



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-0914

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Emerson Automation Solutions

Manufacturer's Technical Representative: Brandon Ward

Mailing Address: 2057 Lovi Rd Building 3/3A, Freedom, PA 15042

Telephone: (314) 553-7086

Email: Brandon.Ward@emerson.com

Product Information

Product Name: Remote IO Cabinet

Product Model Number(s): DH452APP

Product Category: Industrial Control Panels

Product Sub-Category: Building Automation and Security Systems

General Description: Remote IO expansion cabinet for the Ovation DCS system which contains PDUs, breakers, RNI controllers, and IO.

Mounting Description: Base Mounted Rigid

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: DCL Labs, LLC

Contact Person: Nastya Veyngerova

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: nastya.veyngerova@shaketest.com

Title: Seismic Test Engineer



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

Company Name: THE VMC GROUP

Name: Kenneth Tarlow

California License Number: S2851

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (800) 569-8423

Email: ken.tarlow@thevmcgroup.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)

Contact Person: Josh Sailer

Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431

Telephone: (775) 358-5085

Email: Josh@shaketest.com

BY: Mohammad Karim

DATE: 08/13/2026



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Seismic Parameters

Certified Response Spectral Acceleration Factors: (F_p/W_p)

Horizontal (A Flx-H), $g =$ 1.99 (A Rig-H), $g =$ 1.34

Vertical (A Flx-V), $g =$ 0.83 (A Rig-V), $g =$ 0.33

SDS (Design spectral response acceleration at short period, g) = 1.242g with $z/h=1.0$ and 0.0

H_f (Force amplification height factor) = 3.5 at $z/h=1.0$; 1.0 at $z/h=0$

R_u (Structure ductility reduction factor) = 1.3 at $z/h=1.0$; 1.0 at $z/h=0$

I_p (Importance factor) = 1.5

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

HCAI Approval (For Office Use Only) - Approval Expires on 08/13/2032

Date: 8/13/2026

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Condition of Approval (if applicable): _____

OSP-0914

BY: Mohammad Karim

DATE: 08/13/2026



Special Seismic Certification

Table 1 - Certified Components



DCL Project Number: 56460-2601

Manufacturer: Emerson Automation Solutions

Product Line: Remote IO Cabinet

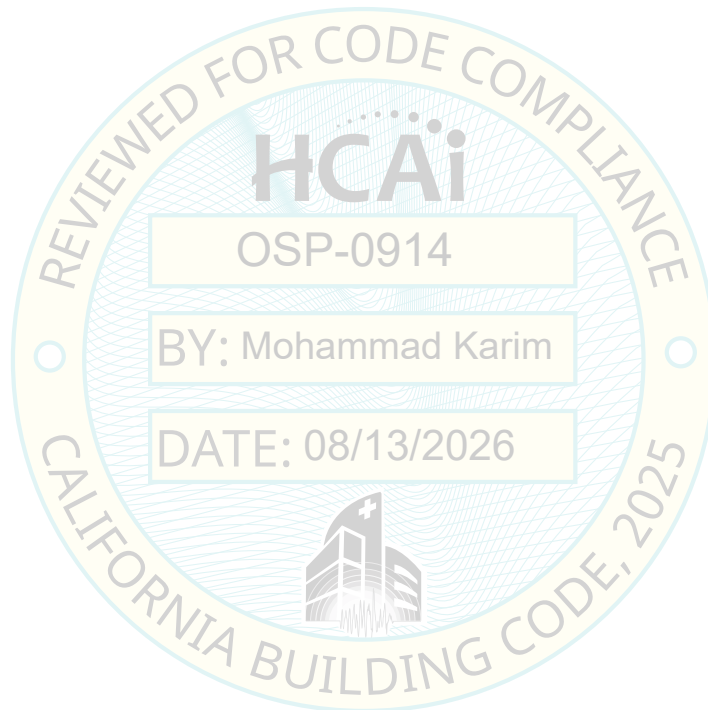
Certified Product Construction: Stainless Steel

Mounting: Rigid Base Mount

Certified Seismic Levels: $S_{ds} = 1.242g$ with $z/h=1.0$ and 0.0

Factors for Force Amplification and Structure Ductility Reduction: $H_f = 3.5$ at $z/h=1.0$; 1.0 at $z/h=0$ and $R_{\mu} = 1.3$ at $z/h=1.0$; 1.0 at $z/h=0$

Model Number	Dimensions [in.]			Weight [lb.]	Unit
	Depth	Width	Height		
DH452APP	24.0	25.0	79.5	432	UUT-01



Special Seismic Certification

Table 2 - Certified Subcomponents

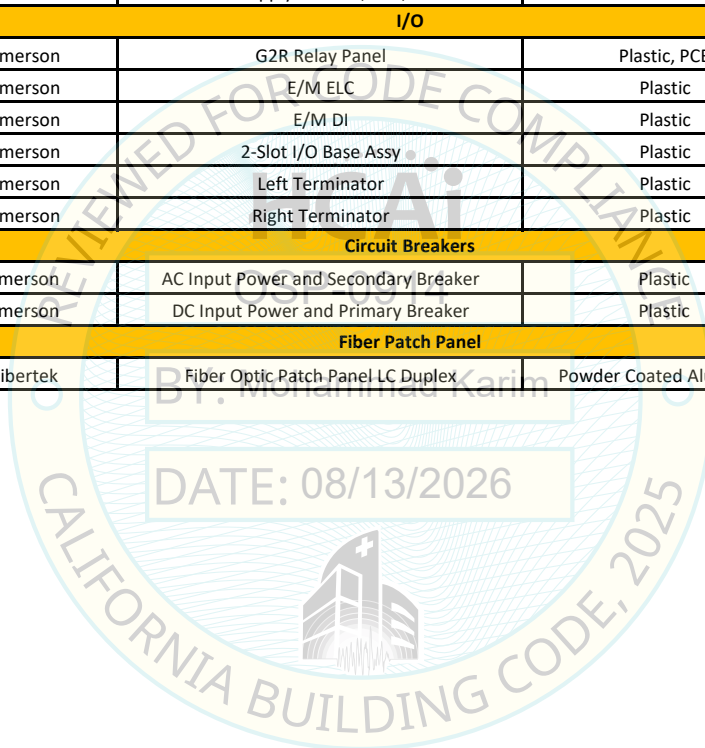


DCL Project Number: 56460-2601

Product Line: Remote IO Cabinet

Certified Seismic Levels: Sds = 1.242g with z/h=1.0 and 0.0

Model Number	Manufacturer	Description	Material	Weight [lb.]	Unit
Enclosures					
DH452APP	Hoffman	RNI Cabinet (Sealed)	Stainless Steel	328	UUT-01
Power Distribution Module					
5X00489G01	Emerson	Ovation Power Distribution Module	Stainless Steel, Plastic	6	UUT-01
Remote Node Interface					
5X00819G03	Emerson	Fiber RNI Kit	Plastic	3	UUT-01
Power Supplies					
1X01046H01L	Emerson	Power Supply +24VDC, 10A, 240W	Stainless Steel	2	UUT-01
I/O					
5A26457G02	Emerson	G2R Relay Panel	Plastic, PCB	<1	UUT-01
5X00419G03	Emerson	E/M ELC	Plastic	<1	UUT-01
1C31107G02	Emerson	E/M DI	Plastic	<1	UUT-01
1B30035H01	Emerson	2-Slot I/O Base Assy	Plastic	2	UUT-01
1B30023H01	Emerson	Left Terminator	Plastic	2	UUT-01
1B30023H02	Emerson	Right Terminator	Plastic	2	UUT-01
Circuit Breakers					
5X00588G02	Emerson	AC Input Power and Secondary Breaker	Plastic	<1	UUT-01
5X00588G06	Emerson	DC Input Power and Primary Breaker	Plastic	<1	UUT-01
Fiber Patch Panel					
DPSTE12 Series	Fibertek	Fiber Optic Patch Panel-LC Duplex	Powder Coated Aluminum	<1	UUT-01



Special Seismic Certification

Table 3 - Tested Units



DCL Project Number: 56460-2601

Manufacturer: Emerson Automation Solutions

Product Line: Remote IO Cabinet

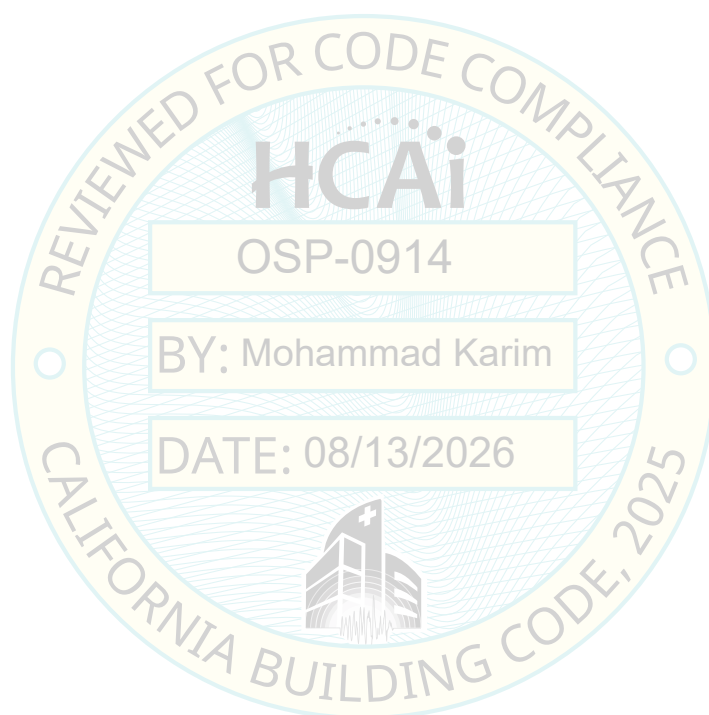
Certified Product Construction: Stainless Steel

Mounting: Rigid Base Mount

Certified Seismic Levels: $S_{ds} = 1.242g$ with $z/h=1.0$ and 0.0

Factors for Force Amplification and Structure Ductility Reduction: $H_f = 3.5$ at $z/h=1.0$; 1.0 at $z/h=0$ and $R_d = 1.3$ at $z/h=1.0$; 1.0 at $z/h=0$

Model Number	Dimensions [in.]			Weight [lb.]	Unit
	Depth	Width	Height		
DH452APP	24.0	25.0	79.5	432	UUT-01



UNIT UNDER TEST (UUT) Summary Sheet



UUT-01

DCL Report Number: 56462-2601

Test Dates: 7/1/26 - 7/2/26

Manufacturer: Emerson Automation Solutions

Product Line: Remote I/O Cabinet

Model Number: DH452APP

Product Construction Summary: Stainless Steel

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
432	24.0	25.0	79.5	14.3	14.0	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _r	R _μ	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES	1.242	1.0	3.5	1.3	1.5	1.99	1.34	N/A	N/A
	AC156-24	1.242	0.0	1.0	1.0		N/A	N/A	0.83	0.33

Unit Mounting Description: The unit was base mounted to DCL shake table interface plate using (4) manufacturer provided seismic kit plates (Hoffman #ASMP3455) and (4) ½" Grade 5 bolts. The bolts were spaced 19" apart in depth- and lengthwise directions measured on-center.



UNIT UNDER TEST (UUT) Summary Sheet



UUT-01

Options / Component Summary:

Model Number	Manufacturer	Material
Enclosures		
DH452APP	Hoffman	Stainless Steel
Power Distribution Module		
5X00489G01	Emerson	Stainless Steel, Plastic
Remote Node Interface		
5X00819G03	Emerson	Plastic
Power Supplies		
1X01046H01L	Emerson	Stainless Steel
I/O		
5A26457G02	Emerson	Plastic, PCB
1C31107G02	Emerson	Plastic
1B30035H01	Emerson	Plastic
1B30023H01	Emerson	Plastic
1B30023H02	Emerson	Plastic
5X00419G03	Emerson	Plastic
Circuit Breakers		
5X00588G02	Emerson	Plastic
5X00588G06	Emerson	Plastic
Fiber Patch Panel		
DPSTE12 Series	Fibertek	Powder Coated Aluminum

