



FORELL/ELSESSER ENGINEERS, INC.
Structural Engineers

February 11, 2014

Sirjan Xhurxhi
Design Engineer
General Electric
41 Woodford Avenue
Plainville, CT 06062

Re: GE LV Transformers
ASCE 7-10, 2012 IBC, and IEEE-693-2005 Seismic and Special Seismic Certification

Forell/Elmesser has reviewed shake table test reports 6982, 8036, 8428, and 2665-R prepared by Clark Testing Laboratory, which summarizes testing for the GE Low Voltage Transformers. The testing was performed according to both the requirements of ICC-ES AC156 and IEEE-693-2005 and demonstrated that the equipment satisfied testing requirements for $I_p=1.5$, Site Class D, $a_p=1.0$, $R_p=2.5$, and $Z/h = 1.0$. In accordance with ASCE 7-10, which contains the seismic provisions of the 2012 International Building Code [IBC], AC156 is an acceptable test procedure for determining the seismic certification of equipment. ASCE 7-10, Section 13.2.1.2.b allows for testing alone to be used to satisfy all IBC seismic design requirements for electrical equipment.

Using AC156 procedures, F/E determined that the test results demonstrate the adequacy of the GE Low Voltage Transformers up to the peak ground seismicity (S_{DS}) in the table below. Therefore, F/E concludes that the test data demonstrates that the GE Low Voltage Transformers are certified for installation in accordance with the seismic provisions of the 2012 IBC for any site with a site-specific S_{DS} equal or less than the attached S_{DS} table and at any location within a building.

Enclosure Type & Product Names	Mounting	NEMA Rating	kVA	Width	Depth	Height	Weight	S_{DS} (g)	IEEE-693 Seismic Level
Vented/Non-Vented QL, QF, FC Transformore	Floor	1, 2	11-1000	19"-48"	16"-40"	27"-58"	50 - 4,290 lbs	2.19	High
	Wall Bracket	1, 2	11-112.5	19"-32"	17"-28"	27"-33"	50 - 800 lbs	2.08	High
							800 - 1,018 lbs	1.16	High
Encapsulated & Enclosed Servicenter	Floor	1, 2, 3R	5-30	11"-35"	11"-35"	27"-33"	50 - 500 lbs	2.42	High
	Wall Bracket	1, 2, 3R	5-30	11"-27"	11"-25"	27"-33"	50 - 500 lbs	2.5	High
Control Power IP	Floor	1, 2	0.05-3	3"-9"	3"-7"	3"-6"	2.5 - 50 lbs	2.31	High
	Wall	1, 2	0.05-3	3"-9"	3"-7"	3"-6"	2.5 - 50 lbs	1.91	High

Notes:

1. Rigid wall-bracket mounted refers to a transformer mounted to the wall via the wall bracket mounting kits.
Rigid wall mounted refers to a transformer mounted directly to the wall without a wall bracket mounting kit.

Should you any questions or need further information please do not hesitate to contact us.

Thank you.

Sincerely,

FORELL/ELSESSER ENGINEERS, INC.

Marco Scanu, SE #4454, Principal

