



Certificate of Compliance

Certificate: 2171348

Master Contract: 162938

Project: 80037585

Date Issued: 2021-03-31

Issued To: Siemens AG
SI BP
Berliner Ring 23
Rastatt, Baden-Württemberg, 76437
Germany

Attention: Hermann Hasselbach

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Thao Cao*
Thao Cao



PRODUCTS

CLASS 2632 03 - FUEL BURNING EQUIPMENT (GAS) - Gas Burners, Electrical Equipment for Accessories
CLASS 2632 83 - FUEL BURNING EQUIPMENT (GAS) - Gas Burners, Electrical Equipment for Accessories -
CERTIFIED TO U.S. STANDARDS
CLASS 2642 03 - FUEL BURNING EQUIPMENT (OIL) - Oil Burners, Electrical Equipment for Accessories
CLASS 2642 83 - FUEL BURNING EQUIPMENT (OIL) - Oil Burners, Electrical Equipment for Accessories -
CERTIFIED TO U.S. STANDARDS
CLASS 4823 05 - TEMPERATURE-INDICATING AND REGULATING EQUIPMENT - Appliance Type - Gas
Ratio Controls

LMV51 and LMV52 Burner Controls for use in oil- or gas-fired furnaces, consisting of the following components:



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- Basic Unit, Model LMV51.1 xxx 1 xx, LMV51.0 xxx 1 xx, LMV51.3 xxx 1 xx, LMV52.2 xxx 1 xx and LMV52.4 xxx 1 xx; rated 120V, 50/60 Hz, 30W (in standby mode without transformer and without external loads) or 6.3A maximum (with external transformer and external loads); where the x in the model designation may be any alpha-numeric to represent additional manufacturer related versions, with no influence to the electrical safety;
- Infrared Flame Detectors, Model QRI, rated 14V DC, 0.5W maximum (continuous duty); or Visible Light Flame Detector, Model QRB1.../QRB3..., rated 10V DC, 1 mW maximum (intermittent duty), or UV Flame Detector, Model QRA7x... rated 120V AC, 3.4W (continuous duty). May be provided with additional suffix of any alpha-numeric to represent additional manufacturer related versions, with no influence to the electrical safety.
- Actuators, stepper motor type, Model SQM45, rated 2 x 12V AC, 15 VA maximum, powered via bus cable, 3Nm nominal torque maximum; Model SQM48, rated 2 x 12V AC, 34 VA maximum; 35 Nm nominal torque maximum. Model SQM91. rated 2 x 12V AC, 40 VA maximum; 60 Nm nominal torque maximum.

May be provided with additional suffix of any alpha-numeric to represent additional manufacturer related versions, with no influence to the electrical safety.
- Display and Programming Unit, Models AZL52..., rated 2 x 12V AC, powered via bus cable. May be provided with additional suffix of any alpha-numeric to represent additional manufacturer related versions, with no influence to the electrical safety.
- O₂ Module, Model PLL52, rated input 120 Vac, 50/60 Hz, 180VA maximum; output 120 Vac, 50/60 Hz, (sensor heating); separate power and communication signal connection to basic unit via bus cable.
- O₂ Sensor, Model QGO20xxxx1x, rated 120 Vac, 50/60 Hz, 150VA maximum.

<u>Control Timings:</u>	<u>Timings:</u>
Pre-purge:	0.2 to 63 minutes
Post-purge:	0.2 to 63 seconds
Pilot Trial For Ignition	1 to 15 seconds
Main Burner Flame Establishing Period:	1 to 15 seconds
Flame Failure Response Time:	Less than 1 second

Notes:

1. The basic unit and external transformer contain terminal blocks for field connections. They are intended to be installed inside an overall electrical and fire enclosure where the suitability of the combination of the final installation is to be determined.



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2. An external component style, compound-filled transformer, with secondary outputs suitable for class 2 when used in combination with a specified type of fuse in series, is connected to the basic unit.
3. The basic unit, actuators and flame detectors are rated for ambient temperature range in operation from -20°C to 60°C.
4. The integral fuses of the basic unit and O2 Module do not provide branch circuit protection.
5. The suitability of the load control and the VSD (Variable Speed Dive) sensors are to be determined in the end use application.
6. Any ionization probe may also be used for continuous duty.
7. May be used in conjunction with CSA Certified and UL Recognized, UV flame sensor, manufactured by “GN Electronics” P/N 5002-01, for continuous duty.
8. The features of the system are determined primarily by parameter settings rather than by the type of devices. The suitability of the parameter settings including timings and programming, in which the control is used for each final application, is to be determined. The LMV5... units and system components are not interchangeable between different types of plant without matching the parameter settings of the relevant plant.
9. The LMV51 and LMV 52 burner control has been evaluated to meet with the applicable CSA and US requirements in compliance with ANSI Z21.20-2014● CAN/CSA-C22.2 No. 60730-2-5-14● UL 60730-2-5 to a safety level equivalent to that of a primary safety burner control with regard to failure mode effect analysis and Class C software classification.
10. The LMV51 and LMV52 burner control in combination with actuators SQM45 and SQM48 version B has been evaluated to meet with the applicable Canadian requirements in compliance with CSA C22.2 No. 24-15, (Appendix A, Electronic gas/air ratio controls)

Software Version Summary:

Configuration	Programmable Models		Software versions
Gas Burner Control with QRI or QRB1.../QRB3... flame sensor without self testing feature	Basic Unit	LMV51 obsolete	--
		Alternate LMV51, LMV52.2	V05.20 Dated November 11, 2015
		LMV52.4	V10.30 Dated October 23, 2015
	Load Control		V02.10 Dated November 4, 2010
	Actuator (SQM45, SQM48)		V01.70 Dated April 7, 2016
	AZL		V05.10 Dated November 27, 2015
	O2-PLL52 (LMV52 only)		V01.50 Dated April 26, 2012
	VSD (LMV51.3/LMV52 only)		V01.50 Dated February 17, 2009
	Basic Unit	LMV51 obsolete	--
		Alternate LMV51, LMV52.2	V05.20 Dated November 11, 2015
		LMV52.4	V10.30 Dated October 23, 2015



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Gas Burner Control with QRA7x UV flame sensor with self testing feature	Load Control	V02.10 Dated November 4,2010
	Actuator (SQM45, SQM48)	V01.70 Dated April 7, 2016
	AZL	V05.10 Dated November 27, 2015
	O2-PLL52 (LMV52 only)	V01.50 Dated April 26, 2012
	VSD (LMV51.3/LMV52 only)	V01.50 Dated February 17,2009
	QRA7x	V01.01 Dated October 1, 2008

APPLICABLE REQUIREMENTS

ANSI Z21.20-2014● CAN/CSA-C22.2 No. 60730-2-5-14-Automatic electrical controls for household and similar use-Part 2-5: Particular requirements for automatic electrical burner control systems

UL 60730-2-5 (3rd Ed.)-Automatic electrical controls for household and similar use-Part 2-5: Particular requirements for automatic electrical burner control systems

CSA C22.2 No. 24-15, Temperature –indicating and –regulating equipment (Appendix A, Electronic gas/air ratio controls)



Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80037585	2021-03-31	Update report 2171348 to cover alternate construction
000070086175	2016-10-03	Update LMV5... system report 2171348 to ANSI Z21.20-2014●CAN/CSA-C22.2 No. 60730-2-5-14 CAN/CSA-E60730-1:13 including assessment of eGARC to requirements of CSA Std 24-15. New Classes: 2632 03 FUEL BURNING EQUIPMENT(GAS) - Gas Burners, Electrical Equipment for Accessories 2632 83 FUEL BURNING EQUIPMENT(GAS) - Gas Burners, Electrical Equipment for Accessories 2642 03 FUEL BURNING EQUIPMENT (OIL) - Gas Burners, Electrical Equipment for Accessories 2642 83 FUEL BURNING EQUIPMENT (OIL) - Gas Burners, Electrical Equipment for Accessories 4823 05 TEMPERATURE-INDICATING AND REGULATING EQUIPMENT - Appliance Type - Gas air ratio controls
0002580732	2013-04-02	Added new version LMV51.3 & LMV52.4, actuator SQM9..., alternate construction of LMV51 & 52.
0002477252	2011-12-29	Added alternate transformer.
0002298416	2010-07-13	Software safety evaluation.
0002171348	2009-07-10	Combine and supersede reports 1282741 and 1504724; Addition of the QRA7x UV flame detector.