



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY
APPLICATION #: OSP - 0633

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [X] New [ ] Renewal

Manufacturer Information

Manufacturer: Sunbelt Controls

Manufacturer's Technical Representative: Greg Clemente

Mailing Address: 4511 Willow Road, Suite 4, Pleasanton, California 94588

Telephone: 925.660.3898 Email: gclemente@sunbeltcontrols.com

Product Information

Product Name: Temperature Control Panels

Product Type: HVAC Control Panels

Product Model Number: See Attachment 1
(List all unique product identification numbers and/or part numbers)

General Description: Temperature control panels containing controllers and network equipment for the management
of HVAC systems. Seismic enhancements made to the test units shall be incorporated into the production units.

Mounting Description: Rigid wall mounted or wall mounted to equipment (flexible/isolated wall mounted).

Applicant Information

Applicant Company Name: Manwill Engineering LLC

Contact Person: Derek Manwill, SE

Mailing Address: PO Box 1194, Bend, OR 97709

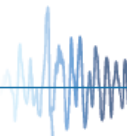
Telephone: 541.241.2102 Email: derek@manwillSE.com

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

Signature of Applicant: [Handwritten Signature] Date: 12/16/2019

Title: President Company Name: Manwill Engineering LLC

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





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

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

Company Name: Manwill Engineering LLC

Name: Derek Manwill, SE California License Number: S6266

Mailing Address: PO Box 1194, Bend, OR 97709

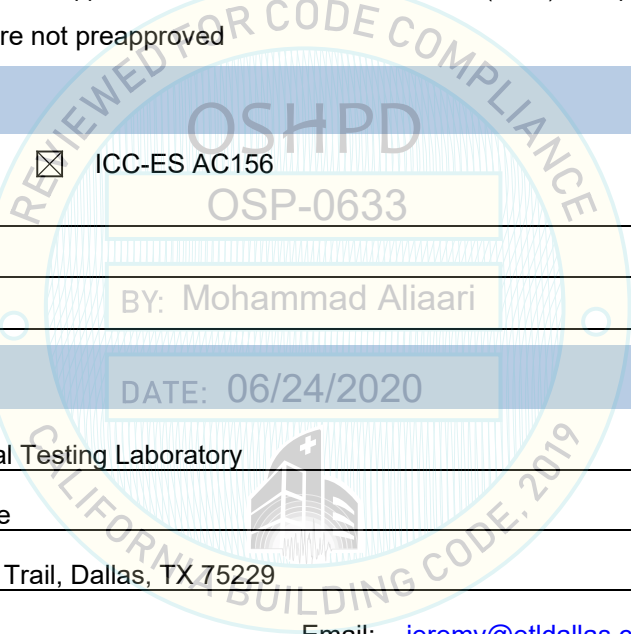
Telephone: 541.241.2102 Email: derek@manwillSE.com

**Supports and Attachments Preapproval**

- Supports and attachments are preapproved under OPM- \_\_\_\_\_  
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

**Certification Method**

- Testing in accordance with:  ICC-ES AC156
- Other (Please Specify): \_\_\_\_\_



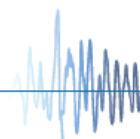
**Testing Laboratory**

Company Name: Environmental Testing Laboratory

Contact Name: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas, TX 75229

Telephone: 972.247.9657 Email: jeremy@etldallas.com





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Seismic Parameters

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

Design Basis of Equipment or Components (Fp/Wp) = 1.50 (SDS = 2.00); 1.13 (SDS = 2.50)

SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1); 2.50 (z/h = 0)

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

Rp (Equipment or component response modification factor) = 6.0

Omega\_0 (System overstrength factor) = 2.0

Ip (Importance factor) = 1.5

z/h (Height factor ratio) = 1 (SDS = 2.00); 0 (SDS = 2.50)

Equipment or Component Natural Frequencies (Hz) = N/A (wall mounted)

Overall dimensions and weight (or range thereof) = See Attachments 1 & 2

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

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

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

SD1 (Design spectral response acceleration at 1 second period, g) =

R (Response modification coefficient) =

Omega\_0 (System overstrength factor) = by: Mohammad Aliaari

Cd (Deflection amplification factor) =

Ip (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component Natural Frequencies (Hz) =

Overall dimensions and weight (or range thereof) =

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

List of Attachments Supporting Special Seismic Certification

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

[X] Other(s) (Please Specify): Attachments 1 & 2

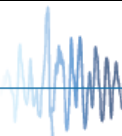
OSHPD Approval (For Office Use Only) - Approval Expires on December 31, 2025

Signature: M. Aliaari Date: June 24, 2020

Print Name: Mohammad Aliaari Title: SSE

Special Seismic Certification Valid Up to : SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable):



## ATTACHMENT 1: CERTIFIED COMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 1 - TEMPERATURE CONTROL PANELS

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER: SUNBELT CONTROLS</b>						
<b>PRODUCT FAMILY: TEMPERATURE CONTROL PANELS</b>						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Temperature Control Panels (custom)</b>						
CUSTOM-6X6X4	4.0	6.0	6.0	5		EXTRAP
...					Extrapolated sizes	EXTRAP
CUSTOM-30X36X12	12.0	30.0	36.0	130		<b>UUT 3</b>
...					Interpolated sizes	INTERP
CUSTOM-30X42X12	12.0	30.0	42.0	162		<b>UUT 2</b>
...					Interpolated sizes	INTERP
CUSTOM-36X48X8	8.0	36.0	48.0	213		<b>UUT 1</b>
<b>MOUNTING:</b>	Rigid and isolated wall mounted.			<b>SEISMIC LEVELS:</b>	$S_{DS} = 2.0g$ for $z/h = 1$ $S_{DS} = 2.5g$ for $z/h = 0$	$I_p = 1.5$
<b>NOTES:</b>	<p><b>Product Construction:</b> Carbon steel enclosure (18GA to 14GA).</p> <p><b>Options/Subcomponents:</b> 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 weight of the complete control panel must be less than or equal to the maximum weight listed for the selected enclosure in Table 2.</p>					

BY: Mohammad Aliaari

DATE: 06/24/2020



## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 2 - ENCLOSURES

DOCUMENT NO.: 19091CR1.1

MANUFACTURER: SUNBELT CONTROLS						
PRODUCT FAMILY: TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Saginaw - Enclosures</b>						
SCE-6N604LP	4	6	6	5	NEMA 1	EXTRAP
SCE-8N604LP	4	6	8	6	NEMA 1	EXTRAP
SCE-8N804LP	4	8	8	8	NEMA 1	EXTRAP
SCE-8N806LP	6	8	8	8	NEMA 1	EXTRAP
SCE-10N804LP	4	8	10	10	NEMA 1	EXTRAP
SCE-10N1004LP	4	10	10	12	NEMA 1	EXTRAP
SCE-12N1004LP	4	10	12	15	NEMA 1	EXTRAP
SCE-10N1006LP	6	10	10	12	NEMA 1	EXTRAP
SCE-10N806LP	6	12	10	15	NEMA 1	EXTRAP
SCE-12N1006LP	6	10	12	15	NEMA 1	EXTRAP
SCE-12N1206LP	6	12	12	18	NEMA 1	EXTRAP
SCE-12N1204LP	4	12	12	18	NEMA 1	EXTRAP
SCE-12N1208LP	8	12	12	18	NEMA 1	EXTRAP
SCE-14N1206LP	6	12	14	21	NEMA 1	EXTRAP
SCE-14N1204LP	4	12	14	21	NEMA 1	EXTRAP
SCE-14N1208LP	8	12	14	21	NEMA 1	EXTRAP
SCE-16N1206LP	6	12	16	24	NEMA 1	EXTRAP
SCE-16R1206LP	6	12	16	24	NEMA 3R	EXTRAP
SCE-16N1208LP	8	12	16	24	NEMA 1	EXTRAP
SCE-16N1606LP	6	16	16	32	NEMA 1	EXTRAP
SCE-16N1608LP	8	16	16	32	NEMA 1	EXTRAP
SCE-20N1606LP	6	16	20	39	NEMA 1	EXTRAP
SCE-20R1606LP	6	16	20	39	NEMA 3R	EXTRAP
SCE-24N1606LP	6	16	24	47	NEMA 1	EXTRAP
SCE-20N2008LP	8	20	20	49	NEMA 1	EXTRAP
SCE-20N2006LP	6	20	20	49	NEMA 1	EXTRAP
SCE-20N2010LP	10	20	20	49	NEMA 1	EXTRAP
SCE-20EL2006LP	6	20	20	49	NEMA 4	EXTRAP
SCE-24N2006LP	6	20	24	59	NEMA 1	EXTRAP
SCE-24N2008LP	8	20	24	59	NEMA 1	EXTRAP
SCE-24N2010LP	10	20	24	59	NEMA 1	EXTRAP
SCE-24R2006LP	6	20	24	59	NEMA 3R	EXTRAP
SCE-24R2012LP	12	20	24	59	NEMA 3R	EXTRAP
SCE-24N2406LP	6	24	24	71	NEMA 1	EXTRAP
SCE-24EL2406LP	6	24	24	71	NEMA 4	EXTRAP
SCE-24N2408LP	8	24	24	71	NEMA 1	EXTRAP
SCE-24N2412LP	12	24	24	71	NEMA 1	EXTRAP
SCE-24R2408LP	8	24	24	71	NEMA 3R	EXTRAP
SCE-30EL2406LP	6	24	30	89	NEMA 4	EXTRAP
SCE-30N2406LP	6	24	30	89	NEMA 1	EXTRAP
SCE-30N2408LP	8	24	30	89	NEMA 1	EXTRAP
SCE-30R2408LP	8	24	30	89	NEMA 3R	EXTRAP

**NOTES:** Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 2 - ENCLOSURES (continued)

DOCUMENT NO.: 19091CR1.1

MANUFACTURER: SUNBELT CONTROLS						
PRODUCT FAMILY: TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Saginaw - Enclosures (continued)</b>						
SCE-30N2412LP	12	24	30	89	NEMA 1	EXTRAP
SCE-30N3008LP	8	30	30	111	NEMA 1	EXTRAP
SCE-36N2406LP	6	24	36	107	NEMA 1	EXTRAP
SCE-36N2408LP	8	24	36	107	NEMA 1	EXTRAP
SCE-36R2408LP	8	24	36	107	NEMA 3R	EXTRAP
SCE-36N2412LP	12	24	36	107	NEMA 1	EXTRAP
SCE-36N3006LP	6	30	36	130	NEMA 1	EXTRAP
SCE-36N3008LP	8	30	36	130	NEMA 1	EXTRAP
SCE-36R3008LP	8	30	36	130	NEMA 3R	EXTRAP
SCE-36EL3008LP	8	30	36	130	NEMA 4	EXTRAP
SCE-36N3012LP	12	30	36	130	NEMA 1	UUT 3
SCE-42EL3008LP	8	30	42	162	NEMA 4	INTERP
SCE-42R3012LP	12	30	42	162	NEMA 3R	UUT 2
SCE-42EL3608LP	8	36	42	186	NEMA 4	INTERP
SCE-48EL3608LP	8	36	48	213	NEMA 4	UUT 1
<b>Saginaw - Subpanels</b>						
SCE-6N60MP	0.08	4	4	1	NEMA 1	INTERP
SCE-8N60MP	0.08	4	6	1	NEMA 1	INTERP
SCE-8N80MP	0.08	6	6	1	NEMA 1	INTERP
SCE-10N10MP	0.08	8	8	1	NEMA 1	INTERP
SCE-10N80MP	0.08	6	8	2	NEMA 1	INTERP
SCE-12N100MP	0.08	8	10	3	NEMA 1	INTERP
SCE-14N120MP	0.08	10	12	3	NEMA 1	INTERP
SCE-16N120MP	0.08	10	14	3	NEMA 1	INTERP
SCE-12N120MP	0.08	10	10	4	NEMA 1	INTERP
SCE-16N160MP	0.08	14	14	4	NEMA 1	INTERP
SCE-16P12	0.08	9	13	4	NEMA 3R/4	INTERP
SCE-20N160MP	0.08	14	18	6	NEMA 1	INTERP
SCE-20N200MP	0.08	18	18	7	NEMA 1	INTERP
SCE-24N160MP	0.08	14	22	7	NEMA 1	INTERP
SCE-20P16	0.08	13	17	8	NEMA 3R/4	INTERP
SCE-24N200MP	0.08	18	22	9	NEMA 1	INTERP
SCE-24N240MP	0.08	22	22	11	NEMA 1	INTERP
SCE-30N240MP	0.08	22	28	13	NEMA 1	INTERP
SCE-24P20	0.08	17	21	14	NEMA 3R/4	INTERP
SCE-30N300MP	0.08	28	28	17	NEMA 1	INTERP
SCE-24P24	0.08	21	21	17	NEMA 3R/4	INTERP
SCE-36N240MP	0.08	22	34	21	NEMA 1	INTERP
SCE-36N300MP	0.08	28	34	21	NEMA 1	UUT 3
SCE-30P24	0.08	21	27	22	NEMA 3R/4	INTERP
SCE-36P24	0.08	21	33	27	NEMA 3R/4	INTERP
SCE-42P30	0.08	27	39	33	NEMA 3R/4	UUT 2
<b>NOTES:</b> Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.						

**ATTACHMENT 1: CERTIFIED SUBCOMPONENTS**

**SPECIAL SEISMIC CERTIFICATION**

**TABLE 2 - ENCLOSURES (continued)**

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER: SUNBELT CONTROLS</b>						
<b>PRODUCT FAMILY: TEMPERATURE CONTROL PANELS</b>						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Saginaw - Subpanels (continued)</b>						
SCE-36P30	0.08	27	33	34	NEMA 3R/4	INTERP
SCE-42P36	0.08	33	39	39	NEMA 3R/4	INTERP
SCE-48P36	0.08	33	45	55	NEMA 3R/4	<b>UUT 1</b>
<b>MOUNTING:</b>	Rigid and isolated wall mounted.			<b>SEISMIC LEVELS:</b>	$S_{DS} = 2.0g$ for $z/h = 1$ $S_{DS} = 2.5g$ for $z/h = 0$ $I_p = 1.5$	
<b>NOTES:</b>	<b>Construction/Options:</b> Carbon steel enclosure. Weights listed for the enclosures are the maximum allowed total weight of enclosure and subcomponents.					



## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 3 - SUBCOMPONENTS

DOCUMENT NO.: 19091CR1.1

MANUFACTURER: SUNBELT CONTROLS						
PRODUCT FAMILY: TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
G5RE	2.1	7.1	7.0	1.1	OptiFlex™ BACnet Router	UUT 2
G5CE	2.1	7.1	7.0	1.1	OptiFlex™ BACnet Integrator	INTERP
OFHI	2.1	7.1	7.0	1.1	OptiFlex™ Integrator	UUT 2
OFBBC-NR	2.1	7.1	7.0	1.1	OptiFlex™ BACnet Controller	INTERP
OFBBC	2.1	7.1	7.0	1.1	OptiFlex™ BACnet Controller	UUT 3
OF028-NR	2.8	6.0	7.0	1.1	OptiFlex™ BACnet Controller	INTERP
OF1628-NR	2.8	12.8	7.0	1.1	OptiFlex™ BACnet Controller	INTERP
OF1628U	2.8	12.8	7.0	1.1	OptiFlex™ BACnet Controller	UUT 3
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
LGR250	2.8	11.3	7.5	1.4	Single-equipment	EXTRAP
LGR1000	2.8	11.3	7.5	1.4	Single-equipment	UUT 2
OIM	2.8	11.3	7.5	1.4	Identical to LGR1000	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
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
AMR	1.8	4.0	5.0	<1	AMR	UUT 1
EQ-PRTL	1.8	4.0	5.0	<1	Equipment Portal	UUT 1
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
AAR	1.5	5.1	5.7	<1	AAR	UUT 1
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
FIO0120u	7.0	6.9	2.1	1.1	OptiFlex™ I/O Expander	UUT 3
FIO48U	7.0	6.9	2.1	1.1	OptiFlex™ I/O Expander	INTERP
FIO88U	7.0	6.9	2.1	1.1	OptiFlex™ I/O Expander	INTERP
FIO812U	7.0	6.9	2.1	1.1	OptiFlex™ I/O Expander	UUT 3
<b>Automated Logic - Routers, Multi-Equipment Control, &amp; Integration</b>						
MEx016U	1.5	4.8	9.0	1.4		EXTRAP
MEx816U	1.5	4.8	9.0	1.4		UUT 1
MEx48U	1.5	4.8	9.0	1.4		INTERP
MEx88U	1.5	4.8	9.0	1.4		UUT 1
ME812u-LGR	1.3	7.5	11.3	1.4		UUT 1
ME812U	1.3	7.5	11.3	1.4		INTERP
ME812U-E	1.3	7.5	11.3	1.4		INTERP
ME012U	1.3	7.5	11.3	1.4		UUT 1
<b>Automated Logic - Single-Equipment Controllers</b>						
SE563sp	1.6	5.1	5.6	<1		EXTRAP
SE563A	1.6	5.1	5.6	<1		UUT 3
SE6104A	1.5	8.3	7.0	<1		INTERP
SE6104sp	1.5	8.3	7.0	<1		INTERP
SE6166	1.5	8.3	7.0	<1		INTERP
SE6166sp	1.5	8.3	7.0	<1		UUT 3
<b>NOTES:</b> Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.						



## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 3 - SUBCOMPONENTS (continued)

DOCUMENT NO.: 19091CR1.1

MANUFACTURER: SUNBELT CONTROLS						
PRODUCT FAMILY: TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Automated Logic - ARCNET156 Zone Control Accessories</b>						
BT485	0.2	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
<b>Contemporary Controls - Networking Equipment</b>						
EIBA5-100T	1.0	3.5	3.9	<1	5-Port 10/100 Mbps hub, panel mnt	UUT 3
EIBA5-100T/R	1.0	3.5	3.9	<1	5-Port 10/100 Mbps hub, DIN mnt	UUT 2
EISK5-100T	2.7	1.0	4.5	<1	5-Port 10/100 Mbps switch	INTERP
EISK5-100T/H	2.7	1.0	4.5	<1	5-Port 10/100 Mbps switch	UUT 3
EISK5-GT	2.7	1.0	4.5	<1	5-Port Gigabit switch	INTERP
EIS8-100T	3.7	1.6	4.5	<1	8-Port 10/100 Mbps switch	UUT 3
EISK8-100T	3.7	1.6	4.5	<1	8-Port 10/100 Mbps switch	INTERP
EISK8-GT	3.7	1.6	4.5	<1	8-Port Gigabit switch	UUT 1
EISK16-100T	3.8	1.6	6.6	<1	16-Port 10/100 Mbps switch	UUT 2
<b>Veris - Differential Pressure Transmitter</b>						
PX3ULX05	1.6	3.5	4.4	<1	Duct Static DPT	UUT 3
<b>Automated Logic - Differential Pressure Transmitter</b>						
NSB-ZPS-SR-EZ-ST-IN-A	1.9	1.9	3.3	<1		UUT 1
<b>Functional Devices - Power Supplies</b>						
PSH100AB10	4.5	5.4	4.5	4.6	100VA	UUT 1
PSH100A100AB10	4.5	8.6	4.5	8.6	2x100VA	UUT 2
<b>Sola - UPS</b>						
UPS-500-A	4.6	11.1	4.9	10.7		UUT 1
<b>Functional Devices - Transformers</b>						
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
<b>BAPI - Transformers</b>						
ALC/VC350A-5	1.4	1.9	2.8	<1	350mA, 5VDC	UUT 2
ALC/VC350A-12-TRK	1.4	1.9	2.8	<1	350mA, 12VDC	INTERP
ALC/VC350A-ADJ	1.4	1.9	2.8	<1	350mA, 5-24VDC	UUT 2
ALC/VC350A-EZ-5	1.4	1.9	2.8	<1	350mA, 5VDC, EZ mount	UUT 3
ALC/VC350A-EZ-10	1.4	1.9	2.8	<1	350mA, 10VDC, EZ mount	INTERP
ALC/VC350A-EZ-12	1.4	1.9	2.8	<1	350mA, 12VDC, EZ mount	INTERP
ALC/VC350A-EZ-15	1.4	1.9	2.8	<1	350mA, 15VDC, EZ mount	INTERP
ALC/VC350A-EZ-ADJ	1.4	1.9	2.8	<1	350mA, 5-24VDC, EZ mount	UUT 3
<b>Kele - Transformer</b>						
DCP-250-H	1.8	2.3	4.0	1.0	Encl., Hub mt., 120VAC to 24VDC	UUT 1
<b>NOTES:</b> Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.						

## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 3 - SUBCOMPONENTS (continued)

DOCUMENT NO.: 19091CR1.1

MANUFACTURER: SUNBELT CONTROLS						
PRODUCT FAMILY: TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Idec - Transformers</b>						
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
<b>Idec - Relays</b>						
RH1B-ULAC120V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 120VAC	UUT 3
RH1B-ULAC24V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 24VAC	INTERP
RH1B-ULCAC24V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 24VAC, Test Button	INTERP
RH1B-ULCDC24V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 24VDC, Test Button	INTERP
RH1B-ULDC24V+SH1B-05	2.6	0.7	2.6	<1	SPDT, 24VDC	INTERP
RH2B-ULAC120V+SH2B-05	2.6	0.9	2.6	<1	DPDT, 120VAC	INTERP
RH2B-ULAC24V+SH2B-05	2.6	0.9	2.6	<1	DPDT, 24VAC	INTERP
RH2B-ULC-AC24V+SH2B-05	2.6	0.9	2.6	<1	DPDT, 24VAC, Test Button	INTERP
RH2B-ULC-DC24V+SH2B-05	2.6	0.9	2.6	<1	DPDT, 24VDC, Test Button	INTERP
RH2B-ULDC24V+SH2B-05	2.6	0.9	2.6	<1	DPDT, 24VDC	INTERP
RH3B-ULAC120V+SH3B-05	2.6	1.3	2.6	<1	3PDT, 120VAC	INTERP
RH3B-ULAC24V+SH3B-05	2.6	1.3	2.6	<1	3PDT, 24VAC	INTERP
RH3B-ULCAC24V+SH3B-05	2.6	1.3	2.6	<1	3PDT, 24VAC, Test Button	INTERP
RH3B-ULCDC24V+SH3B-05	2.6	1.3	2.6	<1	3PDT, 24VDC, Test Button	INTERP
RH3B-ULDC24V+SH3B-05	2.6	1.3	2.6	<1	3PDT, 24VDC	INTERP
RH4B-ULAC120V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 120VAC	INTERP
RH4B-ULAC24V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 24VAC	INTERP
RH4B-ULCAC24V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 24VAC, Test Button	INTERP
RH4B-ULDC24V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 24VDC	INTERP
RH4B-ULCDC24V+SH4B-05	2.6	1.7	2.6	<1	4PDT, 24VDC, Test Button	UUT 3
RVH8-L-AD24	2.9	0.2	3.5	<1	Slim, SPDT, 24VAC/VDC	UUT 3
RVH8-L-D9	2.9	0.2	3.5	<1	Slim, SPDT, 9 VDC	UUT 3
RY2S-UDC24V	2.5	0.7	2.6	<1	DPDT, 24VDC	UUT 3
<b>Phoenix Contact - Relay</b>						
RIF-1-RPT-LV-24AC/1X21	3.0	0.6	3.7	<1	SPDT, 24VAC, 10A	UUT 1
<b>Veris - Relays</b>						
VMD1B-120SVAC+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 120VAC Coil, 3A	UUT 1
VMD1B-24SVAC+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 24VAC Coil, 3A	INTERP
VMD1B-F120A+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 120VAC Coil, 15A	INTERP
VMD1B-F12D+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 12VDC Coil, 15A	INTERP
VMD1B-F240A+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 240VAC Coil, 15A	INTERP
VMD1B-F24A+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 24VAC Coil, 15A	INTERP
VMD1B-F24D+VBD1B-F	2.5	0.7	2.7	<1	SPDT, 24VDC Coil, 15A	INTERP
VMD2B-120SVAC+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 120VAC Coil, 3A/10A	INTERP
VMD2B-24SVAC+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 24VAC Coil, 3A/10A	INTERP
VMD2B-F120A+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 120VAC Coil, 15A	INTERP
<b>NOTES:</b> Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.						

## ATTACHMENT 1: CERTIFIED SUBCOMPONENTS

## SPECIAL SEISMIC CERTIFICATION

### TABLE 3 - SUBCOMPONENTS (continued)

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER:</b> SUNBELT CONTROLS						
<b>PRODUCT FAMILY:</b> TEMPERATURE CONTROL PANELS						
MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
<b>Veris - Relays (continued)</b>						
VMD2B-F12D+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 12VDC Coil, 15A	INTERP
VMD2B-F240A+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 240VAC Coil, 15A	INTERP
VMD2B-F24A+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 24VAC Coil, 15A	INTERP
VMD2B-F24D+VBD2B-F	2.5	1.2	3.1	<1	DPDT, 24VDC Coil, 15A	INTERP
VMD3B-F120A+VBD3B-F	2.5	1.4	3.1	<1	3PDT, 120VAC Coil, 15A	INTERP
VMD3B-F24A+VBD3B-F	2.5	1.4	3.1	<1	3PDT, 24VAC Coil, 15A	INTERP
VMD3B-F24D+VBD3B-F	2.5	1.4	3.1	<1	3PDT, 24VDC Coil, 15A	INTERP
VMD4B-F120A+VBD4B-F	2.8	2.0	2.6	<1	4PDT, 120VAC Coil, 15A	INTERP
VMD4B-F24A+VBD4B-F	2.8	2.0	2.6	<1	4PDT, 24VAC Coil, 15A	INTERP
VMD4B-F24D+VBD4B-F	2.8	2.0	2.6	<1	4PDT, 24VDC Coil, 15A	UUT 1
<b>Phoenix Contact - Power Supply</b>						
2902994	3.5	2.2	3.5	<1		UUT 3
<b>Weidmuller - Terminal Blocks</b>						
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
AGC-3-R	1.3	0.3	0.3	<1	3A Fuse	UUT 3
<b>MOUNTING:</b>	Mounted within unit.			<b>SEISMIC LEVELS:</b>	$S_{DS} = 2.0g$ for $z/h = 1$ $S_{DS} = 2.5g$ for $z/h = 0$ $I_p = 1.5$	
<b>NOTES:</b>	<b>Construction/Options:</b> Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.					

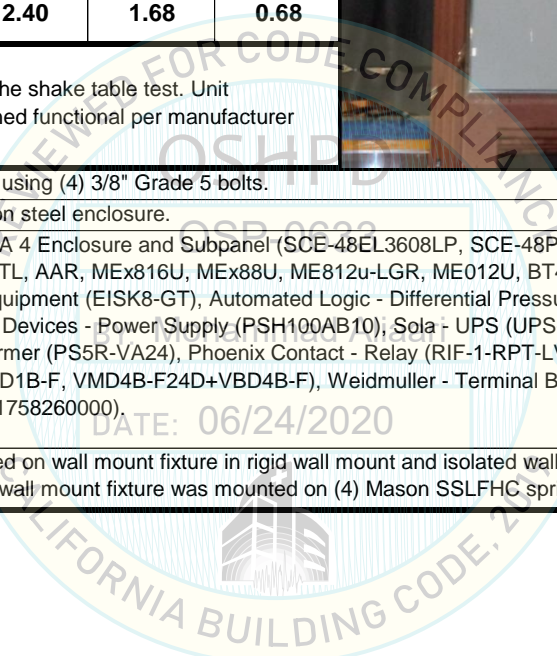
## ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

## SPECIAL SEISMIC CERTIFICATION

### UUT 1

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER:</b>		SUNBELT CONTROLS				
<b>MODEL NUMBER:</b>		CUSTOM-36X48X8				
<b>UNIT FUNCTION:</b>		TEMPERATURE CONTROL PANEL				
<b>SERIAL NUMBER:</b>		N/A				
<b>DIMENSIONS (in)</b>			<b>WEIGHT (lb)</b>	<b>RES. FREQ. (Hz)</b>		
<b>DEPTH</b>	<b>WIDTH</b>	<b>HEIGHT</b>		<b>F-B</b>	<b>S-S</b>	<b>V</b>
8	36	48	213	N/A	N/A	N/A
<b>CODE &amp; CRITERIA:</b>		2019 CBC		ICC-ES AC156		
<b>TEST LABORATORY:</b>		ENVIRONMENTAL TESTING LABORATORY				
<b>REPORT &amp; DATE:</b>		19091TR1.1		December 9, 2019		
<b>S<sub>DS</sub> (g)</b>	<b>z/h</b>	<b>A<sub>FLX-H</sub> (g)</b>	<b>A<sub>RIG-H</sub> (g)</b>	<b>A<sub>FLX-V</sub> (g)</b>	<b>A<sub>RIG-V</sub> (g)</b>	
2.0	1	3.20	2.40	1.68	0.68	
2.5	0					
<b>IMPORTANCE FACTOR, I<sub>p</sub> = 1.5</b>						
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.						
<b>MOUNTING:</b>		Wall mounted using (4) 3/8" Grade 5 bolts.				
<b>CONSTRUCTION:</b>		NEMA 4 carbon steel enclosure.				
<b>SUBCOMPONENTS:</b>		Saginaw NEMA 4 Enclosure and Subpanel (SCE-48EL3608LP, SCE-48P36), Automated Logic - Controllers, etc. (AMR, EQ-PRTL, AAR, MEx816U, MEx88U, ME812u-LGR, ME012U, BT485, DIAG485), Contemporary Controls - Networking Equipment (EISK8-GT), Automated Logic - Differential Pressure Transmitter (NSB-ZPS-SR-EZ-ST-IN-A), Functional Devices - Power Supply (PSH100AB10), Sola - UPS (UPS-500-A), Kele - Transformer (DCP-250-H), Idec - Transformer (PS5R-VA24), Phoenix Contact - Relay (RIF-1-RPT-LV-24AC/1X21), Veris - Relays (VMD1B-120SVAC+VBD1B-F, VMD4B-F24D+VBD4B-F), Weidmuller - Terminal Blocks (1020100000, 1061200000, 1050000000, 1758260000).				
<b>TESTING NOTES:</b>		UUT was tested on wall mount fixture in rigid wall mount and isolated wall mount configurations. For isolated configuration, wall mount fixture was mounted on (4) Mason SSLFHC spring isolators				



## ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

## SPECIAL SEISMIC CERTIFICATION

### UUT 2

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER:</b>	SUNBELT CONTROLS
<b>MODEL NUMBER:</b>	CUSTOM-30X42X12
<b>UNIT FUNCTION:</b>	TEMPERATURE CONTROL PANEL
<b>SERIAL NUMBER:</b>	N/A

DIMENSIONS (in)			WEIGHT (lb)	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT		F-B	S-S	V
12	30	42	162	N/A	N/A	N/A

<b>CODE &amp; CRITERIA:</b>	2019 CBC	ICC-ES AC156
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<b>TEST LABORATORY:</b>	ENVIRONMENTAL TESTING LABORATORY
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<b>REPORT &amp; DATE:</b>	19091TR1.1	December 9, 2019
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S <sub>DS</sub> (g)	z/h	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
2.0	1	3.20	2.40	1.68	0.68
2.5	0				

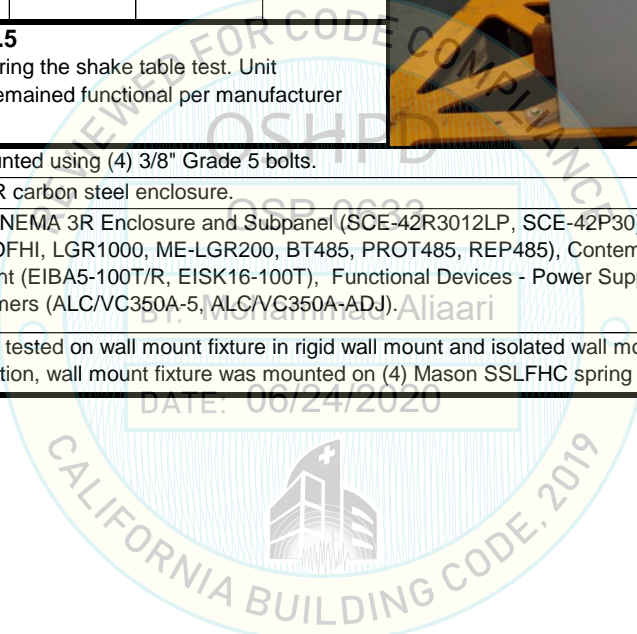
<b>IMPORTANCE FACTOR, I<sub>p</sub> = 1.5</b>
Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

<b>MOUNTING:</b>	Wall mounted using (4) 3/8" Grade 5 bolts.
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<b>CONSTRUCTION:</b>	NEMA 3R carbon steel enclosure.
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<b>SUBCOMPONENTS:</b>	Saginaw NEMA 3R Enclosure and Subpanel (SCE-42R3012LP, SCE-42P30), Automated Logic - Controllers, etc. (G5RE, OFHI, LGR1000, ME-LGR200, BT485, PROT485, REP485), Contemporary Controls - Networking Equipment (EIBA5-100T/R, EISK16-100T), Functional Devices - Power Supply (PSH100A100AB10), BAPI - Transformers (ALC/VC350A-5, ALC/VC350A-ADJ).
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<b>TESTING NOTES:</b>	UUT was tested on wall mount fixture in rigid wall mount and isolated wall mount configurations. For isolated configuration, wall mount fixture was mounted on (4) Mason SSLFHC spring isolators
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## ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

## SPECIAL SEISMIC CERTIFICATION

### UUT 3

DOCUMENT NO.: 19091CR1.1

<b>MANUFACTURER:</b>		SUNBELT CONTROLS				
<b>MODEL NUMBER:</b>		CUSTOM-30X36X12				
<b>UNIT FUNCTION:</b>		TEMPERATURE CONTROL PANEL				
<b>SERIAL NUMBER:</b>		N/A				
<b>DIMENSIONS (in)</b>			<b>WEIGHT (lb)</b>	<b>RES. FREQ. (Hz)</b>		
<b>DEPTH</b>	<b>WIDTH</b>	<b>HEIGHT</b>		<b>F-B</b>	<b>S-S</b>	<b>V</b>
12	30	36	130	N/A	N/A	N/A
<b>CODE &amp; CRITERIA:</b>		2019 CBC		ICC-ES AC156		
<b>TEST LABORATORY:</b>		ENVIRONMENTAL TESTING LABORATORY				
<b>REPORT &amp; DATE:</b>		19091TR1.1		December 9, 2019		
<b>S<sub>DS</sub> (g)</b>	<b>z/h</b>	<b>A<sub>FLX-H</sub> (g)</b>	<b>A<sub>RIG-H</sub> (g)</b>	<b>A<sub>FLX-V</sub> (g)</b>	<b>A<sub>RIG-V</sub> (g)</b>	
2.0	1	3.20	2.40	1.68	0.68	
2.5	0					
<b>IMPORTANCE FACTOR, I<sub>p</sub> = 1.5</b>						
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.						
<b>MOUNTING:</b>		Wall mounted using (4) 1/4" Grade 5 bolts.				
<b>CONSTRUCTION:</b>		NEMA 1 carbon steel enclosure.				
<b>SUBCOMPONENTS:</b>		Saginaw NEMA 1 Enclosure and Subpanel (SCE-36N3012LP, SCE-36N300MP), Automated Logic - Controllers, etc. (OFBBC, OF1628, FIO0120u, FIO812U, SE563A, SE6166sp, BT485), Contemporary Controls - Networking Equipment (EIBA5-100T, EISK5-100T/H, EIS8-100T), Veris - Differential Pressure Transmitter (PX3ULX05), Functional Devices - Transformers (TR75VA004, TR100VA004), BAPI - Transformers (ALC/VC350A-EZ-5, ALC/VC350A-EZ-ADJ), Idec - Transformer (PS5R-VE24), Idec - Relays (RH1B-ULAC120V+SH1B-05, RH4B-ULCDC24V+SH4B-05, RVH8-L-AD24, RVH8-L-D9, RY2S-UDC24V), Phoenix Contact - Power Supply, (2902994), Weidmuller - Terminal Blocks (1020100000, 1061200000, 1014100000, 1050000000, 1758260000, AGC-3-R).				
<b>TESTING NOTES:</b>		UUT was tested on wall mount fixture in rigid wall mount and isolated wall mount configurations. For isolated configuration, wall mount fixture was mounted on (4) Mason SSLFHC spring isolators				

