





CERTIFICATE OF COMPLIANCE SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-48153-01C (Revision 3)

Expiration Date: 10/31/2024

Certification Parameters:

The nonstructural products (mechanical and/or electrical components) listed on this certificate are CERTIFIED¹ FOR SEISMIC APPLICATIONS in accordance with the following building code² releases.

IBC 2012

The following model designations, options, and accessories are included in this certification. Reference report number VMA-48153-01 as issued by VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Siemens; Variable Frequency Drives Gen-II Robicon W-Series and Sinamics G120E; 2.2A - 68A

The above referenced equipment is **APPROVED** for seismic application when properly installed³, used as intended, and contains a Seismic Certification Label referencing this Certificate of Compliance⁴. As limited by the tabulated values, below grade, grade, and roof-level installations, installations in essential facilities, for life safety applications, and/or of equipment containing hazardous contents are permitted and included in this certification with an Equipment Importance Factor assigned as I_p =1.5. The equipment is qualified by successful seismic shake table testing at the nationally recognized University of California Berkeley Pacific Earthquake Engineering Research Center under the witness of the ISO Accredited Product Certification Agency, the VMC Group.

Certified Seismic Design Levels					
	Importance $I_p \le 1.5$	z/h ≤ 1.0	z/h = 0.0		
Certified IBC	Soil Classes A-E Risk Categories I-IV Design Categories A-F	S _{DS} ≤ 1.320 g	S _{DS} ≤ 2.110 g		

Certified Seismic Installation Methods Rigid Mounting From Unit Base To Rigid Structure Directly To Structural Wall Directly To Non-Structural Wall/Enclosure

HEADQUARTERS

113 Main Street Bloomingdale, NJ 07403 Phone: 973.838.1780 Toll Free: 800.569.8423 Fax: 973.492.8430

102S-103387 Rev18

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Certified Product Table:

Drive Type	Frame Type	Rating (HP)	Input Voltage⁴ (V)	Output Rating (A)	Max Cabinet Dimensions (in) (WxDxH)	Max. Cabinet Weight (lb)	Example Catalog or Model No. ^{1 2 3}
ROBICON W120/ SINAMICS G120E	A3-A5	1-2	460-480	2.2-4.1	20 x 16 x 48	230	6SL3710-1BJ12-2Ay•
	B1-B3	3-5		5.9-10.2			6SL3710-1BJ16-0Ay•
	C1-C3	10-20		16-27		 	6SL3710-1BJ21-8Ay•
	D1-D3	25-40		34-54	26 x 20 x 60	330	6SL3710-1BJ23-8Ay•
	E1-E2	50-60		68-80			6SL3710-1BJ27-5Ay•
	F1-F3	75-125		100-160	30 x 24 x 94	720	6SL3710-1BJ31-1Ay•
	F+1-F+2	150-200		186-240			6SL3710-1BJ32-0Ay•
ROBICON W120CP / SINAMICS G120E	E1-E2	50-60	460-480	68-80		930	6SL3710-3BJ27-5Ay•
	F1-F3	75-125		100-160		1260	6SL3710-3BJ31-1Ay•
	F+1-F+2	150-200		186-240		1660	6SL3710-3BJ32-0Ay•
Robicon W150CP	G1-G3	250-400		310-490	54 x 28 x 100	2880	6SL3710-3GJ33-1AS•
	H1-H2	500-600	 	605-745	68 x 32 x 100	3960	6SL3710-3GJ36-1AS•
	H3	700		840	100 x 32 x 104	6170	6SL3710-3GJ38-4AS•
	J1	800		985		6600	6SL3710-3GJ41-0AS•

1. 'x' may be 1 for power module PM240 or 5 for power module PM250.

2. • may be any number based on the firmware version

3. y may be "R" or "U"

4. Optional 380-480 V input

5. More than one optional cabinet may be attached-main drive cabinet and installed as specified in this document.

6. All enclosures have NEMA 1 or 12 Rated Options

S _{DS} (z/h	=0) S _{DS} (z/h	=1) A _{Flex-H}	A _{Rig-H}	A _{Flex-V}	A _{Rig-V}	F _p /W _p
2.11	1.32	2.112	1.584	1.407	0.563	0.990

This certification includes the product and factory supplied accessories and options. The product and included accessories and options shall be a catalogue design and factory supplied. The product must be installed and attached to the building structure per the manufacturer supplied seismic installation instructions. This certification excludes all non-factory supplied accessories, including but not limited to enclosures, isolation/restraint devices, remote control panels, mounting brackets and other electrical/mechanical components.



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SIEMENS

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Notes & Comments:

- 1. All equipment listed herein successfully passed the seismic acceptance criteria for shake testing non-structural components and systems as set forth in the ICC AC-156. The Test Response Spectrum (TRS) enveloped the Required Response Spectrum (RRS) for all units tested. The tested units were representative sample(s) of a contingent of models and all remained captive and structurally sound after the seismic shake simulation. The units also remained functionally operational after the simulation testing as functional testing was completed by the equipment manufacturer before and after the seismic simulations. Although a seismic qualified unit inherently contains some wind resisting capacity, that capacity is undetermined and is excluded from this certification. Snow/Ice loads have been neglected and thus limit the unit to be installed both indoors (covered by an independent protective structure) and out of doors (exposed to accumulating snow/ice) for ground snow loads no greater than 30 psf for all applications.
- 2. The following building codes are addressed under this certification: IBC 2012 referencing ASCE7-10 and ICC-ES AC-156

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- 3. Refer to the manufacturer supplied installation drawings for anchor requirements and mounting considerations for seismic applications. Required anchor locations, size, style, and load capacities (tension and shear) may be specified on the installation drawings or specified by a 3rd party. Mounting requirement details such as anchor brand, type, embedment depth, edge spacing, anchor-to-anchor spacing, concrete strength, special inspection, wall design, and attachment to non-building structures must be outlined and approved by the Engineer of Record for the project or building. Structural walls, structural floors, and housekeeping pads must also be seismically designed and approved by the project or building Structural Engineer of Record to withstand the seismic anchor loads as defined on the installation drawings. The installing contractor is responsible for ensuring the proper installation of all anchors and mounting hardware.
- 4. For this certificate and certification to remain valid, this certificate must correspond to the "Seismic Certification Label" found affixed to the unit by the factory. The label ensures the manufacturer built the unit in conformance to the IBC seismic design criteria set forth by the Certified Seismic Qualification Agency, the VMC Group, and meets the seismic design levels claimed by this certificate.
- 5. Mechanical, Electrical, and Plumbing connections to the equipment must be flexibly attached as to not transfer load through the connection. The structural integrity of any conduit, cable trays, piping, ductwork and/or flexible connections is the responsibility of others. This certification makes no statements of compliance in regards to NEMA, IP, UL, CSA, or other relevant standards after a seismic event. For compliance to other relevant standards, please contact the manufacturer.
- This certificate applies to units manufactured at: 100 Technology Drive, Alpharetta, GA 30005 3010 Engineering Parkway, Alpharetta, GA 30004
- 7. This certification follows the VMC Group's ISO-17065 Scheme.

fol P. A.I.

John P. Giuliano, PE President, VMC Group



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