




Agency Certifications for Series 5

Vanguard[®] Controllers


Technical Note

This document identifies the current agency certifications for the Series 5 Vanguard controllers and related components. Vanguard simplex and duplex controllers have been determined to be compliant with the following safety, environmental, and EMC standards. The Sure-Link Remote I/O subsystem, available only with Vanguard simplex controllers, is certified for hazardous area installations.

	Environmental Conditions for Process Measurement and Control System: Airborne Containments -- Severity Class G3
Compliant Standard	Certification Level
Conformal Coating	Meets or exceeds ISA-S71.04 1985, Severity Class G3, G2, G1 Environments.


	Electrical Safety (Canada) Industrial Process Measurement and Control
Compliant Standard	Certification Level
CSA 22.2 No. 0	General Requirements - Canadian Electrical Code, Part II
CSA 22.2 No. 0 NFPA 70 (1996)	National Fire Protection Association – National Electrical Code (NEC)
CSA 22.2 No. 0.4	Bonding and Grounding of Electrical Equipment (Protective Grounding)
CAN/CSA-C22.2 No. 61010-1-04	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part1: General Requirements
IEC 61010-1 (2010)	
UL Std. No. 61010-1 (2nd Edition)	


	Environmental Industrial Process Measurement and Control
Compliant Standard	Certification Level
IEC 60654-1 (1993) (IEC 654, Part 1)	Operating Conditions for Industrial Process Measurement and Control Equipment, Part 1: Temperature, Humidity, and Barometric Pressure
IEC 60654-2 (1997) (IEC 654, Part 2)	Operating Conditions for Industrial Process Measurement and Control Equipment, Part 2: Power

	Environmental Industrial Process Measurement and Control
Compliant Standard	Certification Level
IEC 60654-3 (1983) (IEC 654, Part 3)	Operating Conditions for Industrial Process Measurement and Control Equipment, Part 3: Mechanical Influences
IEC 60664-3 (2003) (IEC 654, Part 3)	Insulation Coordination for Equipment Within Low-Voltage Systems, Part 3: Use of Coatings to Achieve Insulation Coordination of Printed Board Assemblies
MIL STD 810E Method 514.4.1	Environmental Test Methods and Engineering Guidelines – Transportation Vibration and Shock

	Electromagnetic Capability (EMC) – European Union 73/23/EEC Low Voltage Directive and 89/336/EEC Electromagnetic Compatibility Directive
Compliant Standard	Certification Level
IEC 61000-6-2 (2005)	Electromagnetic Compatibility (EMC), Part 2 General Standards - Immunity for Industrial Environments
IEC 61000-3-2 (2006) EN 61000-3-2 (2005)	Electromagnetic Compatibility (EMC), Part 3-2: Limits for harmonic current emissions (equipment input current \leq 16 A per phase)
IEC 61000-4-2 (2008)	Electromagnetic Compatibility (EMC), Part 4: Testing and Measurement Techniques Section 2: Electrostatic Discharge Immunity Tests
IEC 61000-4-3 (2006 / A1:2007 / A2:2010)	Electromagnetic Compatibility (EMC), Part 4-3: Testing and Measurement Techniques - Radiated, Radio-Frequency, Electromagnetic Field Imm. Test
IEC 61000-4-4 (2004)	Electromagnetic Compatibility (EMC), Part 4: Testing and Measurement Techniques Section 4: Electrical Fast Transient/Burst Immunity Test
IEC 61000-4-5 (2005)	Electromagnetic Compatibility (EMC), Part 4: Testing and Measurement Techniques Section 5: Surge Immunity Test
IEC 61000-4-6 (2008)	Electromagnetic Compatibility (EMC), Part 4: Testing and Measurement Techniques Section 6: Immunity to conducted disturbances, induced by radio-frequency fields
IEC 61000-4-11 (2004 / CRGD1-2010)	Electromagnetic Compatibility (EMC), Part 4: Testing and Measurement Techniques Section 11: Voltage dips, short interruptions, and voltage variations immunity tests
IEC 61000-6-4 (2007)	Electromagnetic Compatibility (EMC), Part 6-4: Generic Emission Standard for Industrial Environments
CISPR 11 (2009 / A2:2010) (BS EN 55011)	Industrial, scientific and medical (ISM) radio-frequency equipment emissions – Electromagnetic disturbance characteristics – Limits and methods of measurement
IEC 61000-3-3 (2008)	Electromagnetic Compatibility (EMC), Part 3-3: Limits - Limitations of voltage changes, voltage fluctuations and flicker in low-voltage supply systems, for equipment with rated current \leq 16 A per phase and not subject to conditional connection

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	Hazardous Area – SureLink (Remote I/O) Only US: Class I, Div. 2, Groups A, B, C, and D, T3 Canada: Class I, Zone 2, Group IIC, T3	
	Compliant Standard	Certification Level
	CSA 22.1	Canadian Electrical Code, Part 1
	CSA 22.2 No. 30-M1986	Explosion – Proof Enclosures for Use in Class I Hazardous Locations
	CSA 22.2 No. 25 -1966	Enclosures for Use in Class II Groups E, F and G Hazardous Locations
	CSA 22.2 No. 157- 92	Intrinsically Safe & Non-Incendive Equipment for Use in Hazardous Locations
	CSA 22.2 No. 213 - M1987	Non-Incendive Electrical Equipment for Use in Hazardous Locations
	ANSI/NFPA 496	Purged and Pressurized Enclosures for Electrical Equipment

	Regional Certifications for Vanguard Controllers	
	Compliant Standard	Description
	Pattern Approval (Metrology) Certification (2014)	<i>The order of testing and approvement of the types of patterns of measuring instruments is approved by the decision of Gosstantart of the Russian Foundation. It establishes the general requirements to the organization work on tests and the approvement of measuring instruments types. This order of testing and approvement is applied to the measurement patterns, including the measuring systems (complexes), which are used in the sphere of distribution of the state metrological control and supervision.</i>
Declaration of Conformity (CU TR) (2014)	<i>The Declaration of Conformity of the Customs Union Technical Requirements (CU TR) confirms the safety requirements and electromagnetic compatibility and allows exporters and producers to spread their goods on the territory of the Customs Union. NOTE: "CT RU" is replacing both "Declaration of Conformity (GOST)" and "Permit to Use from Rostekhnadzor" moving forward.</i>	

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