



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0583

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Climatec, LLC

Manufacturer's Technical Representative: Cory Amick

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

Telephone: (949) 474-0955

Email: corya@climatec.com

Product Information

Product Name: HVAC Control Panels and Network Switches

Product Model Number(s): See attached

Product Category: Industrial Control Panels

Product Sub-Category: HVAC Control Panels

General Description: Control panels containing transformer, PCB controllers, relays, and switches. Tripp Lite Wall Rack SRW6U required for some installations; see UUT Sheets and end of OSP for rack reference.

Mounting Description: Units are rigid or flexibly wall mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: DCL Labs, LLC

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg St, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly.laplace@thevmcgroup.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

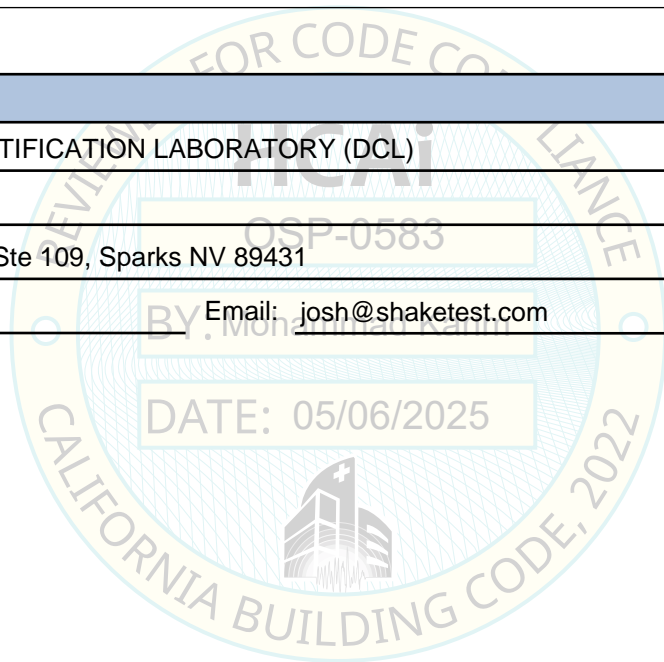
Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)

Contact Person: Josh Sailer

Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431

Telephone: (775) 358-5085

Email: josh@shaketest.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.44 (SDS=2.00, $z/h=1$), 1.13 (SDS=2.50, $z/h=0$)

SDS (Design spectral response acceleration at short period, g) = 2.0 @ $z/h = 1.0$; 2.5 @ $z/h=0$

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

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

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 05/06/2031

Date: 5/6/2025

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.0

$z/h =$ 1

Condition of Approval (if applicable):

Special Seismic Certification

Table 1 - Certified Components



DCL Project Number: 05400-2501

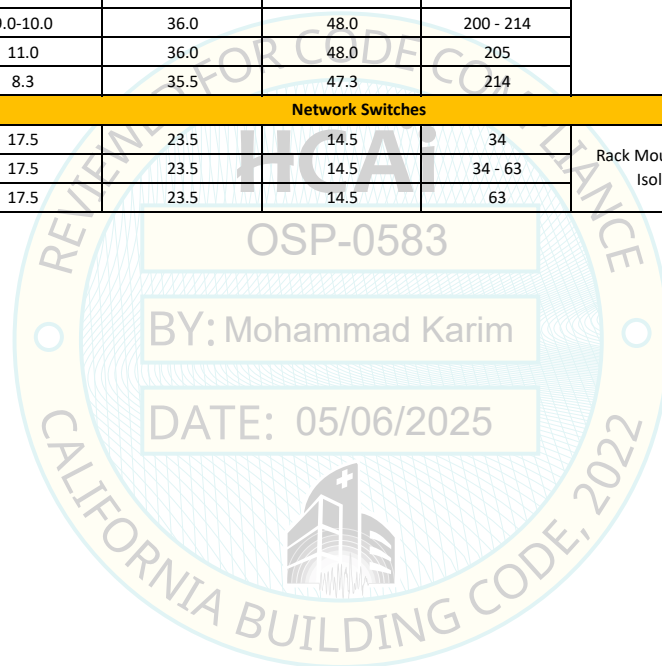
Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Mounting: Rigid or Isolated Wall Mounted

Certified Seismic Levels: Sds 2.0g at z/h=1.0 and Sds 2.5g at z/h=0

Model Number	Dimensions [in.]			Weight [lb.]	Mounting	Unit
	Depth	Width	Height			
Custom Control Panels						
aaa-XXXX	4.0	6.0-12.0	6.0-14.0	<17	Rigid and Isolated Wall	Extrapolated
FCU-1800	4.0	12.0	14.0	17		UUT1a,b
SMK-1100	8.3	23.6	23.6	68		UUT7a,b
aaa-XXXX	4.0-10.0	12.0-24.0	14.0-24.0	17 - 75		Interpolated
HHW-1100	11.0	24.0	24.0	75		UUT3a,b
aaa-XXXX	9.0-10.0	24.0-36.0	24.0-48.0	75 - 130		Interpolated
AHU-1800	9.0	36.0	48.0	200		UUT2a,b
aaa-XXXX	9.0-10.0	36.0	48.0	200 - 214		Interpolated
CHW-1100	11.0	36.0	48.0	205		UUT4a,b
CHW-1200	8.3	35.5	47.3	214		UUT8a,b
Network Switches						
NET-1101	17.5	23.5	14.5	34	Rack Mounted (Rigid and Isolated Wall)	UUT6a,b
NET-xxxx	17.5	23.5	14.5	34 - 63		Interpolated
NET-1100	17.5	23.5	14.5	63		UUT5a,b



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Table 2 - Nomenclature Chart



DCL Project Number: 05400-2501

Certified Seismic Levels: Sds 2.0g at z/h=1.0 and Sds 2.5g at z/h=0

Sample Part Number: aaa-XXXX			
Nomenclature	Allowable Value	Allowable Value Description	UUT
aaa ¹	AHU	Air Handling Unit	UUT2a,b
	CHW	Chilled Water System	UUT4a,b, UU8a,b
	HHW	Heating Hot Water System	UUT3a,b
	FCU	Fan Coil Unit	UUT1a,b
	SMK	Smoke Control Panel	UUT7a,b
	EXH	Exhaust Fan System	Same as UUT1, 2, 3, 4, 7, 8
	ELC	Electrical Systems	Same as UUT1, 2, 3, 4, 7, 8
	PLM	Plumbing Systems	Same as UUT1, 2, 3, 4, 7, 8
	NET	Network Switch	UUT5a,b, UUT6a,b
XXXX	0000-9999	Internally Applied Serial Number	All Interpolated and Tested UUTs

Note:

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



Only

Special Seismic Certification

Table 3 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number ¹	Manufacturer	NEMA Rating	Dimensions			Gauge	Material	Weight [lb.]	Unit
				Height	Width	Depth				
Enclosures	A-6N64 + A6N6P	Hoffman	1, 4	6	6	4	16	Powder coated carbon steel	5	Extrapolated
	A-8N64 + A8N6P		1, 4	8	6	4	16		6	Extrapolated
	A-8N84 + A8N8P		1, 4	8	8	4	16		7	Extrapolated
	A-8N86 + A8N8P		1, 4	8	8	6	16		7	Extrapolated
	A-10N84 + A10N8P		1, 4	10	8	4	16		8	Extrapolated
	A-10N104 + A10N10P		1, 4	10	10	4	16		9	Extrapolated
	A-10N86 + A10N8P		1, 4	10	8	6	16		10	Extrapolated
	A-10N106 + A10N10P		1, 4	10	10	6	16		11	Extrapolated
	A-12N104 + A12N10P		1, 4	12	10	4	16		11	Extrapolated
	A12N106 + A12N10P		1, 4	12	10	6	16		12	Extrapolated
	A-12N124 + A12N12P		1, 4	12	12	4	16		13	Extrapolated
	A-14N124 + A14N12P		1, 4	14	12	4	16		14	UUT1a,b
	A-12N126 + A12N12P		1, 4	12	12	6	16		15	Interpolated
	A-14N126 + A14N12P		1, 4	14	12	6	16		16	Interpolated
	A-12N128 + A12N12P		1, 4	12	12	8	16		17	Interpolated
	A-16N126 + A16N12P		1, 4	16	12	6	16		17	Interpolated
	A-14N128M + A1412P		1, 4	14	12	8	16		18	Interpolated
	A-16H12ALP + A16P12		1, 4	16	12	6	16		21	Interpolated
	A-16H12BLP + A16P12		1, 4	16	12	8	16		24	Interpolated
	A-16H16ALP + A16P16		1, 4	16	16	6	16		29	Interpolated
	A-20H16ALP + A20P16		1, 4	20	16	6	16		32	Interpolated
	A-20H16BLP + A20P16		1, 4	20	16	8	16		35	Interpolated
	A-20H20ALP + A20P20		1, 4	20	20	6	16		37	Interpolated
	A-20H20BLP + A20P20		1, 4	20	20	8	16		41	Interpolated
	A-24H20ALP + A24P20		1, 4	24	20	6	16		45	Interpolated
	A-24H20BLP + A24P20		1, 4	24	20	8	16		52	Interpolated
	A-24H24ALP + A24P24		1, 4	24	24	6	16		53	Interpolated
	A-24H24BLP + A24P24		1, 4	24	24	8	16		57	Interpolated
	A-30H24ALP + A30P24		1, 4	30	24	6	16		73	Interpolated
	A-30H24BLP + A30P24		1, 4	30	24	8	14		77	Interpolated
	A-36H24ALP + A36P24		1, 4	36	24	6	16		83	Interpolated
	A-36H24BLP + A36P24		1, 4	36	24	8	14		89	Interpolated
	A-36H30BLP + A36P30		1, 4	36	30	8	14		110	Interpolated
	A-42H36BLP + A42P36		1, 4	42	36	8	14		156	Interpolated
	A-42H30BLP + A42P30		1, 4	42	30	8	14		160	Interpolated
	A-48H36BLP + A48P36		1, 4	48	36	8	14		185	UUT2a,b

1. Model number includes enclosure and back panel.

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Table 4 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Manufacturer	NEMA Rating	Dimensions			Gauge	Material	Weight [lb.]	Unit
				Height	Width	Depth				
Enclosures	CSD12106 + CP1210	Hoffman	4 & 12	12	10	6	18	Powder coated carbon steel	14	Interpolated
	CSD12126 + CP1212		4 & 12	12	12	6	18		15	Interpolated
	CSD16126 + CP1612		4 & 12	16	12	6	18		19	Interpolated
	CSD161210 + CP1612		4 & 12	16	12	10	16		21	Interpolated
	CSD16128 + CP1612		4 & 12	16	12	8	18		21	Interpolated
	CSD16166 + CP1616		4 & 12	16	16	6	18		24	Interpolated
	CSD16168 + CP1616		4 & 12	16	16	8	18		26	Interpolated
	CSD161610 + CP1616		4 & 12	16	16	10	16		28	Interpolated
	CSD20166 + CP2016		4 & 12	20	16	6	18		30	Interpolated
	CSD20208 + CP2020		4 & 12	20	20	8	18		30	Interpolated
	CSD20168 + CP2016		4 & 12	20	16	8	18		32	Interpolated
	CSD24166 + CP2416		4 & 12	24	16	6	18		34	Interpolated
	CSD20206 + CP2020		4 & 12	20	20	6	18		36	Interpolated
	CSD202010 + CP2020		4 & 12	20	20	10	16		38	Interpolated
	CSD241610 + CP2416		4 & 12	24	16	10	16		39	Interpolated
	CSD162010 + CP1620		4 & 12	16	20	10	16		42	Interpolated
	CSD24206 + CP2420		4 & 12	24	20	6	18		42	Interpolated
	CSD24168 + CP2416		4 & 12	24	16	8	18		44	Interpolated
	CSD242010 + CP2420		4 & 12	24	24	10	16		46	UUT3a,b
	CSD24208 + CP2420		4 & 12	24	20	8	18		47	Interpolated
	CSD24246 + CP2424		4 & 12	24	24	6	16		52	Interpolated
	CSD242410 + CP2424		4 & 12	24	24	10	16		53	Interpolated
	CSD24248 + CP2424		4 & 12	24	24	8	16		53	Interpolated
	CSD302010 + CP3020		4 & 12	30	20	10	16		55	Interpolated
	CSD302410 + CP3024		4 & 12	24	30	10	16		65	Interpolated
	CSD30248 + CP3024		4 & 12	30	24	8	14		67	Interpolated
	CSD36248 + CP3624		4 & 12	36	24	8	16		81	Interpolated
	CSD362410 + CP3624		4 & 12	36	24	10	16		83	Interpolated
	CSD30308 + CP3030		4 & 12	30	30	8	14		89	Interpolated
	CSD303010 + CP3030		4 & 12	30	30	10	14		93	Interpolated
	CSD482410 + CP4824		4 & 12	48	24	10	14		103	Interpolated
	CSD36308 + CP3630		4 & 12	36	30	8	14		109	Interpolated
	CSD363010 + CP3630		4 & 12	36	30	10	14		112	Interpolated
	CSD36368 + CP3636		4 & 12	36	36	8	14		122	Interpolated
	CSD363610 + CP3636		4 & 12	36	36	10	14		126	Interpolated
	CSD423610 + CP4236		4 & 12	42	36	10	14		150	Interpolated
	CSD483610 + CP4836		4 & 12	48	36	10	14		174	UUT4a,b
	SRW6U	Tripp Lite	N/A	15	24	18	14	Powder coated carbon steel	30	UUT5a,b, UUT6a,b
	WM161206NC	Rittal	4 & 12	16	12	6	15	Powder coated carbon steel	19	Interpolated
	WM161606NC		4 & 12	16	16	6	15		19	Interpolated
	WM242006NC		4 & 12	24	20	6	15		21	Interpolated
	WM162006NC		4 & 12	16	20	6	15		27	Interpolated
	WM201606NC		4 & 12	20	16	6	15		31	Interpolated
	WM241606NC		4 & 12	24	16	6	15		35	Interpolated
	WM202006NC		4 & 12	20	20	6	15		36	Interpolated
	WM242408NC		4 & 12	24	24	8	15		50	UUT7a,b
	WM302408NC		4 & 12	30	24	8	15		67	Interpolated
	WM303008NC		4 & 12	30	30	8	15		88	Interpolated
	WM244208NC		4 & 12	24	42	8	12		101	Interpolated
	WM363008NC		4 & 12	36	30	8	12		110	Interpolated
	WM423008NC		4 & 12	42	30	8	12		138	Interpolated
	WM363608NC		4 & 12	36	36	8	12		149	Interpolated
	WM483608NC		4 & 12	48	36	8	12		184	UUT8a,b

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Table 5 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Manufacturer	Material	Interior Mounting	Weight [lb.]	Unit
Controller	VLC-444	Alerton	Plastic	Back Panel	<1	UUT2a,b
	VAV-DD7				<1	Interpolated
	VAV-DD				<1	Interpolated
	VAV-SD				<1	Interpolated
	VAV-SD2A				<1	Interpolated
	VLC-550				<1	Interpolated
	VLC-1600				<1	Interpolated
	VLC-16160				<1	Interpolated
	VLC-16160-S				<1	Interpolated
	VLC-853				<1	UUT1a,b
	VLC-660R				<1	Interpolated
	VLC-651R				<1	Interpolated
	VLC-1188-S				<1	Interpolated
	VLC-1188				<1	UUT2a,b
	BTI-S				<1	Interpolated
	VLC-550-E				<1	Interpolated
	VLC-651R-E				<1	Interpolated
	VLC-660R-E				<1	Interpolated
	VLC-853-E				<1	Interpolated
	VLC-1188-E				<1	Interpolated
	VLC-1600-E				<1	Interpolated
	VLC16160-E				<1	Interpolated
	ALERVIEW-WHT			Cover	<1	UUT4a,b
	ACM			Din Rail	<1	UUT2a,b
	VXIO-322-HOA (WEB-03022H) ¹				<1	UUT4a,b
	ES-EIS8-100T				<1	Interpolated
	VGC-S ¹				<1	UUT7a,b
	VLC-1188-E-S				<1	Interpolated
	VLC-16160-E-S				<1	Interpolated
	VAV-DD7-E-S				<1	Interpolated
	VAV-SD-E-S				<1	Interpolated
	VLC16u8-IP-BLE				1	UUT8a,b
	VLC8u8-IP				1	Interpolated
	VLC8u8-IP-BLE				1	UUT8a,b
	VXIO-965-HOA (WEB-09056H) ¹				1	UUT4a,b
	VLC16u8-IP				1	Interpolated
	VIP-363-HOA (WEB-C3036EPVBNH) ¹				1	UUT4a,b
	VLCA-1688				2	UUT 2a,b
	WEB-EHSERIESNX26ND	Honeywell	Plastic	Din Rail	<1	UUT8a,b
	WEB-C3036EPUBNH				<1	UUT7a,b
	XF821A				<1	UUT8a,b
	XF822A				<1	UUT8a,b
	XF822A				<1	Interpolated
	XSU821-22				<1	Interpolated
	XF823A				<1	Interpolated
	XSU823				<1	Interpolated
	XF824A				<1	Interpolated
	XF824A				<1	UUT8a,b
	XF825A				<1	Interpolated
	XSU824-25				<1	Interpolated
	XFU830A				<1	UUT8a,b
	XS830				<1	Interpolated
	10BASE-T1L-ADAPT				<1	UUT7a,b

1. Alternately branded as Honeywell (second model number listed is Honeywell model number).

Continued on next page

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Table 6 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Manufacturer	Material	Interior Mounting	Weight [lb.]	Unit
Controller	XS831	Honeywell	Plastic	Din Rail	<1	Interpolated
	IO-16DI-S-S				<1	Interpolated
	IO-8DOR-S-S				<1	Interpolated
	IOD-8DOR-S-S				<1	UUT8a,b
	IO-16UI-S-S				<1	Interpolated
	IO-16UIO-S-S				<1	Interpolated
	IOD-16UIO-S-S				<1	UUT8a,b
	HMI-CABLE-L				<1	UUT8a,b
	HMI-CABLE-S				<1	UUT8a,b
	WEB-O9056H				1	UUT7a,b
	WEB-O3022H				1	UUT7a,b
	N-ADV-112-H-C				1	Interpolated
	N-ADV-133-H-C				1	Interpolated
	N-ADV-134-H-C				1	UUT8a,b
	UN-RS0844ES24NMC				1	Interpolated
	UN-RS0844TS24NMC				1	Interpolated
	UN-RS0844MS24NMC				1	UUT8a,b
	UN-RS0844ESB24NMC				1	Interpolated
	UN-RS0844TSB24NMC				1	Interpolated
	UN-RS0844MSB24NMC				1	Interpolated
	UN-RL1644ES24NMC				1	Interpolated
	UN-RL1644TS24NMC				1	Interpolated
	UN-RL1644MS24NMC				1	UUT8a,b
	UN-RL1644ESB24NMC				1	Interpolated
	UN-RL1644TSB24NMC				1	Interpolated
	UN-RL1644MSB24NMC				1	Interpolated
	WEB-HMI7/C	Honeywell	Carbon Steel	Din Rail	2	UUT8a,b
	HMI-WL				<1	Extrapolated
	HMI-DN				<1	UUT8a,b
	JACE-9000	Tridium	Plastic	Din Rail	<1	UUT8a,b
	CDIDI-BOS8USWIFIU	Distech	Plastic	Din Rail	<1	Extrapolated
	PDIDI-NPB82X485U-00				<1	Extrapolated
	PXXDI-COMMSPK				<1	Extrapolated
	PXXDI-IOSPK				<1	Extrapolated
	PXXDI-PWRSPK				<1	Extrapolated
	PXXDI-TRIACSPK				<1	Extrapolated
	PXXDI-INSIK-01				<1	Extrapolated
	PXXDI-DCSIK				<1	Extrapolated
	PDIDI-NPB82X485-00				<1	UUT4a,b
	CDIY-RS485-00				<1	UUT4a,b
	CDIY-NLINT-01				<1	Interpolated
	CDIY-PS100240-00				<1	UUT4a,b
	CDIY-8DOR-00				<1	Interpolated
	CDIY-8DORHOA-00				<1	UUT4a,b
	CDIY-PS24-00				<1	UUT4a,b
	CDIY-S1028-00				<1	Interpolated
	CDIY-S1028ENVY-00				<1	Interpolated
	CDIY-S1028-MS-00				<1	Interpolated
	CDIY-S1028ENVY-MS-00				<1	Interpolated
	CDIY-S1048-00				<1	Interpolated
	CDIY-S1048ENVY-00				<1	Interpolated
	CDIY-S1048-MS-00				<1	Interpolated
	CDIY-S1048ENVY-MS-00				<1	Interpolated

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Special Seismic Certification
Table 7 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Manufacturer	Material	Interior Mounting	Weight [lb.]	Unit
Controller	CDIY-S1048ENVY-MS-00	Distech	Plastic	Din Rail	<1	Interpolated
	CDIY-S1048ENVY-NL-00				<1	Interpolated
	CDIY-S1000-00				<1	UUT4a,b
	CDIY-S1000ENVY-00				<1	Interpolated
	CDIY-8UI-00				<1	Interpolated
	CDIY-4UI4UO-00				<1	Interpolated
	CDIY-4UI4UOHOA-00				<1	Interpolated
	CDIY-8UI6UO-00				<1	Interpolated
	CDIY-8UI6UOHOA-00				<1	Interpolated
	CDIY-8UI6DOT-00				<1	Interpolated
	CDIY-8UI6DOTHOA-00				<1	Interpolated
	CDIY-16DI-00				<1	Interpolated
	CDIY-6UO-00				<1	Interpolated
	CDIY-6UOHOA-00				<1	Interpolated
	CDIB-103X-01				<1	UUT3a,b
	CDIDI-BOS8USWIFI				<1	UUT4a,b
	CDIB-203X-00				<1	UUT4a,b
	CDIB-203E-00				<1	Interpolated
	CDIB-300X-00				<1	Interpolated
	CDIB-203U-00				<1	Interpolated
	CDIB-300U-00				<1	Interpolated
	CDIB-400U-00				1	Interpolated
	CDIB-600U-00				1	Interpolated
	CDIX-400U-00				1	Interpolated
	07CBL-ECLYPSE6HD1590				1	Interpolated
	EIS8-100T				1	Interpolated
	EIS6-100T/FC				1	Interpolated
	CDIB-253X-00				1	Interpolated
	CDIB-350X-00				1	Interpolated
	CDIB-400X-00				1	Interpolated
	CDIB-403X-00				1	Interpolated
	CDIB-410X-00				1	Interpolated
	CDIB-413X-00				1	Interpolated
	CDIB-600X-00				1	Interpolated
	CDIB-610X-00				1	UUT4a,b
	CDIX-400X-00				1	Interpolated
	CDIX-410X-00				1	Interpolated
	CDIX-420X-00				1	Interpolated
	CDIX-400U-00				1	Interpolated
	CDIY-303-IMP-01				1	Interpolated
	CDIY-303M3-IMP-01				1	Interpolated
	CDIB-450X-00				1	Interpolated
	CDIB-453X-00				1	Interpolated
	CDIB-650X-00				1	Interpolated
	CDIY-400X-C1-20				1	UUT8a,b
	CDIY-600X-C1-20				1	UUT8a,b
	CDIY-S1048-C1-20				1	Interpolated
	CDIY-APEX-21				2	Interpolated
	CDIB-VAXU-IMP-10				2	UUT8a,b
	PW-TR100VA002				4	UUT7a,b
	PW-PSB100AB10				5	UUT7a,b

Special Seismic Certification
Table 8 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Manufacturer	Material	Interior Mounting	Weight [lb.]	Unit
Network Switch	NC-ONS-C401i	Optigo	Carbon Steel	Din Rail	1	UUT4a,b
	NC-ONS-C801pi				2	UUT4a,b
	ONS-CR2420GT				3	Interpolated
	NC-ONS-C1601pi			Rack	3	UUT4a,b
	NC-ONS-C810p				4	UUT5a,b
	NC-ONS-C2401p				11	UUT5a,b
	NC-ONS-C4801p				14	UUT5a,b
Optical Switch	NC-ONS-YPS-8	Optigo	Carbon Steel	Din Rail	<1	UUT4a,b
	NC-ONS-YPS-4				<1	Interpolated
	NC-ONS-YPG-1				<1	Interpolated
	NC-ONS-YPG-2				<1	Interpolated
	NC-ONS-YPG-4				<1	Interpolated
	NC-ONS-YPS-16				<1	Interpolated
	NC-ONS-YPD-2				<1	Interpolated
	NC-ONS-YPD-4				<1	Interpolated
	NC-ONS-YPD-8				<1	Interpolated
	NC-ONS-YPG-6				<1	Interpolated
	NC-ONS-YPG-8				<1	Interpolated
	NC-ONS-YRS-8				<1	Interpolated
	NC-ONS-YRS-16				<1	Interpolated
	NC-ONS-YRS-32				<1	Interpolated
	NC-ONS-YPS-2				<1	UUT4a,b
	NC-ONS-YPS-2-A05				<1	Interpolated
	NC-ONS-YPS-2-A10				<1	Interpolated
	NC-ONS-YPS-2-A15				<1	Interpolated
	NC-ONS-YPS-3-A10				<1	Interpolated
	NC-ONS-YPS-2-L				<1	Interpolated
	NC-ONS-YPS-2-A05-L				<1	Interpolated
	NC-ONS-YPS-2-A05-LR				<1	Interpolated
	NC-ONS-YPS-2-A10-L				<1	Interpolated
	NC-ONS-YPS-2-A10-LR				<1	Interpolated
	NC-ONS-YPS-2-A15-L				<1	Interpolated
	NC-ONS-YPS-2-A15-LR				<1	Interpolated
	NC-ONS-YPS-3-A10-L				<1	Interpolated
	NC-ONS-YPS-3-A10-LR				<1	Interpolated
	NC-ONS-YPS-4-L				<1	Interpolated
	NC-ONS-YPS-8-L				<1	Interpolated
	NC-ONS-YPG-1-L				<1	Interpolated
	NC-ONS-YPG-2-L				<1	Interpolated
	NC-ONS-YPG-4-L				<1	Interpolated
	NC-ONS-YPG-6-L				<1	Interpolated
	NC-ONS-YPG-8-L				<1	Interpolated
	NC-ONS-YPS-16-L				<1	Interpolated
	NC-ONS-YRD-8				4	Interpolated
	NC-ONS-YRD-16				4	Interpolated
	NC-ONS-YRD-32				4	Interpolated
Network Controller	NC-ONS-NC-600	Optigo	Carbon Steel	Rack	9	UUT5a,b
	NC-ONS-S8				10	UUT5a,b
Display	Ecx-Display	Distech	Plastic	Cover	<1	UUT3a,b
I/O Expansion Module	AXM-10-12-0	Alerton	Plastic	Din Rail	<1	UUT2a,b
	AXM-10-4-8				<1	Interpolated
	AXM-22-0-0				<1	UUT2a,b
Battery	ACM-BATT	Alerton	Plastic	Din Rail	<1	UUT4a,b

Special Seismic Certification

Table 9 - Certified Subcomponents



DCL Project Number: 05400-2501

Product Line: HVAC Control Panels and Network Switches

Subcomponent Type	Model Number	Description	Manufacturer	Material	Interior Mounting	Weight [lb.]	Unit
Network Gateway	BB3-7101	Modbus to Bacnet Gateway	Babel Buster	Carbon Steel	Din Rail	2	UUT8a,b
Relays	RE-12DC-SPDT	12 VDC Relay	Distech	Plastic	Back Panel	<1	UUT8a,b
	RE-RT78724	12 VDC Relay				<1	UUT8a,b
	RE-PTML0024	LED Module				<1	UUT8a,b
	VMD1B-F24A	24VAC SPDT Relay	Veris			<1	UUT1a,b
	VMD2B-F24A	24VAC DPDT Relay				<1	Interpolated
	RIBMN24S	Smoke Relay				<1	UUT4a,b
	VMD3B-F24A	24VAC 3PDT Relay				1	UUT2a,b
	VMD4B-C24A	24VAC 4PDT Relay				1	UUT2a,b
Router	BASRT-B	BACnet 5 BBMD Capacity	Contemporary Controls	Carbon Steel	Din Rail	<1	Extapolated ²
	BASRTLX-B	BACnet 50 BBMD Capacity				<1	UUT2a,b
Ethernet Switch	1085254	10/100/1000 Mbps 5 Port	Phoenix Contact	Plastic	Din Rail	<1	Extrapolated
	1085243	0/100/1000 Mbps 8 Port				<1	UUT8a,b
	EISK5-GT/H	5 Port Ethernet Switch Gigabit	Contemporary Controls	Carbon Steel	Din Rail	1	Interpolated ³
	EIGR-C3	4 Port Cellular IP Router				1	Interpolated ³
	EISK8-GT/H	8 Port Ethernet Switch Gigabit				1	UUT2a,b
Cellular Router	TB600PAC1	Power Cable	Tosibox	Copper, Plastic	N/A	<1	UUT8a,b
	TB4GM2-3M	Tosibox Antenna Kit		Carbon Steel	Din Rail	<1	UUT8a,b
	TBL670US	Tosibox Lock 670 (90 Mb/s) Ethernet, Cellular				1	UUT8a,b
Fiber	EISK8M-100T/FCS	6 Port 10 / 100Mbps / 2 port 100 Mbps MM SC-Fiber	Contemporary Controls	Carbon Steel	Din Rail	1	UUT2a,b
DC Power Supply	PS5R-VB05	120V/24VDC 10 W Slim Style	IDEC	Plastic	Din Rail	<1	UUT2a,b
	PS5R-VB24	120V/24VDC 15 W Slim Style				<1	Interpolated
	PS5R-VC24	120V/24VDC 30 W Slim Style				<1	UUT2a,b
	PS5R-VD24	120V/24VDC 60 W Slim Style				<1	UUT4a,b
AC Power Supply	NC-ACC-PS-24V10W	Power Supply	Optigo	Carbon Steel	Din Rail	<1	UUT4a,b
	NC-ACC-PS-48V300W				2	UUT4a,b	
	X050COB	120/208/240/277/480 ¹	Veris	Copper Winding	Back Panel	3	UUT1a,b
	X100CBB	120/208/240/277/480 ¹				4	UUT2a,b
	PSH100AB10	120VAC to 24VAC Power Supply w/Receptacle	Functional Devices	Carbon Steel	Back Panel	5	Interpolated ³
	PSH100A100AB10	120VAC to 24VAC Dual Power Supply				9	UUT2a,b
Surge Protector	DTK-120HW	19.5KA	DITEK	Plastic	Din Rail	<1	UUT2a,b
	DTK-120SRD	54KA				<1	UUT2a,b
Pressure Transmitter	PX3ULX05	Differential Pressure Transmitter	Veris	Plastic	Back Panel	<1	UUT4a,b
	2671-001WD-11-A1-FD		Setra	Plastic	Back Panel	<1	UUT2a,b
UPS	BAS34U24V	Uninterruptable Power Supply	CyberPower	Plastic	Din Rail	3	UUT3a,b
	SDU500B		SOLA	Carbon Steel	Back Panel	11	UUT8a,b
	SDU500					11	UUT2a,b
	SUA500PDR-S					APC	28
Cooling Fan	HF0424414	Side-Mount Filter Fans	Hoffman	Plastic	Side Panel	1	UUT3a,b
	HF0924414					2	UUT4a,b
Static Switch	AFS-460	Manual Reset Static Switch	Cleveland Controls	Carbon Steel	Back Panel	1	UUT2a,b
Circuit Breaker	UMBW-1B1-2	1POLE 2AMP	WEG Ind	Plastic	Din Rail	1	UUT2a,b
Plug	SYS1357-2412	AC adapter for 1214E Eth. Extender	Patton	Carbon Steel	Back Panel	2	UUT2a,b

1. Transformer does not change based on input voltage, different input taps are used.

2. Same as tested in UUT2a,b (software change only).

3. Depopulated version of item tested in UUT2a,b.

Special Seismic Certification

Table 10 - Tested Units



DCL Project Number: 05400-2501

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

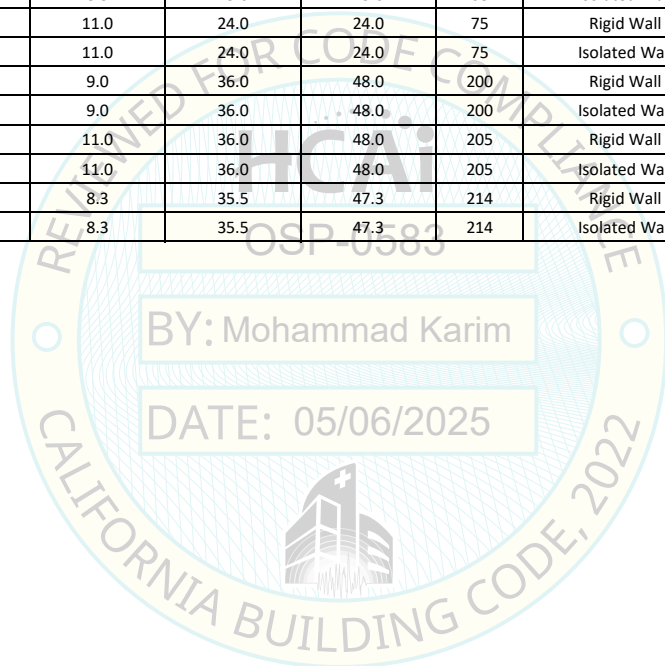
Mounting: Rigid or Flexibly Wall Mounted

Certified Seismic Levels: Sds 2.0g at z/h=1.0 and Sds 2.5g at z/h=0

Model Number	Nema Rating	Dimensions [in.]			Weight [lb.]	Mounting	DCL Test Report Number	Unit
		Length	Width	Height				
FCU-1800	1	4.0	12.0	14.0	17	Rigid Wall	05416-1801	UUT1a
FCU-1800	1	4.0	12.0	14.0	17	Isolated Wall	05416-1801	UUT1b
NET-1101	N/A	17.5	23.5	14.5	34	Rigid Wall (Rack)	00211-2001	UUT6a
NET-1101	N/A	17.5	23.5	14.5	34	Isolated Wall (Rack)	00211-2001	UUT6b
NET-1100	N/A	17.5	23.5	14.5	63	Rigid Wall (Rack)	00211-2001	UUT5a
NET-1100	N/A	17.5	23.5	14.5	63	Isolated Wall (Rack)	00211-2001	UUT5b
SMK-1100	4 & 12	8.3	23.6	23.6	68	Rigid Wall	05400-2501	UUT7a
SMK-1100	4 & 12	8.3	23.6	23.6	68	Isolated Wall	05400-2501	UUT7b
HHW-1100	4 & 12	11.0	24.0	24.0	75	Rigid Wall	00211-2001	UUT3a
HHW-1100	4 & 12	11.0	24.0	24.0	75	Isolated Wall	00211-2001	UUT3b
AHU-1800	4	9.0	36.0	48.0	200	Rigid Wall	05416-1801	UUT2a
AHU-1800	4	9.0	36.0	48.0	200	Isolated Wall	05416-1801	UUT2b
CHW-1100	4 & 12	11.0	36.0	48.0	205	Rigid Wall	00211-2001	UUT4a
CHW-1100	4 & 12	11.0	36.0	48.0	205	Isolated Wall	00211-2001	UUT4b
CHW-1200	4 & 12	8.3	35.5	47.3	214	Rigid Wall	05400-2501	UUT8a
CHW-1200	4 & 12	8.3	35.5	47.3	214	Isolated Wall	05400-2501	UUT8b

BY: Mohammad Karim

DATE: 05/06/2025



UNIT UNDER TEST (UUT) Summary Sheet



UUT1a

DCL Repot Number: 05416-1801

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: FCU-1800

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 1

Options / Component Summary:

Controller, relay

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
17	4.0	12.0	14.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT1a was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The unit was mounted with (4) 1/4" Grade 5 bolts with a washer and a 3" x 3" x 3/16" low carbon steel plate washer spaced 11" on center in the horizontal direction and 11" on center in the vertical direction.



Overall view of UUT1a

UNIT UNDER TEST (UUT) Summary Sheet



UUT1b

DCL Repot Number: 05416-1801

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: FCU-1800

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 1

Options / Component Summary:

Controller, relay

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
17	4.0	12.0	14.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount: UUT 1b was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The unit was mounted to the wall fixture with (4) 1/4" Grade 5 bolts with a washer and a 3" x 3" x 3/16" low carbon steel plate washer spaced 11" on center in the horizontal direction and 11" on center in the vertical direction.



Overall view of UUT1b

UNIT UNDER TEST (UUT) Summary Sheet



UUT6a

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: NET-1101

Product Construction Summary: Powder coated carbon steel panel

Options / Component Summary:

Network switch, network controller

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
34	17.5	23.5	14.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount (rack mounted in SRW6U Tripp Lite enclosure): UUT 6a rack was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The rack was mounted to the wall fixture with (4) 5/16" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 21.5" on center in the horizontal direction and 10.8" on center in the vertical direction.



Overall view of UUT6a

UNIT UNDER TEST (UUT) Summary Sheet



UUT6b

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: NET-1101

Product Construction Summary: Powder coated carbon steel panel

Options / Component Summary:

Network switch, network controller

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
34	17.5	23.5	14.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount (rack mounted in SRW6U Tripp Lite enclosure); UUT 6b rack was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The rack was mounted to the wall fixture (4) 5/16" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 21.5" on center in the horizontal direction and 10.8" on center in the vertical direction.



05/06/2025



Overall view of UUT6b

UNIT UNDER TEST (UUT) Summary Sheet



UUT5a

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: NET-1100

Product Construction Summary: Powder coated carbon steel panel

Options / Component Summary:

Network switches, network controllers

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
63	17.5	23.5	14.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount (rack mounted in SRW6U Tripp Lite enclosure): UUT 5a rack was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The rack was mounted to the wall fixture with (4) 5/16" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 21.5" on center in the horizontal direction and 10.8" on center in the vertical direction.



Overall view of UUT5a

UNIT UNDER TEST (UUT) Summary Sheet



UUT5b

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: NET-1100

Product Construction Summary: Powder coated carbon steel panel

Options / Component Summary:

Network switches, network controllers

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
63	17.5	23.5	14.5	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount (rack mounted in SRW6U Tripp Lite enclosure): UUT 5b rack was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The rack was mounted to the wall fixture (4) 5/16" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 21.5" on center in the horizontal direction and 10.8" on center in the vertical direction.



Overall view of UUT5b

UNIT UNDER TEST (UUT) Summary Sheet



UUT7a

DCL Repot Number: 05400-2501

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: SMK-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers

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

UUT Properties

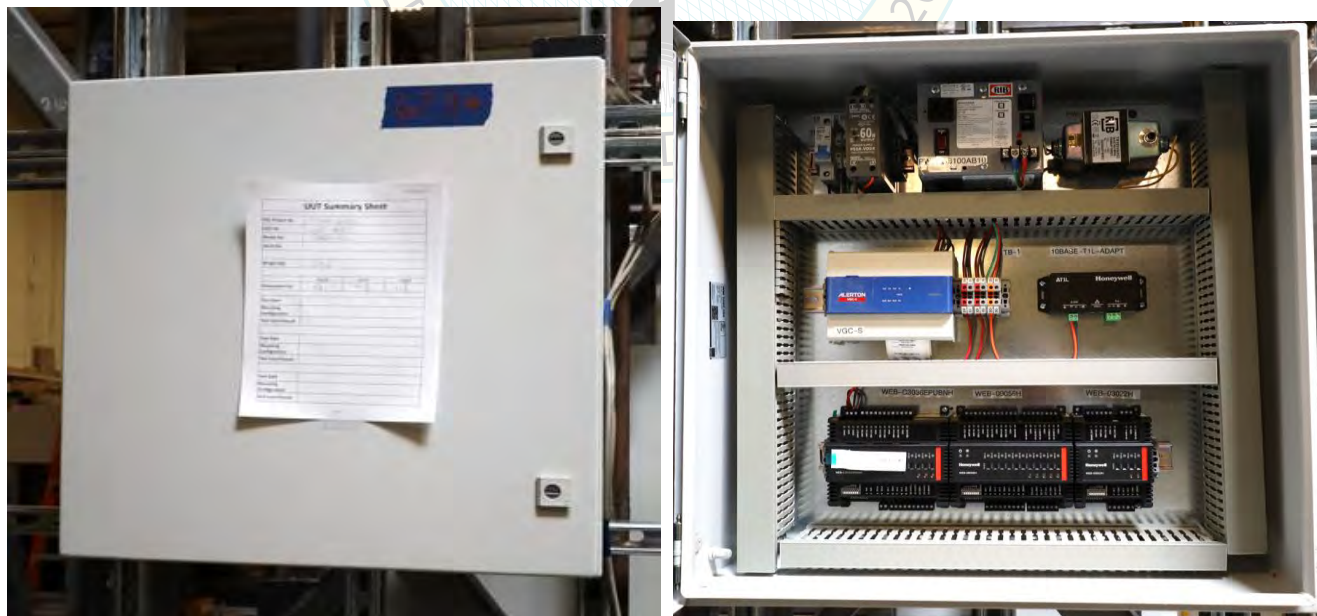
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
68	8.3	23.6	23.6	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT7a was wall mounted to the DCL wall fixture using (4) 3/8" Grade 5 bolts, flat washers, 1 5/8 x 1 5/8 x 1/4" carbon steel plate washers and channel nuts. The bolts were spaced approximately 22" apart in x and z-directions measured on-center. The wall fixture was rigidly mounted to the shake table.

DATE: 05/06/2025



Overall view of UUT7a

UNIT UNDER TEST (UUT) Summary Sheet



UUT7b

DCL Repot Number: 05400-2501

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: SMK-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
68	8.3	23.6	23.6	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Isolated wall mount: UUT7b was wall mounted to the DCL wall fixture using (4) 3/8" Grade 5 bolts, flat washers, 1 5/8 x 1 5/8 x 1/4" carbon steel plate washers and channel nuts. The bolts were spaced approximately 22" apart in x and z-directions measured on-center. The wall fixture was mounted to the shake table using (4) VMC MSSH-1E-650 spring isolators.



Overall view of UUT7b

UNIT UNDER TEST (UUT) Summary Sheet



UUT3a

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: HHW-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controller, display, UPS, cooling fan

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
75	11.0	24.0	24.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT 3a was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The unit was mounted to the wall fixture with (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 22.5" on center in the horizontal direction and 22.5" on center in the vertical direction.

DATE: 05/06/2025



Overall view of UUT3a

UNIT UNDER TEST (UUT) Summary Sheet



UUT3b

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: HHW-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controller, display, UPS, cooling fan

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
75	11.0	24.0	24.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount: UUT 3b was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The unit was mounted to the wall fixture (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 22.5" on center in the horizontal direction and 22.5" on center in the vertical direction.



Overall view of UUT3b

UNIT UNDER TEST (UUT) Summary Sheet



UUT2a

DCL Repot Number: 05416-1801

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: AHU-1800

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4

Options / Component Summary:

Controller, relay, I/O expansion modules, relays, router, ethernet switch, fiber, power supplies, surge protectors, pressure transmitter, UPS, static switch, circuit breaker, plug

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
200	9.0	36.0	48.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT 2a was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The unit was mounted to the wall fixture with (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 3/16" low carbon steel plate washer spaced 30" on center in the horizontal direction and 49.5" on center in the vertical direction.



Overall view of UUT2a

UNIT UNDER TEST (UUT) Summary Sheet



UUT2b

DCL Repot Number: 05416-1801

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: AHU-1800

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4

Options / Component Summary:

Controller, relay, I/O expansion modules, relays, router, ethernet switch, fiber, power supplies, surge protectors, pressure transmitter, UPS, static switch, circuit breaker, plug

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
200	9.0	36.0	48.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount: UUT 2b was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The unit was mounted to the wall fixture (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 3/16" low carbon steel plate washer spaced 30" on center in the horizontal direction and 49.5" on center in the vertical direction.



Overall view of UUT2b

UNIT UNDER TEST (UUT) Summary Sheet



UUT4a

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: CHW-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers, network switches, optical switches, battery, relay, power supplies, pressure transmitter, cooling fan

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
205	11.0	36.0	48.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT 4a was mounted to the wall fixture, and the wall fixture was rigidly mounted to the shake table. The unit was mounted to the wall fixture with (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 34.5" on center in the horizontal direction and 46" on center in the vertical direction.



Overall view of UUT4a

UNIT UNDER TEST (UUT) Summary Sheet



UUT4b

DCL Repot Number: 00211-2001

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: CHW-1100

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers, network switches, optical switches, battery, relay, power supplies, pressure transmitter, cooling fan

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

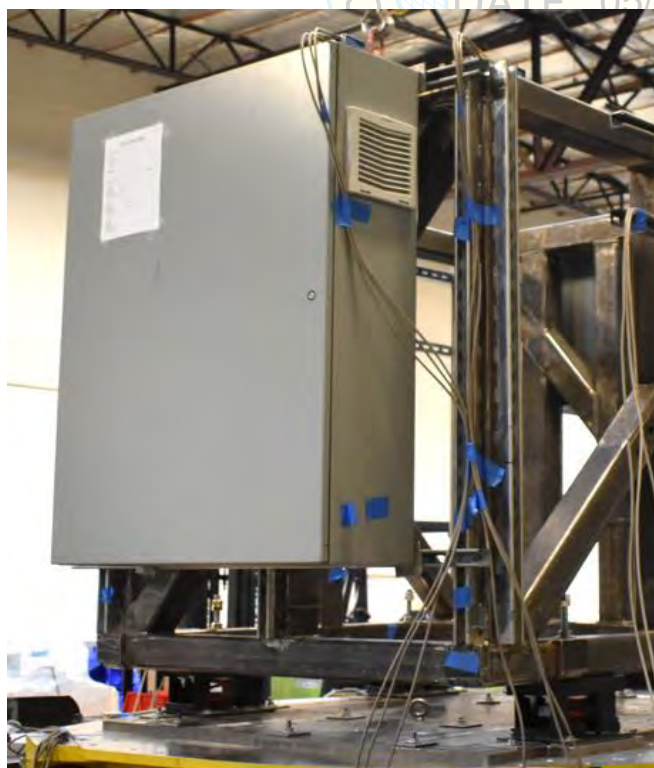
UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
205	11.0	36.0	48.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Flexible wall mount: UUT 4b was mounted to the wall fixture, and the wall fixture was mounted atop VMC Group isolators (model number: MSSH-1E-1700N) mounted to the DCL shake table. The unit was mounted to the wall fixture (4) 3/8" Grade 5 bolts with a washer and a 3" x 3" x 1/4" low carbon steel plate washer spaced 34.5" on center in the horizontal direction and 46" on center in the vertical direction.



Overall view of UUT4b

UNIT UNDER TEST (UUT) Summary Sheet



UUT8a

DCL Repot Number: 05400-2501

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: CHW-1200

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers, network gateway, relays, ethernet switch, cellular router, UPS

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
214	8.3	35.5	47.3	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Rigid wall mount: UUT8a was wall mounted to the DCL wall fixture using (4) 3/8" Grade 5 bolts, flat washers, 1 5/8 x 1 5/8 x 1/4" carbon steel plate washers and channel nuts. The bolts were spaced approximately 33 3/4" apart in x-direction and 45 3/4" apart in z-direction measured on-center. The wall fixture was rigidly mounted to the shake table.



Overall view of UUT8a

UNIT UNDER TEST (UUT) Summary Sheet



UUT8b

DCL Repot Number: 05400-2501

Manufacturer: Climatec

Product Line: HVAC Control Panels and Network Switches

Model Number: CHW-1200

Product Construction Summary: Powder coated carbon steel panel, NEMA rating 4 & 12

Options / Component Summary:

Controllers, network gateway, relays, ethernet switch, cellular router, UPS

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

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
214	8.3	35.5	47.3	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.00		N/A	N/A	1.67	0.67

Unit Mounting Description: Isolated wall mount: UUT8b was wall mounted to the DCL wall fixture using (4) 3/8" Grade 5 bolts, flat washers, 1 5/8 x 1 5/8 x 1/4" carbon steel plate washers and channel nuts. The bolts were spaced approximately 33 3/4" apart in x-direction and 45 3/4" apart in z-direction measured on-center. The wall fixture was mounted to the shake table using (4) VMC MSSH-1E-650 spring isolators.



Overall view of UUT8b