA 4/12	Interpolated
	A36H24BLP	8	24	36	Carbon steel, NEMA 4/12	Interpolated
	A36H30BLP	8	30	36	Carbon steel, NEMA 4/12	Interpolated
	A42H30BLP	8	30	42	Carbon steel, NEMA 4/12	Interpolated
	A42H36BLP	8	36	42	Carbon steel, NEMA 4/12	Interpolated
	A48H36BLP	8	36	48	Carbon steel, NEMA 4/12	UUT4a,b

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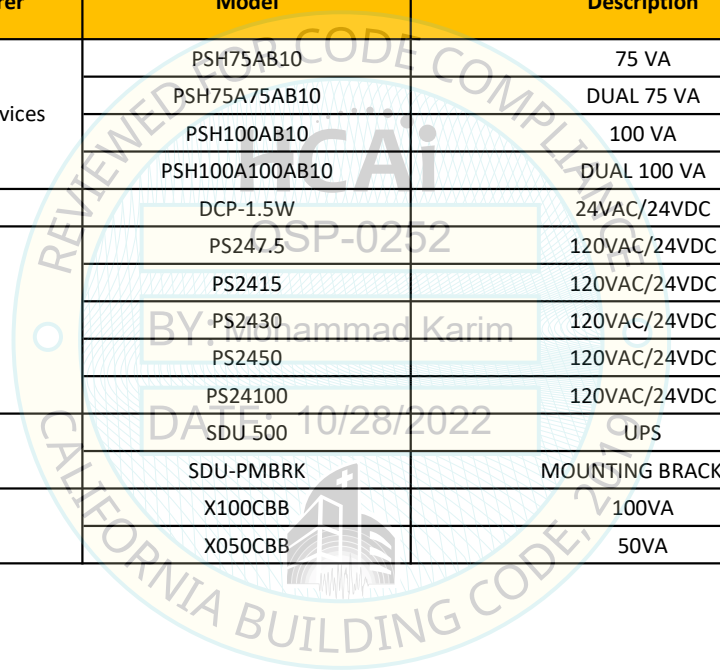
Table 5 - Certified Subcomponents: Transformers & Power Supplies



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Component Type	Manufacturer	Model	Description	Weight (lb)	UUT
Power Supply	Functional Devices	PSH75AB10	75 VA	5.2	Extrapolated
		PSH75A75AB10	DUAL 75 VA	8.9	Extrapolated
		PSH100AB10	100 VA	5.4	UUT3a,b
		PSH100A100AB10	DUAL 100 VA	9.5	UUT4a,b
	Kele	DCP-1.5W	24VAC/24VDC	>1.0	UUT4a,b
	Veris	PS247.5	120VAC/24VDC	>1.0	UUT4a,b
		PS2415	120VAC/24VDC	>1.0	Interpolated
		PS2430	120VAC/24VDC	>1.0	Interpolated
		PS2450	120VAC/24VDC	>1.0	Interpolated
		PS24100	120VAC/24VDC	>1.0	UUT2a,b
UPS		Sola-HD	SDU 500	UPS	11.5
	SDU-PMBRK		MOUNTING BRACKET	>1.0	UUT1a,b
Transformer	Veris	X100CBB	100VA	4.5	UUT2a,b
		X050CBB	50VA	3.0	UUT2a,b



Special Seismic Certification
Table 6 - Certified Subcomponents: Relays



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g, z/h=1.0$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Relay	Magnacraft	781XAXM4L-24A	1PDT 24VAC		>1.0	UUT3a,b
		781XAXM4L-12A	1PDT 12VAC	Similar to 781XAXM4L-24A	>1.0	Interpolated
		781XAXM4L-120A	1PDT 120VAC	Similar to 781XAXM4L-24A	>1.0	Interpolated
		781XAXM4L-220/230A	1PDT 220/230VAC	Similar to 781XAXM4L-24A	>1.0	Interpolated
		781XAXM4L-240A	1PDT 240VAC	Similar to 781XAXM4L-24A	>1.0	Interpolated
		781XAXM4L-12D	Full featured 11	Similar to 781XAXM4L-24A	>1.0	Interpolated
		781XAXM4L-24D	1PDT 24VDC	Similar to 781XAXM4L-24A	>1.0	Interpolated
		782XBX4M4L-24A	2PDT 24VAC		>1.0	UUT2a,b
		782XBX4M4L-12A	2PDT 12VAC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		782XBX4M4L-120A	2PDT 120VAC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		782XBX4M4L-220/230A	2PDT 220/230VAC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		782XBX4M4L-240A	2PDT 240VAC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		782XBX4M4L-12D	2PDT 12VDC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		782XBX4M4L-24D	2PDT 24VDC	Similar to 782XBX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-24A	3PDT 24VAC		>1.0	UUT4a,b
		783XCX4M4L-12A	3PDT 12VAC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-120A	3PDT 120VAC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-220/230A	3PDT 220/230VAC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-240A	3PDT 240VAC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-12D	3PDT 12VDC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		783XCX4M4L-24D	3PDT 24VDC	Similar to 783XCX4M4L-24A	>1.0	Interpolated
		784DXM4L-24A	4PDT 24VAC		>1.0	UUT4a,b
		784DXM4L-12A	4PDT 12VAC	Similar to 784DXM4L-24A	>1.0	Interpolated
		784DXM4L-120A	4PDT 120VAC	Similar to 784DXM4L-24A	>1.0	Interpolated
		784DXM4L-220/230A	4PDT 220/230VAC	Similar to 784DXM4L-24A	>1.0	Interpolated
		784DXM4L-240A	4PDT 240VAC	Similar to 784DXM4L-24A	>1.0	Interpolated
784DXM4L-12D	4PDT 12VDC	Similar to 784DXM4L-24A	>1.0	Interpolated		
784DXM4L-24D	4PDT 24VDC	Similar to 784DXM4L-24A	>1.0	Interpolated		

Special Seismic Certification
Table 7 - Certified Subcomponents: Switches & Lights



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Panel Light	IDEC	APW299D-R-24	Red		>1.0	UUT2a,b
		APW299D-G-24	Green		>1.0	UUT3a,b and UUT4a,b
		APW299D-A-24	Amber	Similar to APW299D-R-24	>1.0	Interpolated
		APW299D-R-120	Red	Similar to APW299D-R-24	>1.0	Interpolated
		APW299D-G-120	Green	Similar to APW299D-R-24	>1.0	Interpolated
		APW299D-A-120	Amber	Similar to APW299D-R-24	>1.0	Interpolated
		APW299-R-24	Red	Similar to APW299D-R-24	>1.0	Interpolated
		APW299-G-24	Green	Similar to APW299D-R-24	>1.0	Interpolated
		APW299-A-24	Amber	Similar to APW299D-R-24	>1.0	Interpolated
Switch	IDEC	ASW2K10	2 Position switch w/ key		>1.0	UUT4a,b
		ASW210	2 Position switch		>1.0	Interpolated
		ASW3K20	3 Position switch w/ key		>1.0	UUT2a,b
		ASW320	3 Position switch		>1.0	Interpolated
LCD	Kele	LPI-1C	Panel mount LCD		>1.0	UUT2a,b
Ethernet Switch	B&B Electronics	EIR102-MC	2 Port		>1.0	Extrapolated
		EIR208	8 Port		>1.0	UUT4a,b
		EIR208-MT	8 Port		>1.0	Interpolated
		EIR208-MC	8 Port		>1.0	Interpolated
		EIR208-SC	8 Port		>1.0	Interpolated
		EIR208-ST	8 Port		>1.0	Interpolated
		EIR208-2MT	8 Port		>1.0	Interpolated
		EIR208-2MC	8 Port		>1.0	Interpolated
		EIR208-2SC	8 Port		>1.0	Interpolated
		EIR208-2ST	8 Port		>1.0	Interpolated
		EIR418-2SFP-T	18 Port		5.0	UUT2a,b
		SFP-100FX-M-2KM-T	SFP module - multi-mode/LC		>1.0	UUT2a,b

Special Seismic Certification

Table 8 - Certified Subcomponents: Controllers & Components



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Controller	Honeywell	NPB-2X-RS485	DUAL RS-485 COMM PORT		>1.0	UUT4a,b
		NPB-232	RS-232 Comm Card	Same as NPB-2X-RS485, diff. cable	>1.0	Interpolated
		XF821A	Panel Bus Analog Input Module		1.0	UUT2a,b
		XF823A	Panel Bus Binary Input Module		1.0	UUT2a,b
		XFL821A	LON Bus Analog Input Module		1.0	UUT2a,b
		XFL823A	LON Bus Binary Input Module		1.0	UUT2a,b
		IO-16-H/U	Optional I/O module		>1.0	Interpolated
		IO-34-H/U	Optional I/O module		1.3	Interpolated
		IO-16-REM-H/U	Remote IO-16 Module		1.0	Interpolated
		SIO6042	Optional I/O module		1.0	Interpolated
		SIO4022	Optional I/O module		>1.0	Interpolated
		SIO12000	Optional I/O module		1.0	Interpolated
		W7750A2005/U	Remote I/O Constant Volume AHU		2.2	Interpolated
		W7750B2011/U	Remote I/O Constant Volume AHU		2.2	Interpolated
		W7750C2001/U	Remote I/O Constant Volume AHU		2.2	Interpolated
		W7753A2002/U	Remote I/O Unit Ventilator Controller		2.2	Interpolated
		W7761A2010/U	Excel 10 Remote I/O		1.0	UUT2a,b
		XFR822A	Panel Bus Analog Output Module W/ OR		1.2	UUT2a,b
		XFLR822A	LON Bus Analog Output Module W/ OR		1.2	UUT2a,b
		XFR824A	Panel Bus Relay Module W/ OR		1.2	UUT2a,b
XFLR824A	LON Bus Relay Module W/ OR		1.2	UUT2a,b		
WEB-600	WEB 600		Same as WEB-700, program, connect	1.3	Interpolated	
WEB-700	WEB 700			2.0	UUT4a,b	

Special Seismic Certification
Table 8 - Certified Subcomponents: Controllers & Components (Continued)



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Controller	Honeywell	XCL8010A	EXCEL 800		>1.0	UUT2a,b
		NPB-LON	LON Adapter		>1.0	UUT4a,b
		PUL1012S	Spyder Lon Unitary		>1.0	Extrapolated
		PUL1012S-ILC-US	Spyder Lon Unitary		>1.0	Extrapolated
		PUL4024S	Spyder Lon Unitary		>1.0	UUT4a,b
		PUL4024S-ILC-US	Spyder Lon Unitary		>1.0	Interpolated
		PUL6438S-ILC	Spyder Lon Unitary		1.1	Interpolated
		PUL6438S-ILC-US	Spyder Lon Unitary		1.1	Interpolated
		PUL6438S	Spyder Lon Unitary		1.1	UUT4a,b
		PUB6438SR	Spyder BACnet Unitary	Same as PUL6438S, programming	1.1	Interpolated
		PUB6438SR-ILC	Spyder BACnet Unitary	Same as PUL6438S-ILC, programming	1.1	Interpolated
		PUB6438SR-ILC-US	Spyder BACnet Unitary	Same as PUL6438S-ILC-US, program	1.1	Interpolated
		PUB6438S-ILC	Spyder BACnet Unitary	Same as PUL6438S-ILC, programming	1.1	Interpolated
		PUB6438S-ILC-US	Spyder BACnet Unitary	Same as PUL6438S-ILC-US, program	1.1	Interpolated
		NPM-256	WEB 600 memory expansion	Software for WEB 600	>1.0	Interpolated
		XS821-22	Terminal Socket For AI/AO Modules		>1.0	UUT2a,b
		XS823	Terminal Socket For BI Module		>1.0	UUT2a,b
		XS824-25	Terminal Socket For Relay Modules		>1.0	UUT2a,b
		XS814	Auxiliary Terminal Blocks		>1.0	UUT2a,b
		XS817	3-Relay Cross Connector		>1.0	UUT2a,b
NPB-PWR-H	24V power module	Same as NPB-PWR-UN-H, connection	1.0	Interpolated		
NPB-PWR-UN-H	Universal power module		1.0	UUT4a,b		

Special Seismic Certification

Table 8 - Certified Subcomponents: Controllers & Components (Continued)



DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g, z/h=1.0$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Controller	Tridium	NPB-RS232	RS-232 Comm Card		>1.0	UUT2a,b
		NPB-8000-232	RS-232 Comm Card	Same as NPB-RS232, connections	>1.0	Interpolated
		NPB-2X-485	DUAL RS-485 COMM PORT	Same as NPB-RS232, connections	>1.0	Interpolated
		NPB-8000-2X-485	RS-485 Comm Card	Same as NPB-RS232, connections	>1.0	Interpolated
		NPB-LON	LON Adapter		>1.0	UUT2a,b
		NPB-8000-LON	LON Adapter	Same as NPB-LON, connections	>1.0	Interpolated
		NPB-256	JACE 600 memory expansion		>1.0	UUT2a,b
		NPB-PWR-UN	Universal power module	Same as NPB-PWR, connection	>1.0	Interpolated
		NPB-PWR	24V power module		1.0	UUT2a,b
		J-600	JACE-600		1.3	UUT2a,b
		J-700	JACE-700	Same as J-600, program, connections	2.0	Interpolated
		J-8000	JACE-8000	Same as J-600, program, connections	1.3	Interpolated
		IO-16	Optional I/O module		>1.0	UUT2a,b
		IO-34	Optional I/O module		>1.0	UUT2a,b
T-IO-16-485	Remote IO-16 Module		>1.0	UUT2a,b		

Special Seismic Certification

Table 9 - Certified Subcomponents: Routers, Repeaters, & Terminators



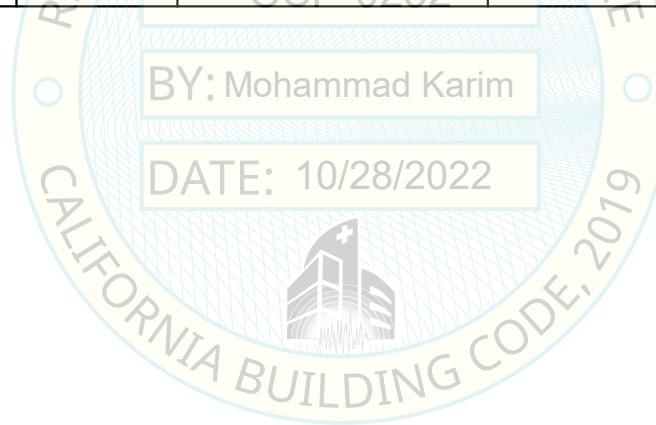
DCL Project Number: 00383-2201

Certified Seismic Level: $S_{DS}=1.93g$, $z/h=1.0$

Component Type	Manufacturer	Model	Description	Notes	Weight (lb)	UUT
Router	Echelon	42100R	LPR Router Module		>1.0	UUT2a,b
		42101R	LPR Router Module	Same as 42100R, programming	>1.0	Interpolated
		42102R	LPR Router Module	Same as 42100R, programming	>1.0	Interpolated
		42103R	LPR Router Module	Same as 42100R, programming	>1.0	Interpolated
		42104R	LPR Router Module	Same as 42100R, programming	>1.0	Interpolated
		42105R	LPR Router Module	Same as 42100R, programming	>1.0	Interpolated

BY: Mohammad Karim

DATE: 10/28/2022



Special Seismic Certification

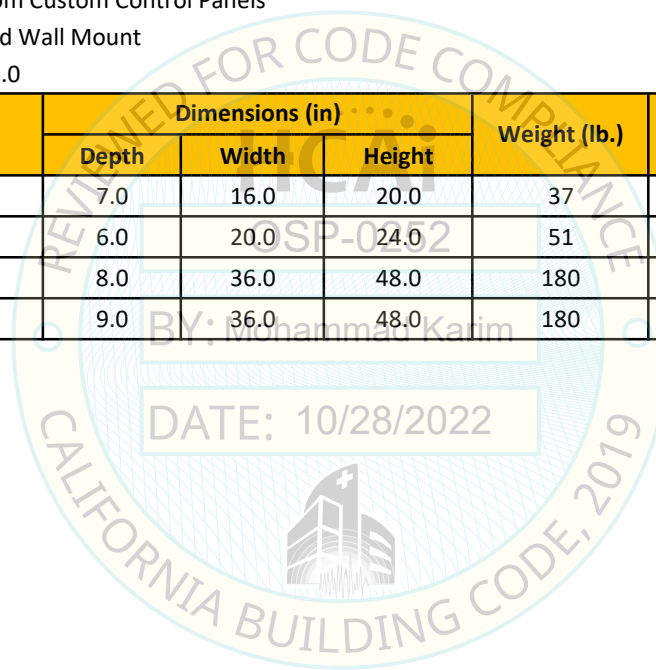
Table 10 - Tested Units



DCL Project Number: 00383-2201

Manufacturer: Climatec
Product Line: Honeywell Custom Custom Control Panels
Mounting Description: Rigid and Isolated Wall Mount
Certified Seismic Level: $S_{D5}=1.93g, z/h=1.0$

Model Line (Manufacturer)	Model	Dimensions (in)			Weight (lb.)	Notes	UUT
		Depth	Width	Height			
Honeywell Custom Control Panels (Climatec)	CHW-1100	7.0	16.0	20.0	37	UUT: A20N16ALP - NEMA 1	UUT1a,b
	HHW-1100	6.0	20.0	24.0	51	UUT: A24H20ALP - NEMA 4/12	UUT3a,b
	PLM-1100	8.0	36.0	48.0	180	UUT: A48H36BLP - NEMA 4/12	UUT4a,b
	AHU-1100	9.0	36.0	48.0	180	UUT: A48N36O9 - NEMA 1	UUT2a,b



UUT1a,b
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 00383-2201

Manufacturer: Climatec Building Technologies Group

Product Line: Honeywell Custom Control Cabinet

Model Number: CHW-1100 (A20N16ALP Enclosure)

Product Construction Summary:

Cabinet is constructed of powder-coated carbon steel, NEMA 1 rating.

Options / Component Summary:

120V power, uninterruptible power supply.

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
37	7	16	20	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.51

Unit Mounting Description:

UUT1a,b was attached to the steel wall frame using (4) 3/8-inch diameter grade 5 bolts, washers, and strut nuts through the manufacturer provided-channels. The steel wall fixture and isolators were attached the shake table interface with M12 threaded rods.



Isolated wall mount



Rigid wall mount

Overall view of UUT1a,b

UUT2a,b
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 00383-2201

Manufacturer: Climatec Building Technologies Group

Product Line: Honeywell Custom Control Panels

Model Number: HHW-1100 (A48N3609 Enclosure)

Product Construction Summary:

Cabinet is constructed of powder-coated carbon steel, NEMA 1 rating.

Options / Component Summary:

120V power, power supply, control transformer, relays, switches, lights, Tridium JACE-600 controller, Honeywell Excel 800 controller, remote IO-16 module, LPR router module and terminators.

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
180	9	36	48	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.51

Unit Mounting Description:

UUT2a,b was attached to the steel wall frame using (4) 3/8-inch diameter grade 5 bolts, washers, and strut nuts through the manufacturer provided-channels. The steel wall fixture and isolators were attached the shake table interface with M12 threaded rods.



Isolated wall mount



Rigid wall mount

Overall view of UUT2a,b

UUT3a,b
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 00383-2201

Manufacturer: Climatec Building Technologies Group

Product Line: Honeywell Custom Control Panels

Model Number: PLM-1100 (A24H20ALP Enclosure)

Product Construction Summary:

Cabinet is constructed of powder-coated carbon steel, NEMA 4/12 rating.

Options / Component Summary:

120V power, power supply, relays, lights, Honeywell Spyder BACnet unitary controller.

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
51	6	20	24	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.51

Unit Mounting Description:

UUT3a,b was attached to the steel wall frame using (4) 3/8-inch diameter grade 5 bolts, washers, and strut nuts through the manufacturer provided-channels. The steel wall fixture and isolators were attached the shake table interface with M12 threaded rods.



Isolated wall mount



Rigid wall mount

Overall view of UUT3a,b

UUT4a,b
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 00383-2201

Manufacturer: Climatec Building Technologies Group

Product Line: Honeywell Custom Control Panels

Model Number: AHU-1100 (A48H36BLP Enclosure)

Product Construction Summary:

Cabinet is constructed of powder-coated carbon steel, NEMA 4/12 rating.

Options / Component Summary:

120V power, power supply, relays, switches, lights, Honeywell Spyder Lon unitary controller, Lon adapter, Web 700 controller.

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
180	8	36	48	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2022	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.51

Unit Mounting Description:

UUT4a,b was attached to the steel wall frame using (4) 3/8-inch diameter grade 5 bolts, washers, and strut nuts through the manufacturer provided-channels. The steel wall fixture and isolators were attached the shake table interface with M12 threaded rods.



Isolated wall mount



Rigid wall mount

Overall view of UUT4a,b