



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0776

HCAI Special Seismic Certification Preapproval (OSP)

Type:  New  Renewal

Manufacturer Information

Manufacturer: Eaton

Manufacturer's Technical Representative: Eddie Wilkie

Mailing Address: 175 Vista Blvd, Arden, NC 28704

Telephone: (828) 651-0707

Email: eddiewilkie@eaton.com

Product Information

Product Name: Switchgear/Switchboards

Product Type: Switchboards

Product Model Number: Pow-R-Line XD Switchboard

General Description: Low Voltage Distribution Switchboards, NEMA-1

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: WE Gundy & Associates, Inc

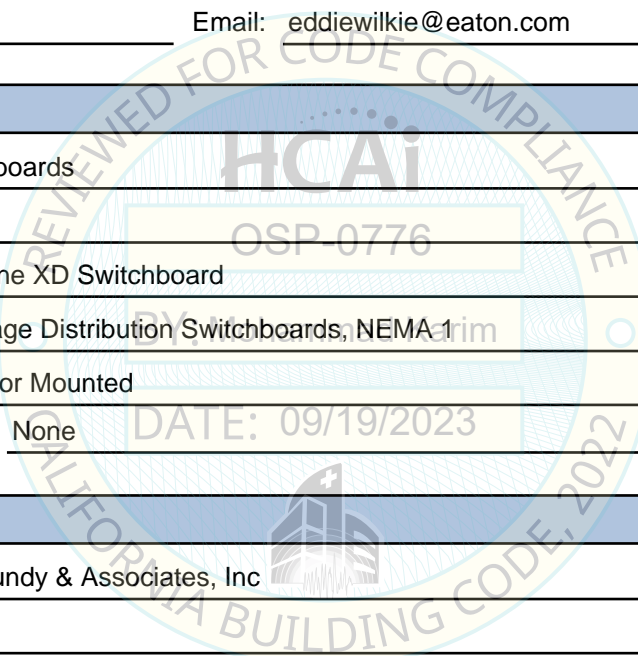
Contact Person: Travis Soppe

Mailing Address: PO Box 9121, Boise, ID 83707

Telephone: (208) 342-5989

Email: tsoppe@wegai.com

Title: President





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
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**California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)**

Company Name: W.E. GUNDY & ASSOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

**Certification Method**

GR-63-Core  ICC-ES AC156  IEEE 344  IEEE 693  NEBS 3

Other (Please Specify): \_\_\_\_\_

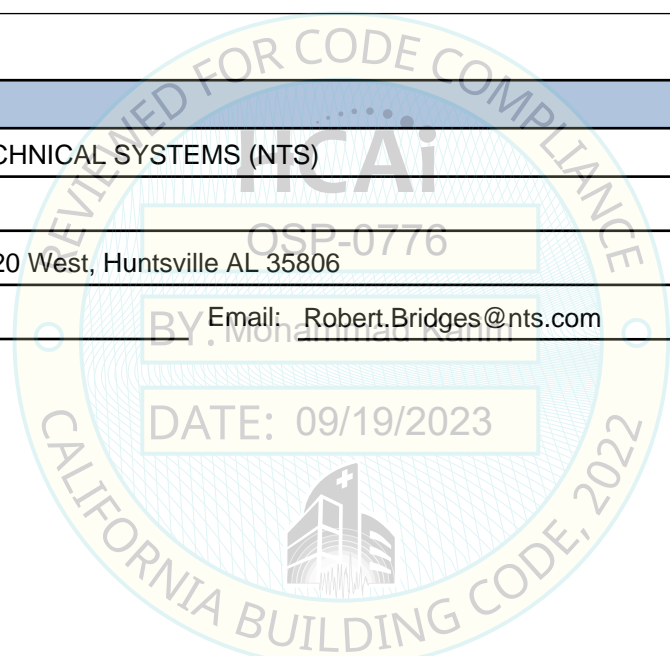
**Testing Laboratory**

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)

Contact Person: Robert Bridges

Mailing Address: 7800 Highway 20 West, Huntsville AL 35806

Telephone: (256) 837-4411 Email: Robert.Bridges@nts.com





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FACILITIES DEVELOPMENT DIVISION**

**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.31

SDS (Design spectral response acceleration at short period, g) = 1.75

$a_p$  (Amplification factor) = 2.5

$R_p$  (Response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

**HCAI Approval (For Office Use Only) - Approval Expires on 09/19/2029**

Date: 9/19/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 1.75 z/h = 1

Condition of Approval (if applicable): DATE: 09/19/2023

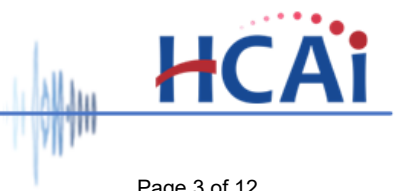
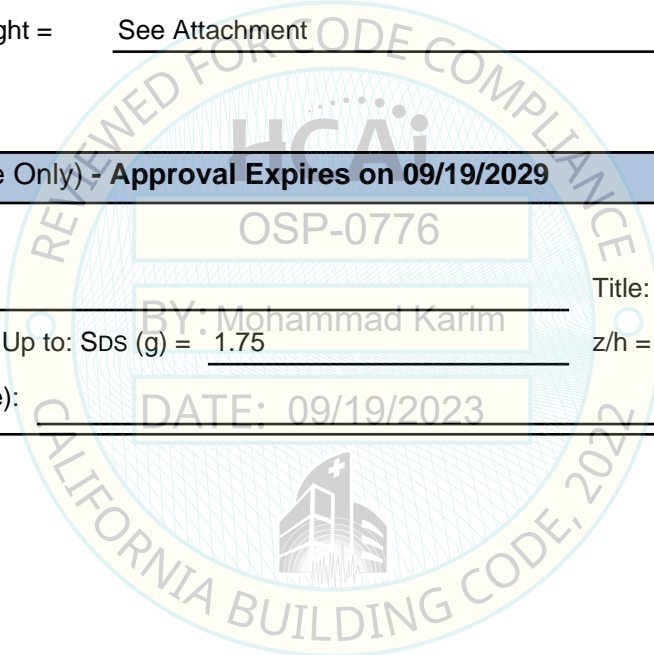



TABLE 1	EATON PRLXD SWITCHBOARD SEISMIC CERTIFICATION PRODUCT LINE MATRIX						 <b>WEGAI</b> <small>W.E. GUNDY &amp; ASSOCIATES, INC.</small> <small>STRUCTURAL &amp; EARTHQUAKE ENGINEERING</small>	
	<i>Seismic Certification Limits: <math>S_{DS} = 1.75</math> at <math>z/h = 1</math> : <math>F_p = 1.31g</math></i>							
Section Identification <sup>1</sup>	Main Bus Amperage	NEMA	Main Enclosure Dimensions (in)			Max Weight (lbs)	Max COG (in)	Representative UUT <sup>3</sup>
			Width	Depth	Height			
PRLXD-T	-	1	20 - 44	60 - 90	96	1000	55	extrapolated
PRLXD-A	-	1	22 - 44	60 - 90	96	1350	55	extrapolated
<b>PRLXD-MTF / 019</b>	<b>4000</b>	<b>1</b>	<b>36.2</b>	<b>90.5</b>	<b>97.0</b>	<b>1543</b>	<b>58.3</b>	<b>UUT<sub>y</sub>-10A</b>
PRLXD-F	2000 - 5000	1	22 - 44	60 - 90	96	1650	52	extrapolated
PRLXD-MF	2000 - 5000	1	22 - 44	60 - 90	96	1650	52	extrapolated
PRLXD-MT	2000 - 5000	1	22 - 44	60 - 90	96	1650	52	extrapolated
PRLXD-MTF	2000 - 5000	1	22 - 44	60 - 90	96	1650	52	extrapolated
<b>PRLXD-F / 034</b>	<b>2000</b>	<b>1</b>	<b>22.0</b>	<b>92.5</b>	<b>96.0</b>	<b>1622</b>	<b>50.4</b>	<b>UUT<sub>x</sub>-3</b>
<b>PRLXD-F / 035</b>	<b>4000</b>	<b>1</b>	<b>36.0</b>	<b>92.5</b>	<b>96.0</b>	<b>1983</b>	<b>52.4</b>	<b>UUT<sub>x</sub>-4</b>
PRLXD-F	2000 - 5000	1	24 - 44	60 - 90	96	2200	50	interpolated
PRLXD-MF	2000 - 5000	1	24 - 44	60 - 90	96	2200	50	interpolated
PRLXD-MT	2000 - 5000	1	24 - 44	60 - 90	96	2200	50	interpolated
PRLXD-MTF	2000 - 5000	1	24 - 44	60 - 90	96	2200	50	interpolated
<b>PRLXD-F / 059</b>	<b>5000</b>	<b>1</b>	<b>24.3</b>	<b>62.5</b>	<b>96.5</b>	<b>2275</b>	<b>46.9</b>	<b>UUT<sub>x</sub>-6</b>
<b>PRLXD-MF / 016</b>	<b>4000</b>	<b>1</b>	<b>24.2</b>	<b>90.5</b>	<b>97.0</b>	<b>2345</b>	<b>55.3</b>	<b>UUT<sub>y</sub>-10B</b>
PRLXD-F	2000 - 5000	1	36 - 44	60 - 90	96	2500	58	interpolated
PRLXD-MF	2000 - 5000	1	36 - 44	60 - 90	96	2500	58	interpolated
PRLXD-MT	2000 - 5000	1	36 - 44	60 - 90	96	2500	58	interpolated
PRLXD-MTF	2000 - 5000	1	36 - 44	60 - 90	96	2500	58	interpolated
PRLXD-F	2000 - 5000	1	44	60 - 90	96	2815	56	interpolated
PRLXD-MF	2000 - 5000	1	44	60 - 90	96	2815	56	interpolated
PRLXD-MT	2000 - 5000	1	44	60 - 90	96	2815	56	interpolated
PRLXD-MTF	2000 - 5000	1	44	60 - 90	96	2815	56	interpolated
<b>PRLXD-MT / 058</b>	<b>5000</b>	<b>1</b>	<b>44.3</b>	<b>61.0</b>	<b>96.5</b>	<b>2815</b>	<b>56.1</b>	<b>UUT<sub>x</sub>-5</b>

Notes:


<sup>1</sup> The switchboard product line consists of section aragments as designated below:

A - Auxiliary Section / T - Transition Section / F - Feeder Section / MF - Main-Feeder Section / MT - Main-Tie Section / MTF - Main-Tie-Feeder Section

<sup>2</sup> NEMA 1 enclosures are constructed of carbon steel and manufactured by Eaton.

<sup>3</sup> The units were tested at different times and the subscripts on the UUT's reference the following lab test reports: x - PR113244-TR-20 / y - PR087462-01TR-rev1

TABLE 2	EATON PRLXD SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX		 <b>WEGAI</b> <small>W.E. GUNDY &amp; ASSOCIATES, INC. STRUCTURAL &amp; EARTHQUAKE ENGINEERING</small>	
ID/Catalog Number	Manufacturer	Description	Weight (lbs)	Representative UUT
<b>Power Circuit Breakers - Magnum SB/DS/DN, Drawout</b>				
MDNC4N	Eaton	4000A	336	UUT <sub>y</sub> -10A
MDS/SBS	Eaton	4000A	336	interpolated
MDS/SBS	Eaton	5000A	343	interpolated
SBSC5N	Eaton	5000A	343	UUT <sub>x</sub> -5
<b>NRX Power Circuit Breakers - Drawout</b>				
NYR6123W	Eaton	800A / 600V	87	UUT <sub>y</sub> -10B
NRX-NF(NY)	Eaton	800A / 600V	87	interpolated
NYR6123W	Eaton	1200A / 600V	87	UUT <sub>y</sub> -10B
NRX-NF(NY)	Eaton	1200A / 600V	87	interpolated
NRX-RF(RY)	Eaton	800A / 480V	211	interpolated
NRX-RF(RY)	Eaton	1200A / 480V	211	interpolated
NRX-RF(RY)	Eaton	1600A / 480V	211	interpolated
NRX-RF(RY)	Eaton	2000A / 480V	211	interpolated
NRX-RF(RY)	Eaton	2500A / 480V	211	interpolated
NRX-RF(RY)	Eaton	3000A / 480V	211	interpolated
RYRC303W	Eaton	3000A / 480V	211	UUT <sub>y</sub> -10B
<b>Series G Molded Case Circuit Breakers - Drawout</b>				
JGC325032W	Eaton	250A	14	UUT <sub>x</sub> -3
JG - Frame	Eaton	70A-250A	14	interpolated
LGC360032W	Eaton	600A	20	UUT <sub>x</sub> -3
LG - Frame	Eaton	150A-600A	20	interpolated
NG - Frame	Eaton	800A-1200A	45	interpolated
NGC312032E	Eaton	1200A	45	UUT <sub>x</sub> -6
<b>Series C/G Molded Case Circuit Breakers (MCCB)</b>				
FD3225	Eaton	225A	5	UUT <sub>x</sub> -4
F - Frame	Eaton	10A-225A	5	interpolated
KD3400F	Eaton	400A	12	UUT <sub>x</sub> -4
K - Frame	Eaton	70A-400A	12	interpolated
LGE3630NN	Eaton	600A	20	UUT <sub>x</sub> -4
L - Frame	Eaton	125A-600A	20	interpolated
HLD3600F	Eaton	600A	20	UUT <sub>x</sub> -4
MDL3800F	Eaton	800A	30	UUT <sub>x</sub> -4
M - Frame	Eaton	300A-800A	30	interpolated
ND312T33W	Eaton	1200A	45	UUT <sub>x</sub> -4
N - Frame	Eaton	400A-1200A	45	interpolated
Notes:				

TABLE 2	EATON PRLXD SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX			 <b>WEGAI</b> <small>W.E. GUNDY &amp; ASSOCIATES, INC.</small> <small>STRUCTURAL &amp; EARTHQUAKE ENGINEERING</small>	
ID/Catalog Number	Manufacturer	Description	Weight (lbs)	Representative UUT	
<b>Power Defense Molded Case Circuit Breakers (MCCB) 1 - 3 Poles (3 Pole Data)</b>					
PDG23M0225	Eaton	225A	4	UUT <sub>x</sub> -4	
PDG-2	Eaton	15A-225A	4	interpolated	
PDG33M0400	Eaton	400A	11	UUT <sub>x</sub> -4	
PDG-3	Eaton	45A-400A	11	interpolated	
PDG33M0600	Eaton	600A	12	UUT <sub>x</sub> -4	
PDG-3	Eaton	45A-600A	12	interpolated	
PDG43M0800	Eaton	800A	30	UUT <sub>x</sub> -4	
PDG-4	Eaton	300A-800A	30	interpolated	
PDG-5	Eaton	320A-1200A	47	interpolated	
PDG531200	Eaton	1200A	47	UUT <sub>x</sub> -4	
<b>Meters</b>					
PXM 350	Eaton	Power Xpert Meter	1.0	extrapolated	
PXM 1000, 3000	Eaton	Power Xpert Meter	1.0	UUT <sub>x</sub> -3	
PXM 2000	Eaton	Power Xpert Meter	2.0	interpolated	
PXM4000, 6000, 8000	Eaton	Power Xpert Meter	9.2	UUT <sub>x</sub> -3	
<b>SPD (Surge Protective Device)</b>					
SPD100480YIC	Eaton	SPD 100	4	UUT <sub>x</sub> -3	
SPD	Eaton	SPD50, 80, 100, 120, 160, 200	4	interpolated	
SPD	Eaton	SPD250, 300, 400	7	interpolated	
SPD400480Y1C	Eaton	SPD 400	7	UUT <sub>x</sub> -3	
Notes:					



UUT<sub>x</sub>-3

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



<b>Manufacturer:</b> Eaton	<b>Test Location:</b> NTS - Huntsville, AL
<b>Product:</b> PRLXD Switchboard	<b>Test Date:</b> March 2020
<b>Section ID / SN:</b> PRLXD-F / MEDPCHIRON-034	<b>Report Number:</b> PR113244-TR-20

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 2000A NEMA 1 enclosure with rear access. Feeder section housing copper bus, JGC325032W / LGC360032W circuit breakers, PXM 1000/3000 and PXM 4000/6000/8000 meters, and SPD100480YIC/ SPD400480YIC surge protection devices.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,622	22.0	92.5	96.0	7.5	3.5	18

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>Ds</sub> (g)	z / h	I <sub>p</sub>	A <sub>F</sub> LX-H (g)	A <sub>R</sub> IG-H (g)	A <sub>F</sub> LX-V (g)	A <sub>R</sub> IG-V (g)
CBC 2022 / ICC-ES AC156	1.75	1.0	1.5	2.80	2.10	1.18	0.47

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT<sub>x-4</sub>

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



**Manufacturer:** Eaton **Test Location:** NTS - Huntsville, AL

**Product:** PRLXD Switchboard **Test Date:** March 2020

**Section ID / SN:** PRLXD-F / MEDPCHIRON-035 **Report Number:** PR113244-TR-20

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 4000A NEMA 1 enclosure with rear access. Feeder fixed 50x chassis section with copper bus, FD3225 / KD3400F/ LGE3630NN / HLD3600F / MDL3800F / ND312T33W / PDG23M0225 / PDG33M0400 / PDG33M0600 / PDG43M0800 / PDG531200 circuit breakers.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,983	36.0	92.5	96.0	7.5	3.5	18

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>Ds</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	1.75	1.0	1.5	2.80	2.10	1.18	0.47

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.



UUT<sub>x-5</sub>

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



<b>Manufacturer:</b> Eaton	<b>Test Location:</b> NTS - Huntsville, AL
<b>Product:</b> PRLXD Switchboard	<b>Test Date:</b> March 2020
<b>Section ID/SN:</b> PRLXD-MT / MEDPCHIRON-058	<b>Report Number:</b> PR113244-TR-20

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 5000A NEMA 1 enclosure with rear access. Main / Tie section housing copper bus, a SBSC5N drawout Magnum power circuit breaker, and overhead breaker lifting device.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,815	44.25	61.0	96.5	6.5	3.5	22

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	1.75	1.0	1.5	2.80	2.10	1.18	0.47

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT<sub>x</sub>-6

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



<b>Manufacturer:</b> Eaton	<b>Test Location:</b> NTS - Huntsville, AL
<b>Product:</b> PRLXD Switchboard	<b>Test Date:</b> March 2020
<b>Section ID/SN:</b> PRLXD-F / MEDPCHIRON-059	<b>Report Number:</b> PR113244-TR-20

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 5000A NEMA 1 enclosure with rear access. Main / Feeder section housing copper bus with four NGC312032E circuit breakers.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,275	24.25	62.5	96.0	6.5	3.5	22

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>AFLX-H</sub> (g)	A <sub>ARIG-H</sub> (g)	A <sub>AFLX-V</sub> (g)	A <sub>ARIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	1.75	1.0	1.5	2.80	2.10	1.18	0.47

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT<sub>y</sub>-10A

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



**Manufacturer:** Eaton **Test Location:** NTS - Huntsville, AL

**Product:** PRLXD Switchboard **Test Date:** October 2018

**Section ID/SN:** PRLXD-MTF / MEDPCHIRON-019 **Report Number:** PR087462-01TR-rev1

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 4000A NEMA 1 enclosure with rear access. Main / Tie / Feeder section housing copper bus, a MDNC4N drawout Magnum power circuit breaker.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,543	36.2	90.5	97.0	9.9	5.1	> 33

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.40	1.0	1.5	3.84	2.88	1.61	0.65

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.



UUT<sub>y</sub>-10B

**UNIT UNDER TEST (UUT)  
SUMMARY SHEET**



**Mounting Details:** Rigid floor mounted with (6) 1/2" grade 5 bolts



<b>Manufacturer:</b> Eaton	<b>Test Location:</b> NTS - Huntsville, AL
<b>Product:</b> PRLXD Switchboard	<b>Test Date:</b> October 2018
<b>Section ID/SN:</b> PRLXD-MF / MEDPCHIRON-016	<b>Report Number:</b> PR087462-01TR-rev1

**UUT Function:** Divides electrical power feed into branch circuits while providing a protective circuit breaker or fuse for each circuit in a common enclosure.

**UUT Description:** 4000A NEMA 1 enclosure with rear access. Main / Feeder section housing copper bus with three NYR6123W and one RYRC303W power circuit breakers.

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,345	24.2	90.5	97.0	9.8	5.1	>33

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>Ds</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.40	1.0	1.5	3.84	2.88	1.61	0.65

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.