



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0273

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Siemens Industry, Inc.

Manufacturer's Technical Representative: Evelyn Esteban

Mailing Address: 8 Fernwood Road, Florham Park, NJ 07932

Telephone: 973.593.6582

Email: Evelyn.esteban@siemens.com

Product Information

Product Name: Siemens FC2025/2050 & FC922/924 Fire Alarm Control Panels

Product Type: Fire Alarm Control Panel

Product Model Number: Various (See Attachment)

(List all unique product identification numbers and/or part numbers)

General Description: Fire Alarm Control Panels with internal and external components as shown in the attachments.

Mounting Description: Wall Mounted - Rigid

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Contact Person: Galen Reid

Mailing Address: 5215 Hellyer Ave., Suite 210, San Jose, CA 95138

Telephone: 541-604-7225

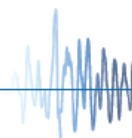
Email: greid@structint.com

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:  Date: 9/4/2019

Title: Program Manager Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

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





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

Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Name: Andrew Coughlin, SE California License Number: S6082

Mailing Address: 5215 Hellyer Ave, Suite 210, San Jose, CA 94608

Telephone: (844) 878-0200 Email: acoughlin@structint.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): _____

BY: Mohammad Aliaari

DATE: 08/06/2020

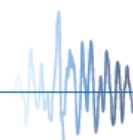
Testing Laboratory

Company Name: National Technical Systems, Inc.

Contact Name: Ratish Rao

Mailing Address: 1536 East Valencia Drive, Fullerton, CA 92831

Telephone: (714) 879-6110 Email: Ratish.rao@nts.com





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Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.88

S_{DS} (Design spectral response acceleration at short period, g) = 2.50

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

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

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

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = by: Mohammad Aliaari

C_d (Deflection amplification factor) = _____

I_p (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 ☐ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☒ Manufacturer's Catalog

☒ Other(s) (Please Specify): Product Matrices

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

Signature: M. Aliaari

Date: August 06, 2020

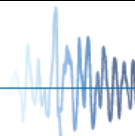
Print Name: Mohammad Aliaari

Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.50

z/h = 1.0

Condition of Approval (if applicable): _____



1801452-CR-001 R1

SIEMENS

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1801452-CR-001 R1

SIEMENS



| Manufacturer: Siemens Industry, Inc. | | Table Description: Panel Components | | | TABLE 2 | |
|--|------------------------|--|---|--|------------------------------------|-----|
| Model Line: FC2025/FC2050/FT2050 & FC922/FC924/FT924 | | | | | | |
| Building Code: CBC 2019 Seismic Certification Limits: $S_{DS} = 2.5 g$ $z/h = 1.0$ $I_p = 1.5$ | | | | | | |
| Component Type | Manufacturer | Model | Description | Notes | UUT | |
| One Height Enclosure | Siemens Industry, Inc. | FHB2001-U1/R1 | Back Box | | 3 | |
| | | FHD2004-U1 | Inner Door | | 3 | |
| | | FHD2001-U2/R2 | Outer Door | | 3 | |
| | | FHD2001-U3/R3 | Outer Door | Similar to FHD2001-U2/R2 (label) | Interp. | |
| | | FHD2006-U1 | Clear Lens | | 3 | |
| FHA2035-U1/R1 | | Trim Kit | Depopulated FHA2036-U1/R1 | Interp. | | |
| FHB2002-U1/R1 | | Back Box | UUT1: -R1, UUT2: -U1 | 1,2 | | |
| FHD2004-U1 | | Inner Door | | 1,2 | | |
| FHD2005-U1 | | Inner Door | Similar to FHD2004-U1 (window) | Interp. | | |
| FHD2002-U2/R2 | | Outer Door | UUT2: -U2 | 2 | | |
| FHD2003-U2/R2 | | Outer Door | UUT1: -R2 | 1 | | |
| FHD2002-U3 | | Outer Door | Similar to FHD2002-U2/R2 (label) | Interp. | | |
| FHD2003-U3/R3 | | Outer Door | Similar to FHD2003-U2/R2 (label, color) | Interp. | | |
| FHD2006-U1 | | Clear Lens | | 1,2 | | |
| FHA2036-U1/R1 | | Trim Kit | UUT1: -R1 | 1 | | |
| Panel Components | | Siemens Industry, Inc. | FCM2018-U2, FCM2019-U2 | Operating Interface Units | UUT1 & UUT3: Both | 1,3 |
| | | | FCM2018-U3, FCM2019-U3 | (18 = w/o LED module; 19 = w/LED module) | UUT2: Both | 2 |
| | | | FCI2016-U1, FCI2017-U1 | Periphery Boards (16 = 250pt; 17 = 500pt.) | UUT1: FCI2016-U1, UUT2: FCI2017-U1 | 1,2 |
| | | | FTI-2001-A1 | Fire Terminal Board | | 3 |
| Notes: Suffix "2" at end of model number represents Desigo branding label. Suffix "3" at end of model number represents Cerberus PRO branding label. Suffix "1" at end of model number represents universal component. "R"=Red, "U"=Black | | | | | | |

TRU Compliance, by Structural Integrity Associates, Inc.

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1801452-CR-001 R1

SIEMENS



| Manufacturer: Siemens Industry, Inc. | | Table Description: Panel Components | | | TABLE 2 |
|--|------------------------|---|--|--|----------------|
| Model Line: FC2025/FC2050/FT2050 & FC922/FC924/FT924 | | | | | |
| Building Code: CBC 2019 | | Seismic Certification Limits: $S_{DS} = 2.5 g$ $z/h = 1.0$ $I_p = 1.5$ | | | |
| Component Type | Manufacturer | Model | Description | Notes | UUT |
| Panel Components | Siemens Industry, Inc. | FCA2015-U1 | Digital Alarm Communicator Transmitter | | 1 |
| | | FN2001-U1 | SAFEDLINK / FCnet Network Module | | 1,3 |
| | | FCI2011-U1 | NAC Expansion Module | | 2 |
| | | XCI2001-U1 | Releasing Module | | 1 |
| | | FCA2016-A1 | RS485 Class A Module | | 1 |
| | | FCI2020-U1 | Leased-Line City Tie Module | | 1 |
| | | FN2006-U1 | Single-Mode Fiber-Optic Module | | 1,3 |
| | | FN2007-U1 | Multi-Mode Fiber-Optic Module | Similar to FN2006-U1 (integrated chip) | Interp. |
| | | FHA2031-U1 | DIN-Rail Kit | | 1 |
| | | FHA2032-U1 | Battery Bracket | | 1,2 |
| | | FCM2034-U2 | LED Option Module | Similar to FCM2023-U2 (led color) | Interp. |
| | | FCM2034-U3 | LED Option Module | Similar to FCM2023-U3 (led color, label) | Interp. |
| | | FCM2023-U2 | LED Option Module | | 1 |
| | | FCM2023-U3 | LED Option Module | Similar to FCM2023-U2 (label) | Interp. |
| | | FCM2022-U2 | Blank Option Module | | 1 |
| | | FCM2022-U3 | Blank Option Module | Similar to FCM2022-U2 (label) | Interp. |
| | | FP2011-U1 | 170 Watt Power Supply | | 2 |
| | | FP2012-U1 | 300 Watt Power Supply | | 1 |
| | | BP-61 | 24V 15AH Battery Set | | 1,2 |
| Notes: Suffix "2" at end of model number represents Desigo branding label. Suffix "3" at end of model number represents Cerberus PRO branding label. Suffix "1" at end of model number represents universal component. "R"=Red, "U"=Black | | | | | |

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Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET

SIEMENS



1801452-CR-001 R1

| | | |
|-----------------------|------------------------|--------------|
| Manufacturer: | Siemens Industry, Inc. | UUT 1 |
| Model Line: | FC2050 | |
| Model Number: | Two Height Enclosure | |
| Serial Number: | | N/A |

Product Construction Summary:
16 GA carbon steel NEMA Type 1 enclosure (Red). Hinged doors with key lock.
FC2050 – Desigo branding label

Options/Subcomponent Summary:
FHB2002-R1, FHD2004-U1, FHD2003-R2, FHD2006-U1, FHA2036-R1, FCM2018-U2, FCM2019-U2,
FCI2016-U1, FCI2017-U1, FCA2015-U1, FN2001-U1, XCI2001-U1, FCA2016-A1, FCI2020-U1, FN2006-U1, FHA2031-U1, FHA2032-U1,
FCM2023-U2, FCM2022-U2, FP2012-U1, BP-61

| UUT Properties | | | | | | | | | |
|--|----------------|---------------------|---------------------|-------------------------------|----------------|------------------------|------------------------|------------------------|------------------------|
| Weight (lb) | Dimension (in) | | | Lowest Natural Frequency (Hz) | | | | | |
| | Depth | Width | Height | Front-Back | Side-Side | Vertical | | | |
| 60 | 6 | 28 | 28.5 | 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 (2018) | 2.5 | 1.0 | 1.5 | 4 | 3 | 1.67 | 0.67 |

Test Mounting Details:



UUT wall mounted to the test fixture using four (4) 5/16" Diameter Hex Head 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

SIEMENS



1801452-CR-001 R1

| | | |
|-----------------------|------------------------|--------------|
| Manufacturer: | Siemens Industry, Inc. | UUT 2 |
| Model Line: | FC2050 | |
| Model Number: | Two Height Enclosure | |
| Serial Number: | | N/A |

Product Construction Summary:
16 GA carbon steel NEMA Type 1 enclosure (Black). Hinged doors with key lock.
FC2050 – Desigo branding label

Options/Subcomponent Summary:
FHB2002-U1, FHD2004-U1, FHD2002-U2, FHD2006-U1, FCM2018-U3, FCM2019-U3, FCI2016-U1, FCI2017-U1, FCI2011-U1, FHA2032-U1, FP2011-U1, BP-61

| UUT Properties | | | | | | | | | |
|--|----------------|---------------------|---------------------|-------------------------------|----------------|------------------------|------------------------|------------------------|------------------------|
| Weight (lb) | Dimension (in) | | | Lowest Natural Frequency (Hz) | | | | | |
| | Depth | Width | Height | Front-Back | Side-Side | Vertical | | | |
| 60 | 6 | 28 | 28.5 | 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 (2018) | 2.5 | 1.0 | 1.5 | 4 | 3 | 1.67 | 0.67 |

Test Mounting Details:



UUT wall mounted to the test fixture using four (4) 5/16" Diameter Hex Head 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

SIEMENS



1801452-CR-001 R1

| | | |
|-----------------------|------------------------|--------------|
| Manufacturer: | Siemens Industry, Inc. | UUT 3 |
| Model Line: | FT2050 | |
| Model Number: | One Height Enclosure | |
| Serial Number: | N/A | |

Product Construction Summary:
16 GA carbon steel NEMA Type 1 enclosure (Red). Hinged doors with key lock.
FT2050 – Desigo branding label

Options/Subcomponent Summary:
FHB2001-R1, FHD2004-U1, FHD2001-R2, FHD2006-U1, FCM2018-U2, FCM2019-U2, FTI-2001-A1, FN2001-U1, FN2006-U1

| UUT Properties | | | | | | | | | |
|---|---------------------|---------------------|--------|-------------------------------|------------------------|------------------------|------------------------|------------------------|--|
| Weight (lb) | Dimension (in) | | | Lowest Natural Frequency (Hz) | | | | | |
| | Depth | Width | Height | Front-Back | Side-Side | Vertical | | | |
| 30 | 4.5 | 15 | 20 | 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 (2018) | 2.5 | 1.0 | 1.5 | 4 | 3 | 1.67 | 0.67 | |

Test Mounting Details:



UUT wall mounted to the test fixture using four (4) 5/16" Diameter Hex Head bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.