



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0011 – 10

OSHPD 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: eddiwilkie@eaton.com

Product Information

Product Name: Unit and Group Mounted Elevator Control Switches

Product Type: Elevator Control Switches

Product Model Number: See Product Range Summary

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

General Description: Switch assemblies for the controlled shut down of single or multiple elevator units providing appropriate interface controls and relays to the fire alarm systems. Unit or group mounted, 30-1200A, 3-phase, 600 Vac maximum, NEMA 1, 3R, 4 and 12 enclosures. Marked as either Eaton or Bussman.

Mounting Description: Rigid Wall Mounted

Applicant Information

Applicant Company Name: Eaton

Contact Person: Eddie Wilkie

Mailing Address: 175 Vista Blvd, Arden, NC 28704

Telephone: 828-651-0707

Email: eddiwilkie@eaton.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

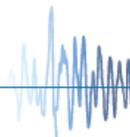
Signature of Applicant: *Eddie Wilkie*

Date: 2/19/13

Title: Engineering Manager

Company Name: Eaton

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



osHPD



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: ISAT

Name: William V. Joerger California License Number: SE 4545

Mailing Address: 1020 Crews Road, Quite Q, Matthews, NC 28105

Telephone: 510-714-0216 Email: wvjoerger@isatsb.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: Wyle Laboratories

Contact Name: Phil McNaught

Mailing Address: P.O. Box 77777, Huntsville, AL 35807

Telephone: 256-716-4130 Email: Phil.mcnaught@wyle.com





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**Seismic Parameters**

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 2.06

$S_{DS}$  (Design spectral response acceleration at short period, g) = 2.74

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

$R_p$  (Equipment or component response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.5

$I_p$  (Importance factor) = 1.5

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

Equipment or Component Natural Frequencies (Hz) = See Resonance Summary

Overall dimensions and weight (or range thereof) = See Product Range Summary

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) = \_\_\_\_\_

$\Omega_0$  (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) = \_\_\_\_\_

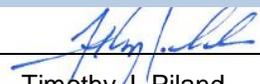
Tank(s) designed in accordance with ASME BPVC, 2010:  Yes  No

**List of Attachments Supporting Special Seismic Certification**

Test Report(s)  Drawings  Calculations  Manufacturer's Catalog

Other(s) (Please Specify): Product Range Summary

**OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019**

Signature:  Date: April 4, 2013

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to :  $S_{DS}$  (g) = 2.74  $z/h$  = 1.0

Condition of Approval (if applicable): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





Product Range Summary  
Wall Mounted Elevator Control Panels<sup>6,7</sup>

Model	Model #	Rating (Amps)	NEMA Enclosure Type <sup>5</sup>	Voltage (Maximum)	Width (in.)	Height (in.)	Depth (in.)	Conductor Material (Cu/Al)	Weight (lbs.)	S <sub>DS</sub> (g)	Notes	UUT
Elevator Control	ES1T1R1F1B	30	1	600VAC	17.25	29.75	11.5	Cu	51	2.74	1	1
	ES1XXXXXXXX <sup>2</sup>	30	1, 3R, 4	600VAC	17.25	29.75	11.5	Cu	51	2.74	1	Interpolated
	ES2XXXXXXXX <sup>2</sup>	60	1, 3R, 4	600VAC	17.25	29.75	11.5	Cu	60	2.74	1	Interpolated
	ES3XXXXXXXX <sup>2</sup>	100	1, 3R, 4	600VAC	17.25	29.75	11.5	Cu	60	2.74	1	Interpolated
	ES4XXXXXXXX <sup>2</sup>	200	1, 3R, 4	600VAC	21.5	32.75	11.5	Cu	76	2.74	1	Interpolated
	ES5T1R1GF3B	400	1	600VAC	26.75	54.5	11.5	Cu	142	2.74	1	19
	See Note 3	400	1, 3R, 4	600VAC	26.75	54.5	11.5	Cu	142	2.74	1	Interpolated
	See Note 3	400	1	600VAC	40	57	11.5	Cu	400	2.74	1	Interpolated
	See Note 3	600	1	600VAC	40	73.75	11.5	Cu	460	2.74	1	Interpolated
	See Note 3	800	1	600VAC	40	90	11.5	Cu	530	2.74	1	Interpolated
	See Note 3	1200	1	600VAC	40	90	12	Cu	582	2.74	1	Interpolated
SM060812-001	1200	1	600VAC	40.5	90.25	12	Cu	582	2.74	1	2	

1 - Carbon Steel Enclosure

2 - See Product Numbering System

3 - Engineered to Order. Unique Model number assigned to specific product.

5 - NEMA 3R includes rain shield and gasket material for door. NEMA 4 includes gasket material for seams.

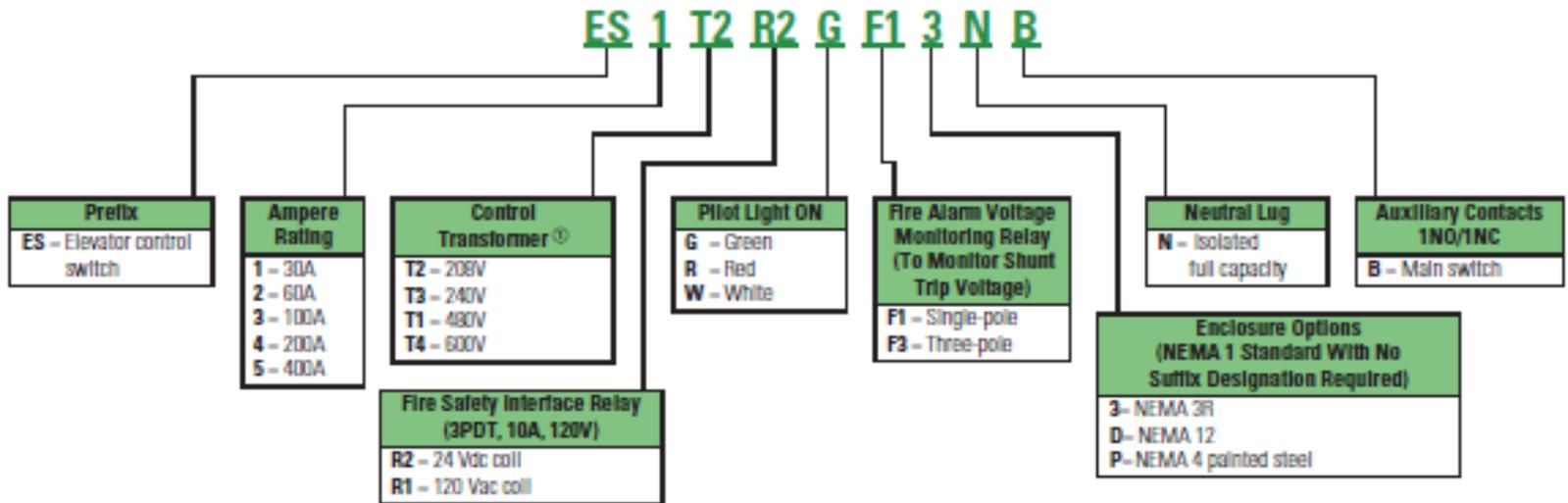
6 -Manufactured by Eaton

7 - Marked as either "Eaton Elevator Control " or "Bussman Power Module Panel".

# Elevator Control Switch

## Unit Mounted - Product Numbering System

### Elevator Control Switch





**Certified Major Component Summary  
Wall Mounted Elevator Control Switches**

Molded Case Switches (Single)								
(Model)/Frame	Size (Amps)	Voltage (Maximum)	Dimensions / Weights				Manufacturer	Unit
			Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)		
(6629C85G10)/F	30	600	4.13	3.38	6	4.5	Eaton	1
F	30-200	600	4.13	3.38	6	4.5	Eaton	Interpolated
LG	400	600	5.48	4.09	10.13	16	Eaton	Interpolated
(LGK3400KSG)/LG	400	600	5.48	4.09	10.13	16	Eaton	19

Molded Case Switches (Twins)								
Model	Size (Amps)	Voltage	Dimensions / Weights				Manufacturer	Unit
			Width (in.)	Depth (in.)	Height (in.)	Weight (lbs.)		
FDPB3601JSA	Blank/30	600	28.875	8.10	8.25	22	Eaton	2
FDPB3602JSA	Blank/60	600	28.875	8.10	8.25	22	Eaton	Interpolated
FDPB3603JSA	Blank/100	600	28.875	8.10	8.25	22	Eaton	Interpolated
FDPB3604JSA	Blank/200	600	28.875	8.10	8.25	22	Eaton	Interpolated
FDPB3611JSA	30/30	600	28.875	8.10	8.25	26	Eaton	Interpolated
FDPB3612JSA	30/60	600	28.875	8.10	8.25	26	Eaton	Interpolated
FDPB3613JSA	30/100	600	28.875	8.10	8.25	26	Eaton	Interpolated
FDPB3614JSA	30/200	600	28.875	8.10	8.25	29	Eaton	Interpolated
FDPB3622JSA	60/60	600	28.875	8.10	8.25	26	Eaton	Interpolated
FDPB3623JSA	60/100	600	28.875	8.10	8.25	26	Eaton	Interpolated
FDPB3624JSA	60/200	600	28.875	8.10	8.25	29	Eaton	Interpolated
FDPB3633JSA	100/100	600	28.875	8.10	8.25	26	Eaton	2
FDPB3634JSA	100/200	600	28.875	8.10	8.25	29	Eaton	Interpolated
FDPB3644JSA	200/200	600	28.875	8.10	8.25	32	Eaton	2

Control Relays								
Model	Operating Voltage	Poles	Dimensions (in.)			Weight (lbs.)	Manufacturer	Unit
			Width	Height	Depth			
D5PR3A-A3	120 Vac	3	1.37	2.31	1.37	0.19	Eaton	1, 19
D5PR3T1	24 Vdc	3	1.50	2.18	1.38	0.19	Eaton	Interpolated
2961419	120 Vac	1	0.50	1.14	0.62	0.03	Phoenix	2

Transformers									
Model	Voltage (Primary)	Size (VA)	Dimensions (in.)			Weight (lbs.)	Winding Material	Manufacturer	Unit
			Width	Height	Depth				
C0100E5EFB	480 Vac	100	3.75	4.63	3.62	5.77	Copper	Eaton	1,2,19



## Certified Enclosures<sup>1</sup> - Elevator Control

Model Number	Enclosure Dimensions (in.)			Nema Type Ratings	Manufacturer	Test in UUT #
	Width	Height	Depth			
N/A	17.25	29.75	11.50	1	Eaton	1
N/A	17.25	29.75	11.50	3R, 4	Eaton	Interpolated
N/A	26.75	54.50	11.50	3R, 4	Eaton	Interpolated
N/A	26.75	54.50	11.50	1	Eaton	19
N/A	40.50	73.75	12.00	1	Eaton	Interpolated
N/A	40.50	90.25	12.00	1	Eaton	2

1. All enclosures made from carbon steel.



Elevator Control  
Resonant Frequency Summary

Report	UUT	Front to Back (Hz)	Side to Side (Hz)	Vertical (Hz)
70282R12	1	N/A	N/A	N/A
70282R12	2	N/A	N/A	N/A
70282R12	19	N/A	N/A	N/A

\* - UUT rigidly mounted to wall fixture.

## UUT 1 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Elevator Control

Model Number: ES1T1R1F1B

Product Construction Summary:

Cabinet is constructed of electro-coated carbon steel, NEMA 1 rating.

Options/Component Summary: Relay (D5PR3A-A3), Control Transformer (C0100E5EFB), Molded Case Switch (F Frame)

### UUT Properties (As Tested)

Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
51	11.5	17.25	29.75	N/A	N/A	N/A

Seismic Test Parameters								
Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.74	1	1.5	4.38	3.29	1.84	0.74

UUT maintained structural integrity and functionality as observed in post test inspection and operation checks.



UUT 1 (top center) was mounted to a rigid wall frame using (4) 3/8-16 bolts. The steel frame was welded to the shake table.

## UUT 2 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Elevator Control

Model Number/UUT Identifier: ECP1200/SM060812-001

Product Construction Summary:

Cabinet is constructed of powder-coated carbon steel, NEMA 1 rating.

Options/Component Summary: Molded Case Switch Assemblies (FDPB3612JSA, FDPB3633JSA, FDPB3644JSA). Control Transformer (C0100E5EFB). Relay (2961419).

### UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
582	12	40.5	90.25	N/A	N/A	N/A

### Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.74	1	1.5	4.38	3.29	1.84	0.74

UUT maintained structural integrity and functionality as observed in post test inspection and operation checks.



UUT 2 (left) was mounted to a rigid wall frame using (4) 1/2-13 bolts. The steel frame was welded to the shake table.

## UUT 19 (Unit Under Test) Summary Sheet

Manufacturer: Eaton Corporation

Product Line: Elevator Control

Model Number: ES5T1R1GF3B

Product Construction Summary:

Cabinet is constructed of electro-coated carbon steel, NEMA 1 rating.

Options/Component Summary: Relay (D5PR3A-A3), Control Transformer (C0100E5EFB), Molded Case

Switch (L Frame, Series G)

### UUT Properties (As Tested)

Weight (lbs.)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
142	11.5	26.75	54.5	N/A	N/A	N/A

### Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.74	1	1.5	4.38	3.29	1.84	0.74

UUT maintained structural integrity and functionality as observed in post test inspection and operation checks.



UUT19 (bottom left) was mounted to a rigid wall frame using (4) 1/2-13 bolts. The steel frame was welded to the shake table.