



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-0633

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Sunbelt Controls

Manufacturer's Technical Representative: Greg Clemente

Mailing Address: 5700 Stoneridge Dr., Suite 250, Pleasanton, CA 94588

Telephone: (925) 660-3898

Email: gclemente@sunbeltcontrols.com

Product Information

Product Name: Temperature Control Panels

Product Model Number(s): See Attachment

Product Category: Industrial Control Panels

Product Sub-Category: HVAC Control Panels

General Description: Temperature control panels containing controllers and network equipment for the management of HVAC systems.

Mounting Description: Any Vertical Surface Mounted Rigid (tested wall mounted both rigid and flexible)

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Manwill Engineering LLC

Contact Person: Derek Manwill

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102

Email: derek@manwillSE.com

Title: President



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

Company Name: MANWILL ENGINEERING LLC

Name: Derek Manwill

California License Number: S6266

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102

Email: derek@manwillse.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657

Email: jeremy@etldallas.com

BY: Timothy J. Piland

DATE: 09/16/2025



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Seismic Parameters

Certified Response Spectral Acceleration Factors: (F_p/W_p)

Horizontal (A Flx-H), $g =$ 3.20 (A Rig-H), $g =$ 2.40

Vertical (A Flx-V), $g =$ 1.68 (A Rig-V), $g =$ 0.68

S_{DS} (Design spectral response acceleration at short period, g) = 2.00 ($z/h = 1$); 2.50 ($z/h = 0$)

H_f (Force amplification height factor) = 1 @ $z/h = 0$; 3.5 @ $z/h = 1$

R_u (Structure ductility reduction factor) = 1 @ $z/h = 0$; 1.3 @ $z/h = 1$

I_p (Importance factor) = 1.5

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

HCAI Approval (For Office Use Only) - Approval Expires on 09/16/2031

Date: 9/16/2025

Name: Timothy Piland

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

OSP-0633

BY: Timothy J. Piland

DATE: 09/16/2025

SUNBELT CONTROLS Temperature Control Panels

TABLE 1

Mounting: Any Vertical Surface Mounted Rigid (tested wall mounted both rigid and flexible).	S _{DS} (g)	H _f / R _μ	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}	I _p
	2.00	3.5 / 1.3	3.20	2.40	1.68	0.68	1.5
	2.50	1.0 / 1.0					

Product Construction: Carbon steel enclosure.

Options/Subcomponents: NEMA 1, NEMA 3R, or NEMA 4 enclosures as listed in Table 2. Enclosures may contain any combination of subcomponents listed in Table 3 to create a complete control panel. The total weight of the complete control panel must be less than or equal to the maximum weights listed for the selected enclosure in Table 2.

Substitutions: Subcomponents weighing less than 10-lb may be substituted per CBC 1705A.14.3.1 Exception 7, provided they meet the five listed requirements in that section.

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Temperature Control Panels (custom)						
CUSTOM-6X6X4	4.0	6.0	6.0	5	Extrapolated sizes	EXTRAP
...						EXTRAP
CUSTOM-30X36X12	12.0	30.0	36.0	130	Interpolated sizes	UUT 3
...						INTERP
CUSTOM-30X42X12	12.0	30.0	42.0	162	Interpolated sizes	UUT 2
...						INTERP
CUSTOM-36X48X8	8.0	36.0	48.0	213		UUT 1

End of TABLE 1. Notes, information, and seismic parameters are shown at the beginning of the table.

SUNBELT CONTROLS
Temperature Control Panels

TABLE 2 - ENCLOSURES & SUBPANELS

Mounting: Any Vertical Surface Mounted Rigid (tested wall mounted both rigid and flexible).	S _{DS} (g)	H _f / R _μ	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}	I _p
	2.00	3.5 / 1.3	3.20	2.40	1.68	0.68	1.5
	2.50	1.0 / 1.0					

Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents. All panels were tested with matching subpanels.

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Enclosures with Subpanels - Mfr: Saginaw - Material: Carbon Steel						
SCE-6N604LP	4.0	6.0	6.0	5	NEMA 1	EXTRAP
SCE-8N604LP	4.0	6.0	8.0	6	NEMA 1	EXTRAP
SCE-8N804LP	4.0	8.0	8.0	8	NEMA 1	EXTRAP
SCE-8N806LP	6.0	8.0	8.0	8	NEMA 1	EXTRAP
SCE-10N804LP	4.0	8.0	10.0	10	NEMA 1	EXTRAP
SCE-10N1004LP	4.0	10.0	10.0	12	NEMA 1	EXTRAP
SCE-12N1004LP	4.0	10.0	12.0	15	NEMA 1	EXTRAP
SCE-10N1006LP	6.0	10.0	10.0	12	NEMA 1	EXTRAP
SCE-10N806LP	6.0	12.0	10.0	15	NEMA 1	EXTRAP
SCE-12N1006LP	6.0	10.0	12.0	15	NEMA 1	EXTRAP
SCE-12N1206LP	6.0	12.0	12.0	18	NEMA 1	EXTRAP
SCE-12N1204LP	4.0	12.0	12.0	18	NEMA 1	EXTRAP
SCE-12N1208LP	8.0	12.0	12.0	18	NEMA 1	EXTRAP
SCE-14N1206LP	6.0	12.0	14.0	21	NEMA 1	EXTRAP
SCE-14N1204LP	4.0	12.0	14.0	21	NEMA 1	EXTRAP
SCE-14N1208LP	8.0	12.0	14.0	21	NEMA 1	EXTRAP
SCE-16N1206LP	6.0	12.0	16.0	24	NEMA 1	EXTRAP
SCE-16R1206LP	6.0	12.0	16.0	24	NEMA 3R	EXTRAP
SCE-16N1208LP	8.0	12.0	16.0	24	NEMA 1	EXTRAP
SCE-16N1606LP	6.0	16.0	16.0	32	NEMA 1	EXTRAP
SCE-16N1608LP	8.0	16.0	16.0	32	NEMA 1	EXTRAP
SCE-20N1606LP	6.0	16.0	20.0	39	NEMA 1	EXTRAP
SCE-20R1606LP	6.0	16.0	20.0	39	NEMA 3R	EXTRAP
SCE-24N1606LP	6.0	16.0	24.0	47	NEMA 1	EXTRAP
SCE-20N2008LP	8.0	20.0	20.0	49	NEMA 1	EXTRAP
SCE-20N2006LP	6.0	20.0	20.0	49	NEMA 1	EXTRAP
SCE-20N2010LP	10.0	20.0	20.0	49	NEMA 1	EXTRAP
SCE-20EL2006LP	6.0	20.0	20.0	49	NEMA 4	EXTRAP
SCE-24N2006LP	6.0	20.0	24.0	59	NEMA 1	EXTRAP
SCE-24N2008LP	8.0	20.0	24.0	59	NEMA 1	EXTRAP
SCE-24N2010LP	10.0	20.0	24.0	59	NEMA 1	EXTRAP
SCE-24R2006LP	6.0	20.0	24.0	59	NEMA 3R	EXTRAP
SCE-24R2012LP	12.0	20.0	24.0	59	NEMA 3R	EXTRAP
SCE-24N2406LP	6.0	24.0	24.0	71	NEMA 1	EXTRAP
SCE-24EL2406LP	6.0	24.0	24.0	71	NEMA 4	EXTRAP
SCE-24N2408LP	8.0	24.0	24.0	71	NEMA 1	EXTRAP
SCE-24N2412LP	12.0	24.0	24.0	71	NEMA 1	EXTRAP
SCE-24R2408LP	8.0	24.0	24.0	71	NEMA 3R	EXTRAP

TABLE 2 - ENCLOSURES & SUBPANELS continues on the next page.

SUNBELT CONTROLS
Temperature Control Panels

TABLE 2 - ENCLOSURES & SUBPANELS (CONTINUED)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Enclosures with Subpanels - Mfr: Saginaw - Material: Carbon Steel (continued)						
SCE-30EL2406LP	6.0	24.0	30.0	89	NEMA 4	EXTRAP
SCE-30N2406LP	6.0	24.0	30.0	89	NEMA 1	EXTRAP
SCE-30N2408LP	8.0	24.0	30.0	89	NEMA 1	EXTRAP
SCE-30R2408LP	8.0	24.0	30.0	89	NEMA 3R	EXTRAP
SCE-30N2412LP	12.0	24.0	30.0	89	NEMA 1	EXTRAP
SCE-30N3008LP	8.0	30.0	30.0	111	NEMA 1	EXTRAP
SCE-36N2406LP	6.0	24.0	36.0	107	NEMA 1	EXTRAP
SCE-36N2408LP	8.0	24.0	36.0	107	NEMA 1	EXTRAP
SCE-36R2408LP	8.0	24.0	36.0	107	NEMA 3R	EXTRAP
SCE-36N2412LP	12.0	24.0	36.0	107	NEMA 1	EXTRAP
SCE-36N3006LP	6.0	30.0	36.0	130	NEMA 1	EXTRAP
SCE-36N3008LP	8.0	30.0	36.0	130	NEMA 1	EXTRAP
SCE-36R3008LP	8.0	30.0	36.0	130	NEMA 3R	EXTRAP
SCE-36EL3008LP	8.0	30.0	36.0	130	NEMA 4	EXTRAP
SCE-36N3012LP	12.0	30.0	36.0	130	NEMA 1	UUT 3
SCE-42EL3008LP	8.0	30.0	42.0	162	NEMA 4	INTERP
SCE-42R3012LP	12.0	30.0	42.0	162	NEMA 3R	UUT 2
SCE-42EL3608LP	8.0	36.0	42.0	186	NEMA 4	INTERP
SCE-48EL3608LP	8.0	36.0	48.0	213	NEMA 4	UUT 1

End of TABLE 2 - ENCLOSURES & SUBPANELS. Notes, information, and seismic parameters are shown at the beginning of the table.

SUNBELT CONTROLS
Temperature Control Panels

TABLE 3 - ELECTRICAL SUBCOMPONENTS

Mounting: Mounted within enclosure to subpanel or DIN rail.	S _{DS} (g)	H _f / R _μ	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}	I _p
	2.00	3.5 / 1.3	3.20	2.40	1.68	0.68	1.5
	2.50	1.0 / 1.0					

Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.

Substitutions: Subcomponents weighing less than 10-lb may be substituted per CBC 1705A.14.3.1 Exception 7, provided they meet the five listed requirements in that section.

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: OptiFlex Controllers, Routers, Integrators, Expanders - Mfr: Automated Logic						
OF022-E2	2.0	5.5	4.4	0.8	Advanced Application Controller	EXTRAP
OFCSR-E2	2.0	5.5	4.4	0.8	Segment Router	EXTRAP
OFISO-E2	2.0	5.5	4.4	0.8	Network Isolator	EXTRAP
OFINT-E2	2.0	5.5	4.4	0.8	Integration Router	EXTRAP
OFBBC-NR	2.1	7.1	7.0	1.0	BACnet Building Controller	EXTRAP
OFBBC-A	2.1	7.1	7.0	1.0	BACnet Building Controller/Router	EXTRAP
OFBBC	2.1	7.1	7.0	1.0	BACnet Building Controller/Router	UUT 3
OFX48	2.1	6.9	7.0	1.1	Equipment Expander	INTERP
FIO012u	2.1	6.9	7.0	1.1	I/O Expander	UUT 3
FIO48U	2.1	6.9	7.0	1.1	I/O Expander	INTERP
FIO88U	2.1	6.9	7.0	1.1	I/O Expander	INTERP
FIO812U	2.1	6.9	7.0	1.1	I/O Expander	UUT 3
G5RE	2.1	7.1	7.0	1.1	BACnet/SC Router	UUT 2
G5CE	2.1	7.1	7.0	1.1	BACnet Integrator	INTERP
OFHI-A	2.1	6.9	7.0	1.1	Integrator	INTERP
OFHI	2.1	7.1	7.0	1.1	Integrator	UUT 2
OF683T-E2	2.0	7.8	5.9	1.2	Advanced Equipment Controller	INTERP
OF683XT-E2	2.0	7.8	5.9	1.2	Advanced Equipment Controller	INTERP
OF561-E2	2.0	7.8	4.9	1.6	Advanced Application Controller	INTERP
OF683-E2	2.0	7.8	4.9	1.6	Advanced Application Controller	INTERP
OF253T-E2	2.0	7.8	4.9	1.6	Advanced Equipment Controller	INTERP
OF561T-E2	2.0	7.8	4.9	1.6	Advanced Equipment Controller	INTERP
OF028-NR-A	2.1	7.0	12.8	2.7	BACnet/ARCnet Building Controller	INTERP
OF028-NR	2.1	7.0	12.8	2.7	BACnet Building Controller	INTERP
OF1628-A	2.1	7.0	12.8	2.7	BAC/ARC Building Controller/Router	INTERP
OF1628-NR-A	2.1	7.0	12.8	2.7	BACnet/ARCnet Building Controller	INTERP
OF1628-NR	2.1	7.0	12.8	2.7	BACnet Building Controller	INTERP
OF1628	2.1	7.0	12.8	2.7	BAC/ARC Building Controller/Router	UUT 3
Type: Controllers, Routers, & Integration - Mfr: Automated Logic - Material: Plastic						
AMR	1.8	4.0	5.0	0.4	AMR	UUT 1
EQ-PRTL	1.8	4.0	5.0	0.4	Equipment Portal	UUT 1
SE563sp	1.6	5.1	5.6	0.4	Single Equipment Controller	INTERP
SE563A	1.6	5.1	5.6	0.4	Single Equipment Controller	UUT 3
ZN220	1.5	5.1	5.7	0.6	Zone Controller	INTERP
ZN253	1.5	5.1	5.7	0.6	Zone Controller	INTERP
ZN551	1.5	5.1	5.7	0.6	Zone Controller	INTERP
AAR	1.5	5.1	5.7	0.6	High Speed ARCNET Router	UUT 1

TABLE 3 - ELECTRICAL SUBCOMPONENTS continues on the next page.

SUNBELT CONTROLS
Temperature Control Panels

TABLE 3 - ELECTRICAL SUBCOMPONENTS (CONTINUED)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Controllers, Routers, & Integration - Mfr: Automated Logic - Material: Metal						
SE6104A	1.5	8.3	7.0	1.1	Single Equipment Controller	EXTRAP
SE6104sp	1.5	8.3	7.0	1.1	Single Equipment Controller	EXTRAP
SE6166	1.5	8.3	7.0	1.1	Single Equipment Controller	EXTRAP
SE6166sp	1.5	8.3	7.0	1.1	Single Equipment Controller	UUT 3
MEx48U	1.5	4.8	9.0	1.4	I/O Expander	INTERP
MEx88U	1.5	4.8	9.0	1.4	I/O Expander	UUT 1
MEx016U	1.5	4.8	9.0	1.4	I/O Expander	INTERP
MEx816U	1.5	4.8	9.0	1.4	I/O Expander	UUT 1
ME012U	1.3	7.5	11.3	1.4	Multi-equipment	UUT 1
ME812U	1.3	7.5	11.3	1.4	Multi-equipment	INTERP
ME812U-E	1.3	7.5	11.3	1.4	Multi-equipment	INTERP
ME812u-LGR	1.3	7.5	11.3	1.4	Multi-equipment	UUT 1
LGR250	2.8	11.3	7.5	1.4	High Speed Ethernet Router	INTERP
LGR1000	2.8	11.3	7.5	1.4	High Speed Ethernet Router	UUT 2
OIM	2.8	11.3	7.5	1.4	Onity Integration Module	INTERP
ME-LGR25	2.8	11.3	7.5	1.4	Multi-equipment	INTERP
ME-LGR200	2.8	11.3	7.5	1.4	Multi-equipment	UUT 2
Type: ARCNET156 Zone Control Accessories - Mfr: Automated Logic						
BT485	1	0.5	0.6	<1	Terminating/Biasing plug in board	UUT 1-3
DIAG485	2.0	4.0	4.0	<1	Diagnostic Board	UUT 1
PROT485	2.0	4.0	4.0	<1	Protection Board	UUT 2
REP485	2.0	4.0	4.0	<1	Repeater Board	UUT 2
Type: Networking Equipment - Mfr: Contemporary Controls						
EIBA5-100T	1.3	3.5	4.1	<1	5-Port 10/100 Mbps hub, panel mnt	UUT 3
EIBA5-100T/R	1.0	3.5	3.9	<1	5-Port10/100 Mbps hub, DIN mnt	UUT 2
EISK5-100T	1.0	2.7	4.5	<1	5-Port 10/100 Mbps switch	INTERP
EISK5-100T/H	1.0	2.7	4.5	<1	5-Port 10/100 Mbps switch	UUT 3
EISK5-GT	1.0	2.7	4.5	<1	5-Port Gigabit switch	INTERP
EISK8-100T	1.6	3.7	4.5	<1	8-Port 10/100 Mbps switch	UUT 3
EISK8-GT	1.6	3.7	4.5	<1	8-Port Gigabit switch	UUT 1
EISK16-100T	1.6	3.8	6.6	<1	16-Port 10/100 Mbps switch	UUT 2
Type: Differential Pressure Transmitter - Mfr: Veris						
PX3ULX05	1.6	3.5	4.4	<1	Duct Static DPT	UUT 3
Type: Differential Pressure Transmitter - Mfr: Automated Logic						
NSB-ZPS-SR-EZ-ST-IN-A	1.9	1.9	3.3	<1		UUT 1
Type: Power Supplies - Mfr: Functional Devices						
PSH100AB10	4.5	5.4	4.5	4.6	100VA	UUT 1
PSH100A100AB10	4.5	8.6	4.5	8.6	2x100VA	UUT 2

TABLE 3 - ELECTRICAL SUBCOMPONENTS continues on the next page.

SUNBELT CONTROLS
Temperature Control Panels

TABLE 3 - ELECTRICAL SUBCOMPONENTS (CONTINUED)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Transformers - Mfr: Functional Devices						
TR40VA004	2.9	2.2	2.6	2.2	40VA, Multitap to 24VAC	EXTRAP
TR40VA015	2.9	2.2	2.6	2.2	40VA, Multitap to 24VAC	EXTRAP
TR50VA005	3.0	2.5	3.5	2.4	50VA, 120VAC to 24VAC	EXTRAP
TR50VA015	3.0	2.5	3.4	2.8	50VA, Multitap to 24VAC	EXTRAP
TR75VA004	3.1	2.5	3.8	3.6	75VA, Multitap to 24VAC	UUT 3
TR100VA001	3.0	2.5	4.1	3.8	96VA, 120VAC to 24VAC	INTERP
TR100VA004	3.0	2.5	4.2	4.4	100VA, Multitap to 24VAC	UUT 3
Type: Transformers - Mfr: BAPI						
BA/VC350A-5	1.4	1.9	2.8	<1	350mA, 5VDC	UUT 2
BA/VC350A-12-TRK	1.4	1.9	2.8	<1	350mA, 12VDC	INTERP
BA/VC350A-ADJ	1.4	1.9	2.8	<1	350mA, 5-24VDC	UUT 2
BA/VC350A-EZ-5	1.4	1.9	2.8	<1	350mA, 5VDC, EZ mount	UUT 3
BA/VC350A-EZ-10	1.4	1.9	2.8	<1	350mA, 10VDC, EZ mount	INTERP
BA/VC350A-EZ-12	1.4	1.9	2.8	<1	350mA, 12VDC, EZ mount	INTERP
BA/VC350A-EZ-15	1.4	1.9	2.8	<1	350mA, 15VDC, EZ mount	INTERP
BA/VC350A-EZ-ADJ	1.4	1.9	2.8	<1	350mA, 5-24VDC, EZ mount	UUT 3
Kele - Transformer						
DCP-250-H	1.8	2.3	4.0	1.0	Encl., Hub mt., 120VAC to 24VDC	UUT 1
Type: Transformers - Mfr: Idec						
PS5R-VA24	2.8	1.8	3.0	<1	120VAC:24VDC, 0.3A/7.5W	UUT 1
PS5R-VB24	3.7	1.8	3.0	<1	120VAC:24VDC, 0.6A/15W	INTERP
PS5R-VC24	3.7	3.5	3.0	<1	120VAC:24VDC, 1.3A/30W	INTERP
PS5R-VD24	3.7	3.5	3.0	<1	120VAC:24VDC, 2.5A/60W	INTERP
PS5R-VE24	3.7	3.5	3.0	<1	120VAC:24VDC, 3.75A/90W	UUT 3
Type: Power Supply - Mfr: Phoenix Contact						
2902994	3.5	2.2	3.5	<1		UUT 3
Type: Terminal Blocks - Mfr: Weidmuller						
1020100000	1.8	0.2	2.4	<1	Terminal Block	UUT 1,3
1061200000	1.8	0.3	2.2	<1	End Stop	UUT 1,3
1014100000	3.1	0.5	2.4	<1	Fuse Block	UUT 3
1050000000	1.3	0.1	2.2	<1	End Cap	UUT 1,3
1758260000	1.0	0.1	2.4	<1	Terminal Jumper - 10 Pole	UUT 1,3
Type: Fuse - Mfr: Eaton						
AGC-3-R	1.3	0.3	0.3	<1	3A Fuse	UUT 3

TABLE 3 - ELECTRICAL SUBCOMPONENTS continues on the next page.

ATTACHMENT 2: CERTIFIED SUBCOMPONENTS

SPECIAL SEISMIC CERTIFICATION

SUNBELT CONTROLS Temperature Control Panels

TABLE 3 - ELECTRICAL SUBCOMPONENTS (CONTINUED)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Relay - Mfr: Phoenix Contact						
RIF-1-RPT-LV-24AC/1X21	3.0	0.6	3.7	<1	SPDT, 24VAC, 10A	UUT 1
Type: Relays - Mfr: Idec - Options: 120VAC, 24VAC, 24VDC, Test Button						
RH1B-ULAC120V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 120VAC	UUT 3
RH1B-***	2.6	0.7	2.6	<1	SPDT	INTERP
RH2B-***	2.6	0.9	2.6	<1	DPDT	INTERP
RH3B-***	2.6	1.3	2.6	<1	3PDT	INTERP
RH4B-***	2.6	1.7	2.6	<1	4PDT	INTERP
RH4B-ULCDC24V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 24VDC, Test Button	UUT 3
RV8H-L-AD24	2.9	0.2	3.5	<1	Slim, SPDT, 24VAC/VDC	UUT 3
RV8H-L-D9	2.9	0.2	3.5	<1	Slim, SPDT, 9 VDC	UUT 3
RY2S-UDC24V+SY2S-05	2.5	0.7	2.6	<1	DPDT, 24VDC	UUT 3
Type: Relays - Mfr: Veris - Options: 120VAC, 24VAC, 24VDC, 12VDC, 3A, 3A/10A, 15A						
VMD1B-120SVAC+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 120VAC, 3A	UUT 1
VMD1B-***	2.5	0.7	2.7	<1	SPDT	INTERP
VMD2B-***	2.5	1.2	3.1	<1	DPDT	INTERP
VMD3B-***	2.5	1.4	3.1	<1	3PDT	INTERP
VMD4B-***	2.8	2.0	2.6	<1	4PDT	INTERP
VMD4B-F24D+VBD4B-F	2.8	2.0	2.6	<1	4PDT, 24VDC, 15A	UUT 1

End of TABLE 3 - ELECTRICAL SUBCOMPONENTS. Notes, information, and seismic parameters are shown at the beginning of the table.

ATTACHMENT 3: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 1A - Isolated

Manufacturer: Sunbelt Controls
Model number: CUSTOM-36X48X8
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
8.0	36.0	48.0	213	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-9-19

S_{DS} (g)	H_f / R_{μ}	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 3/8" Grade 5 bolts.

Construction: NEMA 4 carbon steel enclosure.

Subcomponents: Saginaw - Enclosures with Subpanels (SCE-48EL3608LP), Automated Logic - Controllers, Routers, & Integration (AMR, EQ-PRTL, AAR, MEX88U, MEX816U, ME012U, ME812u-LGR), Automated Logic - ARCNET156 Zone Control Accessories (BT485, DIAG485), Contemporary Controls - Networking Equipment (EISK8-GT), Automated Logic - Differential Pressure Transmitter (NSB-ZPS-SR-EZ-ST-IN-A), Functional Devices - Power Supplies (PSH100AB10), BAPI - Transformers (DCP-250-H), Idec - Transformers (PS5R-VA24), Weidmuller - Terminal Blocks (1020100000, 1061200000, 1050000000, 1758260000), Phoenix Contact - Relay (RIF-1-RPT-LV-24AC/1X21), Sola - UPS (SDU 500 [Obsolete]).

Testing notes: UUT 1A was wall mounted to a wall mount fixture that was mounted to the table using (4) Mason SSLFHC spring isolators.



UUT 1B - Rigid

Manufacturer: Sunbelt Controls
Model number: CUSTOM-36X48X8
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
8.0	36.0	48.0	213	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-10-19

S_{DS} (g)	H_f / R_{μ}	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 3/8" Grade 5 bolts.

Construction: NEMA 4 carbon steel enclosure.

Subcomponents: Identical to UUT 1A - Isolated.

Testing notes: UUT 1B was wall mounted to a wall mount fixture that was rigid mounted to the table.



ATTACHMENT 3: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 2A - Isolated

Manufacturer: Sunbelt Controls
Model number: CUSTOM-30X42X12
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
12.0	30.0	42.0	162	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-9-19

S_{DS} (g)	H_f / R_μ	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 3/8" Grade 5 bolts.

Construction: NEMA 3R carbon steel enclosure.

Subcomponents: Saginaw - Enclosures with Subpanels (SCE-42R3012LP), Automated Logic - OptiFlex Controllers, Routers, Integrators, Expanders (G5RE, OFHI), Automated Logic - Controllers, Routers, & Integration (LGR1000, ME-LGR200), Automated Logic - ARCNET156 Zone Control Accessories (BT485, PROT485, REP485), Contemporary Controls - Networking Equipment (EIBA5-100T/R, EISK16-100T), Functional Devices - Power Supplies (PSH100A100AB10), BAPI - Transformers (BA/VC350A-5, BA/VC350A-ADJ).

Testing notes: UUT 2A was wall mounted to a wall mount fixture that was mounted to the table using (4) Mason SSLFHC spring isolators.



UUT 2B - Rigid

Manufacturer: Sunbelt Controls
Model number: CUSTOM-30X42X12
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
12.0	30.0	42.0	162	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-10-19

S_{DS} (g)	H_f / R_μ	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 3/8" Grade 5 bolts.

Construction: NEMA 3R carbon steel enclosure.

Subcomponents: Identical to UUT 2A - Isolated.

Testing notes: UUT 2B was wall mounted to a wall mount fixture that was rigid mounted to the table.



ATTACHMENT 3: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 3A - Isolated

Manufacturer: Sunbelt Controls
Model number: CUSTOM-30X36X12
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
12.0	30.0	36.0	130	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-9-19

S_{DS} (g)	H_f / R_{μ}	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 1/4" Grade 5 bolts.

Construction: NEMA 1 carbon steel enclosure.

Subcomponents: Saginaw - Enclosures with Subpanels (SCE-36N3012LP), Automated Logic - OptiFlex Controllers, Routers, Integrators, Expanders (OFBBC, FIO012u, FIO812U, OF1628), Automated Logic - Controllers, Routers, & Integration (SE563A, SE6166sp), Automated Logic - ARCNET156 Zone Control Accessories (BT485), Contemporary Controls - Networking Equipment (EIBA5-100T, EISK5-100T/H, EISK8-100T), Veris - Differential Pressure Transmitter (PX3ULX05), Functional Devices - Transformers (TR75VA004, TR100VA004), BAPI - Transformers (BA/VC350A-EZ-5, BA/VC350A-EZ-ADJ), Idec - Transformers (PS5R-VE24), Phoenix Contact - Power Supply (2902994), Weidmuller - Terminal Blocks (1020100000, 1061200000, 1014100000, 1050000000, 1758260000), Eaton - Fuse (AGC-3-R), Idec - Relays (RV8H-L-AD24, RV8H-L-D9, RY2S-UDC24V+SY2S-05).

Testing notes: UUT 3A was wall mounted to a wall mount fixture that was mounted to the table using (4) Mason SSLFHC spring isolators.



UUT 3B - Rigid

Manufacturer: Sunbelt Controls
Model number: CUSTOM-30X36X12
Unit function: Temperature Control Panel
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
12.0	30.0	36.0	130	N/A	N/A	N/A

Code & criteria: 2025 CBC, ICC-ES AC156

Test laboratory: Environmental Testing Laboratory

Report: 19091TR1.1 (dated 6-22-20), tested on 12-10-19

S_{DS} (g)	H_f / R_{μ}	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.00	3.5 / 1.3	3.20	2.40	1.68	0.68
2.50	1.0 / 1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Wall mounted using (4) 1/4" Grade 5 bolts.

Construction: NEMA 1 carbon steel enclosure.

Subcomponents: Identical to UUT 3A - Isolated.

Testing notes: UUT 3B was wall mounted to a wall mount fixture that was rigid mounted to the table.

