APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0425 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Johnson Controls Inc.

Manufacturer's Technical Representative: Tom Naughton

Mailing Address: 6 Technology Park Drive, Westford, MA 01886

Telephone: (978) 577-4231 Email: Thomas.Naughton@JCI.com

Product Information

Product Name: iSTAR Controllers

Product Type: Access Controllers

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

General Description: PCB iSTAR controllers and power supplies inside NEMA 1 enclosures

Mounting Description: Rigid wall mounted

Applicant Information

Applicant Company Name: The VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thevmcgroup.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: 1/28/19

Title: President The VMC Group

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

Company Name: The VMC Group

Name: Kenneth Tarlow California License Number: SE-2851

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: ken.tarlow@thevmcgroup.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: National Technical Systems, Inc.

Contact Name: Michael Rowe

Mailing Address: 1146 Massachusetts Avenue, Boxborough, MA 01719

Telephone: (978) 266-1001 Email: michael.rowe@nts.com

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 g

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) = 2.0

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) =

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):

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: Date: May 6, 2019

Print Name: Ali Sumer Title: DSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.5 z/h = 1.0

Condition of Approval (if applicable):

Table 1 - Certified Components

Manufacturer: *Johnson Controls, Inc. (Sold as Tyco Security Products, Inc.)*

Model Line	Model Number	Max. Dimensions (in)			Max. Weight (lb)	Mounting	Unit
		Depth	Width	Height			
Tyco iSTAR Pro	STAR008W-64A NPS	4.0	16.5	24.3	20.9	Rigid Wall	Extrapolated
	STAR016W-64A NPS	4.0	16.5	24.3	21.7	Rigid Wall	Extrapolated
	STAR008W-64A	4.0	16.5	24.3	22.5	Rigid Wall	Extrapolated
	STAR016W-64A	4.0	16.5	24.3	23.3	Rigid Wall	UUT 1
Tyco iSTAR Ultra	USTAR008	5.0	22.3	25.3	25.6	Rigid Wall	Interpolated
	USTAR016	5.0	22.3	25.3	27.3	Rigid Wall	UUT 2
Tyco iSTAR Ultra SE	USTAR008-SE-NPS	4.0	16.5	24.3	20.9	Rigid Wall	Extrapolated [1,2,3]
	USTAR016-SE-NPS	4.0	16.5	24.3	21.7	Rigid Wall	Extrapolated [1,2,3]
	USTAR008-SE	4.0	16.5	24.3	22.5	Rigid Wall	Extrapolated [1,2,3]
	USTAR016-SE	4.0	16.5	24.3	23.3	Rigid Wall	Extrapolated [1,2,3]

Notes:
1. iSTAR Ultra SE uses the same enclosure as iSTAR Pro
2. iSTAR Ultra SE uses the same GCM as used in the iSTAR Ultra
3. iSTAR Ultra SE uses ACMs that are reduced feature boards of the iSTAR Ultra ACM boards

Table 2 - Certified Subcomponents

Manufacturer: *Johnson Controls, Inc. (Sold as Tyco Security Products, Inc.)*

Subcomponent	Model Number	Description	Material	Unit
General Control Module	STARGV-64MBA	iSTAR Pro GCM Board	PCB	UUT 1
	USTAR-GCM	iSTAR Ultra GCM Board	PCB	UUT 2
Access Control Module	STAR-ACM8-WA	iSTAR Pro ACM Board, Qty 2	PCB	UUT 1
	USTAR-ACM	iSTAR Ultra ACM Board, Qty 2	PCB	UUT 2
Power Supply	STAR-PS	100-240 VAC Input, 12 VDC Output	Copper and Plastic	UUT 1&2
Enclosure	STAR-CAN	iSTAR Pro Enclosure	Carbon Steel, NEMA 1	UUT 1
	USTAR-CAN	iSTAR Ultra	Carbon Steel, NEMA 1	UUT 2

Table 3 - Tested Units

Manufacturer: *Johnson Controls, Inc. (Sold as Tyco Security Products, Inc.)*

Model Number	Dimensions (in)			Weight (lb)	Mounting	Unit
	Depth	Width	Height			
STAR016W-64A	4.0	16.5	24.3	23.3	Rigid Wall	UUT 1
USTAR016	5.0	22.3	25.3	27.3	Rigid Wall	UUT 2

UUT1

UNIT UNDER TEST (UUT) Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Johnson Controls, Inc. (Sold as Tyco Security Products, Inc.)

Product Line: Tyco iSTAR Controllers

Model Number: STAR016W-64A

Product Construction Summary: 16ga carbon steel enclosure, NEMA 1

Options / Component Summary: General controller module: STARGC-64MBA (Qt. 1). Access Control Module: STAR-ACM8-WA (Qt. 2). Power Supply: STAR-PS input 100 VAC to 240VAC, output 12VDC. Enclosure: STAR-CAN (Qt. 1)

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

UUT Properties

Operating Weight (lb)	Dimensions (in)				Lowest Natural Frequency (Hz)		
		Length	Width	Height	Front-Back	Side-Side	Vertical
23.3	UUT1	4.0	16.5	24.3	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 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

UUT 1 was mounted to the wall test fixture with (4) 1/4'' Grade 2 bolts with washers. Bolts were spaced approximately 15'' horizontally and 23'' vertically

UUT2

UNIT UNDER TEST (UUT) Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Johnson Controls, Inc. (Sold as Tyco Security Products, Inc.)

Product Line: Tyco iSTAR Controllers

Model Number: USTAR016

Product Construction Summary: 16ga carbon steel enclosure, NEMA 1

Options / Component Summary: General controller module: USTAR-GCM (Qt. 1). Access Control Module: STAR-ACM (Qt. 2). Enclosure: USTAR-CAN (Qt. 1)

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

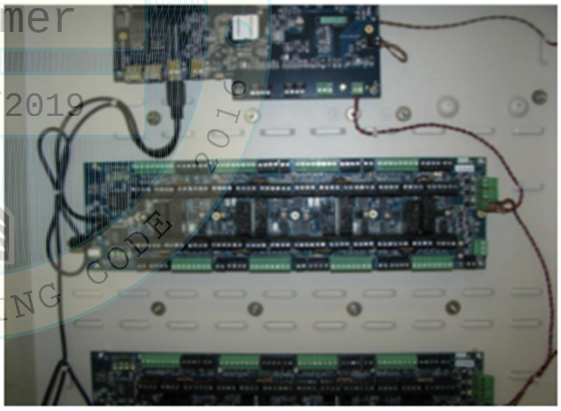
UUT Properties

Operating Weight (lb)	Dimensions (in)				Lowest Natural Frequency (Hz)		
		Length	Width	Height	Front-Back	Side-Side	Vertical
27.3	UUT2	5.0	22.3	25.3	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 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:



UUT 2 was mounted to the wall test fixture with (6) 1/4'' Grade 2 bolts with washers. Bolts were spaced at approximately 21'' horizontally and 12'' vertically