

## Section 10-1 Component Specifications

### LMV5 Base Unit (120volt)

Category	Description	Units	Value
Power Requirements	Mains Voltage (max)	Volts AC	132
	Mains Voltage (min)	Volts AC	102
	Mains Frequency (min)	Hz	47
	Mains Frequency (max)	Hz	63.6
	Typ. Power Consumption	Watts	30
Fuses	Fuse FU1 Rating 5 x 20 mm 250 volt Slow-Blow	Amps	6.3
	Fuse FU2 Rating 5 x 20 mm 250 volt Slow-Blow	Amps	4
	Fuse FU3 Rating 5 x 20 mm 250 volt Slow-Blow	Amps	4
Maximum ratings for Mains Voltage Outputs	Total Current to all outputs, thru safety loop (X3-04.1 / X3-04.2) and burner flange (X3-03.2 / X3-03.1) at any given time	Amps	5
	Fan motor contactor (X3-01.1)	Amps	1
	Alarm (X3-01.2)	Amps	1
	Ignition transformer (X4-02.3)	Amps	1.6
	Pilot Valve (X9-01.2)	Amps	1.6
	Gas Valve 1 (X9-01.4)	Amps	1.6
	Gas Valve 2 (X9-01.3)	Amps	1.6
	Gas Valve SV (X9-01.1)	Amps	1.6
	Oil Valve1 (X8-02.1)	Amps	1.6
	Oil Valve1 (X8-03.1)	Amps	1.6
	Oil Valve 2 (X7-01.3)	Amps	1.6
	Oil Valve 3 (X7-02.3)	Amps	1.6
	Oil Valve SV (X6.03.3)	Amps	1.6
	Oil pump contactor (X6-02.3)	Amps	1.6
	Oil Indicator (X8-01.2)	Amps	1
	Gas Indicator (X8-01.1)	Amps	1
	Start Signal, (X4-03.3)	Amps	0.5
Power signals for switches, flame detector	Amps	0.5	
Maximum ratings for Low Voltage Outputs	12VAC1 for CANbus power, 12 VAC (X50.2, X51.2)	Amps	4
	12VAC2 for can bus power, 12 VAC (X50.3, X51.3)	Amps	4
	Power supply for pressure / temp transducers, 20 VDC	mA	25
	Power supply for QRI flame detector 14 / 21 VDC	mA	100
Weight	Chassis weight	lb	3
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP20
Mounting	All Orientations	N/A	N/A

**Notes :** Ingress of water and ice are not permitted.  
 Use wire suitable for maximum terminal ratings  
 For CANBus wiring, use specified cable only.

## AZL52 Display

Category	Description	Units	Value
Power Requirements	Voltage (max)	Volts AC	26.4
	Voltage (min)	Volts AC	20.4
	Typ. Power Consumption	Watts	5
Replacement Back-up batteries	VARTA CR-2430 (LF-1 / 2 W)		
	DURACELL DL 2430		
	SAYNO ELECTRIC CR 2439 (LF-1 / 2 W)		
	RENATA CR 2430		
Weight	Weight of AZL5	lb	0.5
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating front (first number objects, second water)	N/A	IP54
	IP rating rear, mounted (first number objects, second water)	N/A	IP00
Mounting	All Orientations	N/A	N/A

## SQM4 Rotary Actuators

Category	Description	Units	Value
Power Requirements	Voltage (max)	Volts AC	26.4
	Voltage (min)	Volts AC	20.4
	Typ. Power Consumption (SQM45)	VA	15
	Typ. Power Consumption (SQM48)	VA	34
Torque Output	SQM45	in-lb	27
	SQM48.4	in-lb	177
	SQM48.6	in-lb	310
Run Time (90° Stroke)	SQM45	sec	10-120
	SQM48.4	sec	30-120
	SQM48.6	sec	60-120
Rotation	Clockwise or Counterclockwise	N/A	N/A
Duty Cycle	Percentage of time moving @ nominal torque	%	50
	Maximum continuous run time @ nominal torque	min	3
Weight	SQM45	lb	2.2
	SQM48	lb	3.5
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP54
Mounting	All Orientations	N/A	N/A

**Notes :** Ingress of water and ice are not permitted.  
For CANBus wiring, use specified cable only.

## QRI Infrared Flame Scanner

Category	Description	Units	Value
Power Requirements	Operating Voltage (max)	Volts DC	14.7
	Operating Voltage (min)	Volts DC	13.3
	Test Voltage (max)	Volts DC	22.05
	Test Voltage (min)	Volts DC	19.95
	Typ. Power Consumption	Watts	0.5
Signal	Analog output signal	Volts DC	0 to 5
Weight	Scanner weight	lb	0.4
Cable	Supplied cable length	in	70
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP54
Mounting	All Orientations	N/A	N/A

**Notes :** Ingress of water and ice are not permitted.

## 500-01 UV Flame Scanner

Category	Description	Units	Value
Power Requirements	Operating Voltage	Volts AC	120
	Typ. Power Consumption	Watts	2
Signal	Analog output signal	Micro Amp DC	0 to 40
Weight	Scanner weight (non-self check)	lb	0.8
	Scanner weight (self check)	lb	2.5
Cable	Supplied cable length	ft	5 or 10
Environmental	Ambient Temperature (min)	°F	0
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP65
Mounting	All Orientations	N/A	N/A

**Notes :** Ingress of water and ice are not permitted.

## 7MF1564 Pressure sensors

Category	Description	Units	Value
Signal	Analog Amperage	mA	4 to 20
	Analog Voltage	Volts DC	0 to 10
Measurement Range	Maximum for highest range sensor	PSIG	300
	Minimum (vacuum prohibited for low range 4-20mA sensors)	PSIG	0
Accuracy	Percent of full scale @ 77 ° F	%	0.25
Fluid Temperature	Maximum fluid temperature @ process connection	°F	248
	Minimum fluid temperature @ process connection	°F	-22
Ambient Temperature	Maximum Ambient temperature	°F	185
	Minimum fluid temperature @ process connection	°F	-13
Weight	Sensor weight	lb	0.55
Diaphragm	Diaphragm material	Aluminum Oxide	
Gasket	Gasket material	Viton	
Process Conn.	Size of process connection	1/4" NPT	
Environmental	Ambient Temperature (max)	°F	185
	Ambient Temperature (min)	°F	-13
	Maximum humidity	% R.H.	95
Enclosure	IP rating front (first number objects, second water)	N/A	IP65

## QAE 2020.005 1000 ohm Nickel RTD temp sensor

Category	Description	Units	Value
Signal	Resistance @ 32 ° F	ohms	1000
Measurement Range	Maximum	°F	266
	Minimum	°F	-13
Accuracy	Accuracy over entire measurement range	%	0.46
Max fluid Temperature	Maximum fluid temperature @ process connection	°F	266
Max fluid Pressure	Maximum fluid pressure @ 203 °F	PSIG	400
Weight	Sensor weight	lb	1.6
Process Conn.	Size of process connection (Thermowell)	1/2" NPT	
Environmental	Ambient Temperature (max)	°F	203
	Ambient Temperature (min)	°F	-13
	Maximum humidity	% R.H.	95
Enclosure	IP rating front (first number objects, second water)	N/A	IP65
Wire Gauge	Copper Wire gauge for up to a 300 ft loop (150 ft segment)	AWG	14
	Copper Wire gauge for up to a 100 ft loop (50 ft segment)	AWG	20

## QAE26.9 Temperature sensor

Category	Description	Units	Value
Signal	Resistance @ 32 ° F	ohms	1000
Measurement Range	Maximum	°F	356
	Minimum	°F	-40
Accuracy	Accuracy over entire measurement range	%	0.46
Max fluid Temperature	Maximum fluid temperature @ process connection	°F	356
Max fluid Pressure	Maximum fluid pressure @ 365 °F	PSIG	500
Weight	Sensor weight	lb	0.23
Process Conn.	Size of process connection (Thermowell)	1/4" NPT	
Environmental	Ambient Temperature (max)	°F	356
	Ambient Temperature (min)	°F	-40
	Maximum humidity	% R.H.	95
Enclosure	IP rating front (first number objects, second water)	N/A	IP65
Wire Gauge	Copper Wire gauge for up to a 300 ft loop (150 ft segment)	AWG	14
	Copper Wire gauge for up to a 100 ft loop (50 ft segment)	AWG	20

## PLL52 Oxygen Trim Module

Category	Description	Units	Value
Power Requirements	Voltage, CANBus (max)	Volts AC	26.4
	Voltage, CANBus (min)	Volts AC	20.4
	Typ. Power Consumption, CANBus	Watts	4
	Mains Voltage (max)	Volts AC	132
	Mains Voltage (min)	Volts AC	102
	Mains Frequency (min)	Hz	57
	Mains Frequency (max)	Hz	63.6
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP54
Connections	M16 thread conduit connections	N/A	N/A
Mounting	All Orientations	N/A	N/A

**Notes :** Ingress of water and ice are not permitted.  
For CANBus wiring, use specified cable only.

## QGO20 Oxygen Sensor

Category	Description	Units	Value
Power Requirements	Mains Voltage, heating element (max)	Volts AC	132
	Mains Voltage, heating element (min)	Volts AC	102
	Mains Frequency (min)	Hz	47
	Mains Frequency (max)	Hz	63.6
	Max Power Consumption	VA	90
	Typ. Power Consumption	VA	35
Maximum Flue Temperatures (W/O high temp kit)	Sensor Flange temperature	°F	482
	Flue gas temperature	°F	572
	Connection head (electronics)	°F	158
Measurement Range	Minimum O2 reading	%	0.2
	Maximum O2 reading	%	20.9
Cell Operation Temperature	Minimum O2 cell temperature	°F	1202
	Maximum O2 cell temperature	°F	1382
Weight	Sensor weight	lb	2.1
Type of Fuel	Fuel oil or Natural Gas	N/A	N/A
Environmental	Ambient Temperature (min)	°F	-13
	Maximum humidity	% R.H.	95
Enclosure	IP rating front (first number objects, second water)	N/A	IP40

**Notes :** Ingress of water and ice are not permitted.

## QAC22 Ambient Temperature sensor

Category	Description	Units	Value
Signal	Resistance @ 32 ° F	ohms	1000
Measurement Range	Maximum	°F	122
	Minimum	°F	-31
Accuracy	Accuracy over entire measurement range	%	0.46
Weight	Sensor weight	lb	0.26
Environmental	Ambient Temperature (max)	°F	122
	Ambient Temperature (min)	°F	-31
	Maximum humidity	% R.H.	100
Enclosure	IP rating front (first number objects, second water)	N/A	IP43
Wire Gauge	Copper Wire gauge for up to a 300 ft loop (150 ft segment)	AWG	14
	Copper Wire gauge for up to a 100 ft loop (50 ft segment)	AWG	20

## AGG5.210 Transformer

Category	Description	Units	Value
Power Requirements (Primary)	Mains Voltage (max)	Volts AC	132
	Mains Voltage (min)	Volts AC	102
	Mains Frequency (min)	Hz	47
	Mains Frequency (max)	Hz	63.6
	Typ. Power Consumption	VA	110
Power Output (SEC1)	Voltage (max)	Volts AC	14.2
	Voltage (min)	Volts AC	11
	Power Output	VA	14.4
Power Output (SEC2)	Voltage, Pin 1 to 4 (max)	Volts AC	28.2
	Voltage, Pin 1 to 4 (min)	Volts AC	21.77
	Power Output	VA	75.6
Weight	Transformer Weight	lb	4.8
Environmental	Ambient Temperature (min)	°F	-4
	Ambient Temperature (max)	°F	140
	Maximum humidity	% R.H.	95
Enclosure	IP rating (first number objects, second water)	N/A	IP20
Mounting	All Orientations	N/A	N/A

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