



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0265

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Siemens Inc.

Manufacturer's Technical Representative: Vincent Baroncini

Mailing Address: 2 Gatehall Dr., Parsippany, NJ 07054

Telephone: (973) 593-2682

Email: vincent.baroncini@siemens.com

Product Information

Product Name: Electrical Control Panels on Life Safety/Critical Branch

Product Type: Fire Alarm & Security Panels

Product Model Number: Enclosures with various internal components per Attachments

General Description: Wall mounted fire alarm system controllers. Karim

Mounting Description: Rigid, Wall Mounted

Tested Seismic Enhancements: None

DATE: 06/23/2022

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates

Contact Person: Daniel Zentner

Mailing Address: 233 SW Wilson Ave, Suite 101, Bend, OR 97702

Telephone: (541) 292-5839

Email: dzentner@structint.com

Title: Program Manager





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

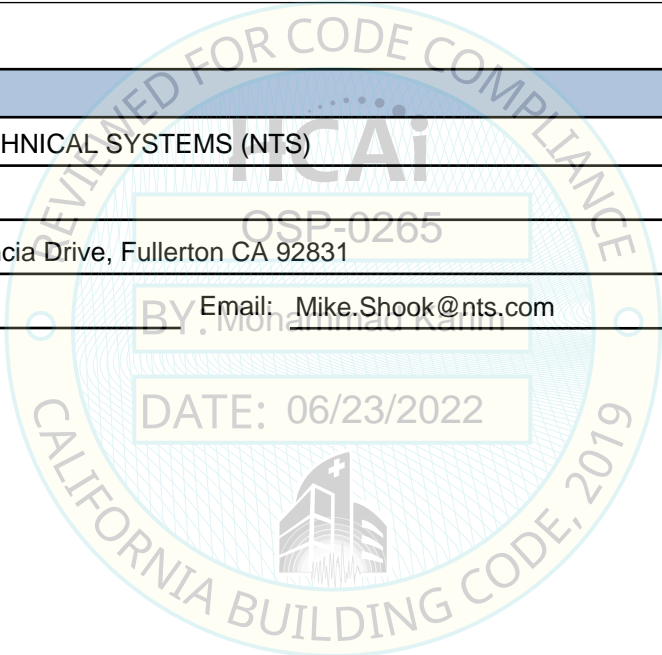
Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.
Name: Andrew Coughlin California License Number: S6082
Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025
Telephone: (415) 635-8461 Email: acoughlin@structint.com

Certification Method

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

Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)
Contact Person: Mike Shook
Mailing Address: 1536 East Valencia Drive, Fullerton CA 92831
Telephone: (714) 879-6110 Email: Mike.Shook@nts.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.87

SDS (Design spectral response acceleration at short period, g) = 2.5

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

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

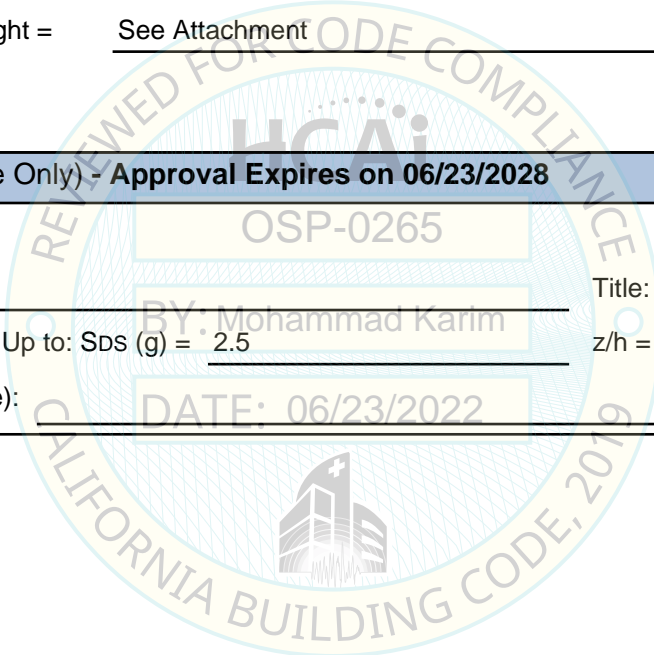
HCAI Approval (For Office Use Only) - Approval Expires on 06/23/2028

Date: 6/23/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.5 z/h = See Above

Condition of Approval (if applicable): DATE: 06/23/2022



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

TRU PROJECT NO. 2200522



Manufacturer: Siemens Industry, Inc.						TABLE 1	
Model Line: FC901							
Certified Product Construction Summary: 16 ga Carbon Steel NEMA Type 1 enclosure & backplane (Red or Black). Hinged doors with key lock.							
Certified Options Summary: See subcomponent table (Table 3) for a complete list of certified components and options. Note: The only difference between Model U3 and R3 is the color of the enclosure. Therefore model U3 certified through testing of model R3.							
Mounting Configuration: Wall mounted - rigid Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2019		Seismic Certification Limits:			$S_{DS} = 2.5 g \quad z/h=1.0$		$I_p = 1.5$
					$S_{DS} = 2.5 g \quad z/h=0.0$		
Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
FC901	U3	9.3	22.4	20.9	41	Black enclosure	Interp.
	R3	9.3	22.4	20.9	41	Red enclosure	2

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

TRU PROJECT NO. 2200522



Manufacturer: Siemens Industry, Inc.	TABLE 2
Model Line: FC2005	

Certified Product Construction Summary:
16 ga Carbon Steel NEMA Type 1 enclosure & backplane (Red or Black). Hinged doors with key lock.

Certified Options Summary:
See subcomponent table (Table 3) for a complete list of certified components and options. Note: The only difference between Model U2 and R2 is the color of the enclosure. Therefore model U2 certified through testing of model R2.

Mounting Configuration:
Wall mounted - rigid
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5g \quad z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5g \quad z/h = 0.0$

Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
FC2005	U2	9.3	22.4	20.9	41	Black enclosure	Interp.
	R2	9.3	22.4	20.9	41	Red enclosure	1

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 2200522



Manufacturer: Siemens Industry, Inc.	Table Description: Panel Subcomponents	TABLE 3
Model Line: FC2005 and FC901		

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5 g$ $z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5 g$ $z/h = 0.0$

Component Type	Manufacturer	Model	Description	Notes	UUT	
Main Board	Siemens	FCM901-U2	S54433-B100-A1 (Desigo)		1	
Housing (black)		FH901-U2	S54433-B103-A1 (Desigo)	Similar to FH901-R2	Interp.	
Housing (red)		FH901-R2	S54433-B103-A2 (Desigo)		1	
Configuration Kit		FX901-U2	S54433-S104-A1 (Desigo)		1	
Configuration Cable		FXA901-A1	S54433-K108-A1		1, 2	
Housing Trim Kit (black)		FHA902-U1	S54433-B106-A1	Similar to FHA902-R1	Interp.	
Housing Trim Kit (red)		FHA902-R1	S54433-B106-A2		1, 2	
Battery Bracket		FHA901-U1	S54433-B107-A1		1, 2	
City Tie Board		FCI2020-U1	A5Q00037945		1, 2	
Power Supply Module		FP2011-U1	500-450222		1, 2	
Main Board		FCM901-U3	S54433-B101-A1 (Cerberus)		2	
Housing (black)		FH901-U3	S54433-B103-A3 (Cerberus)	Similar to FH901-R3	Interp.	
Housing (red)		FH901-R3	S54433-B103-A4 (Cerberus)		2	
Configuration Kit		FX901-U3	S54433-S105-A1 (Cerberus)		2	
NP Series 12v 12Ah Battery		N/A	NP 12-12		1, 2	

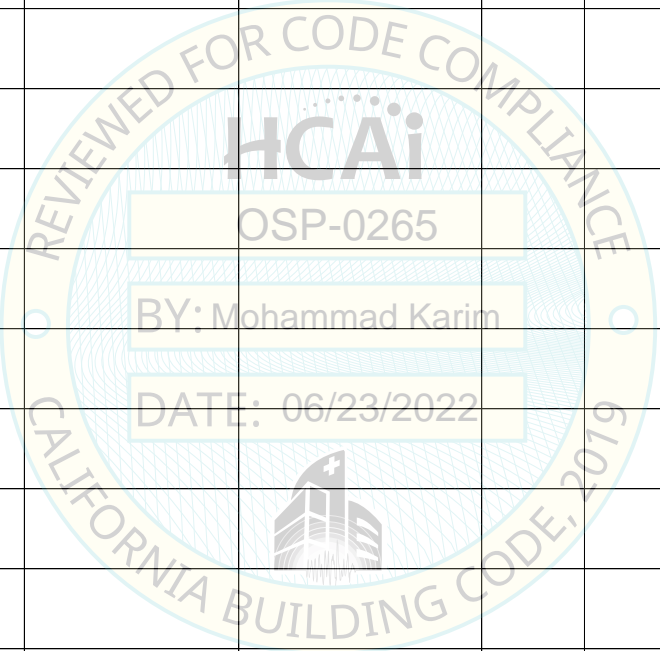
UNIT UNDER TEST (UUT) SUMMARY SHEET



TRU PROJECT NO. 2200522

Manufacturer: Siemens Industry, Inc.
Model Line: FC2005 and FC901

UUT	Unit Description	Report Number	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{Ds}	z/h	I _p
1	FC2005 Fire Alarm Control Panel	PR009646	National Technical Systems - Fullerton	2012	Yes	2.5	1, 0	1.5
2	FC901 Fire Alarm Control Panel	PR009646	National Technical Systems - Fullerton	2012	Yes	2.5	1, 0	1.5



Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 2200522



Manufacturer: Siemens Industry, Inc.	UUT 1
Model Line: FC2005 and FC901	
Model Number: FC2005-R2	
Serial Number: N/A	

Product Construction Summary:
16 ga. Carbon Steel NEMA Type 1 enclosure (red) and backplane. Hinged doors with key lock.

Options/Subcomponent Summary:
FC2005 Main Board - Desigo (S54433-B100-A1) : Two 2.5 amp (24VDC) Notification Appliance Circuits (NACs), One Configurable Signaling Line Circuit (SLC), 160x64 dots LCD display.
120/240 VAC 50/60 Hz power supply module (500-450222) with 6.6 amps of system power;
Polarity reversing city tie module (A5Q00037945); 12v 12Ah lead-acid battery (Yuasa NP12-12)

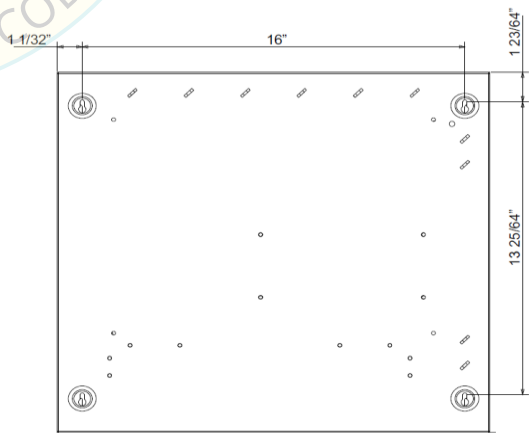
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
41	9.3	22.4	20.9	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2010)	2.5	1.0 0.0	1.5	4.00	3.00	1.67	0.67

Test Mounting Details:



UUT1 was wall mounted-rigid with four (4) Grade 5 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 2200522



Manufacturer: Siemens Industry, Inc.	UUT 2
Model Line: FC2005 and FC901	
Model Number: FC901-R3 Serial Number: N/A	

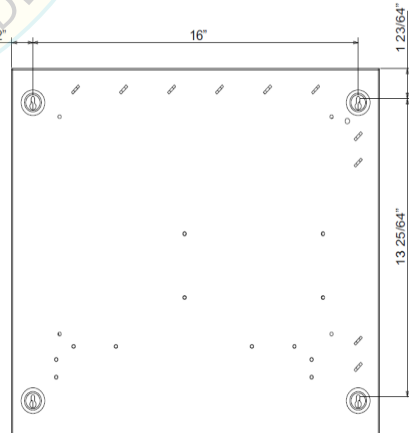
Product Construction Summary:
16 ga. Carbon Steel NEMA Type 1 enclosure and backplane. Hinged doors with key lock.

Options/Subcomponent Summary:
FC901 Main Board - Cerberus (S54433-B101-A1): Teo 2.5 amp (24VDC) Notification Appliance Circuits (NACs), One Configurable Signaling Line Circuit (SLC), 160x164 dots LCD display.
120/240 VAC 50/60 Hz power supply module (500-450222) with 6.6 amps of system power;
Polarity reversing city tie module (A5Q00037945); 12v 12Ah lead-acid battery (Yuasa NP12-12).

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
41	9.3	22.4	20.9	N/A	N/A	N/A

<i>UUT Highest Passed Seismic Run Information</i>									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156 (2010)	2.5	1.0 0.0	1.5	4.00	3.00	1.67	0.67	

Test Mounting Details:



UUT2 was wall mounted-rigid with four (4) Grade 5 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.