

## Product Range Overview

## LMV6...

The LMV6 burner management system carries out all supervision tasks associated with medium to large-capacity forced draft burners, and features integrated communication interfaces that enable modular system extensions.

The following components are integrated into the LMV6:

- Burner control complete with valve proving system
- Electronic fuel-air ratio control system for a maximum of 6 actuators
- Optional: PID control thermostat / pressurestat (internal load controller)
- Optional variable speed drive control
- Optional O<sub>2</sub> control and O<sub>2</sub> alarm (with QGC)

This documentation is a brief overview of the most important functions and components of the product family of the LMV6 burner management systems.



### Note!

Highlighted range corresponds to the first and second market package.

### Use

- Residential and non-residential buildings with heating via hot water boilers or steam boilers
- Industrial plants
- Direct-fired thermotechnical plants

### Target groups

- Sales teams
- In-house staff
- OEM burner manufacturers
- Plant designers
- Plant manufacturers
- Operators






## Functions

	LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Basic applications, single-fuel operation, electronic ratio control</b>												
<ul style="list-style-type: none"> <li>Gas direct ignition, modulating operation (Gmod)</li> <li>Gas pilot ignition, modulating operation (GP1)</li> <li>Gas pilot ignition, modulating operation (GP2)</li> </ul>	●	●	●	●	●	●	●	●	●	●	●	●
<ul style="list-style-type: none"> <li>Direct ignition with light fuel oil, 2-stage or 3-stage operation</li> <li>Direct ignition with light fuel oil, modulating operation</li> <li>Direct ignition with heavy fuel oil, 2-stage or 3-stage operation</li> </ul>	---	---	---	●	●	●	●	●	●	●	●	●
All modulating gas fuel trains can also be operated with an air actuator and a suitable gas control valve as a pneumatic ratio control. All fuel trains can also be operated with an air actuator and a mechanical ratio control.	●	●	●	●	●	●	●	●	●	●	●	●
<b>Basic applications, dual-fuel operation, electronic ratio control</b>												
<ul style="list-style-type: none"> <li>Light oil with gas pilot ignition, modulating operation</li> <li>Heavy oil with gas pilot ignition, modulating operation</li> <li>Each gas fuel train or oil fuel train can be combined with any gas fuel train or oil fuel train</li> </ul>	---	---	---	●	●	●	---	●	●	---	●	●
<b>Electronic ratio control</b>												
Control of a maximum of 3 actuators	●	---	---	---	---	---	---	---	---	---	---	---
Control of a maximum of 4 actuators and a maximum of 1 variable speed drive	---	●	●	●	●	---	---	---	---	---	---	---
Control of a maximum of 6 actuators and a maximum of 1 variable speed drive	---	---	---	---	---	●	●	●	●	●	●	●
Control of a maximum of 8 actuators and a maximum of 2 variable speed drives	---	---	---	---	---	---	---	---	---	---	---	---

	LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Overview of further basic applications</b>												
Control of variable speed drive	--	●	●	●	●	--	●	●	●	●	●	●
Flue gas recirculation (time triggered)	●	●	●	--	--	--	●	●	●	●	●	●
Flue gas recirculation (temperature triggered)	●	●	●	--	--	--	●	●	●	●	●	●
Flue gas recirculation (temperature compensated)	--	--	●	--	--	--	--	--	●	--	--	●
O2 combustion optimization	--	--	--	--	●	--	--	--	--	●	●	●
Internal load controller	--	--	--	●	●	●	●	●	●	●	●	●

Functions (continued)

Approvals and certificates

Type					
LMV60.110A2	●	---	---	---	---
LMV62.110A2	---	---	---	---	---
LMV62.111A2	---	---	---	---	---
LMV62.500					
LMV62.540					
LMV63.320					
LMV63.510					
LMV63.520					
LMV63.521					
LMV63.550					
LMV63.560					
LMV63.561					

Type							
LMV60.110A2	---	---	---	---	●	---	---
LMV62.110A2	---	---	---	---	---	---	---
LMV62.111A2	---	---	---	---	---	---	---
LMV62.500							
LMV62.540							
LMV63.320							
LMV63.510							
LMV63.520							
LMV63.521							
LMV63.550							
LMV63.560							
LMV63.561							

Functions (continued)

**Flame supervision**

**Selection of flame detector:**

All LMV6 systems have 2 independent inputs for flame detectors.

With flame signal amplifier module      External flame signal amplifier for intermittent or continuous operation via plug-in AGQ6 module

		<b>LMV60 / LMV62 / LMV63</b>	
		Integrated into LMV6	With flame signal amplifier module for LMV6 (accessory, plug-in module)
<b>Flame detectors for intermittent operation</b>			
One flame detector connected	UV flame detector QRA2, QRA2M, QRA4, QRA10	●	Not necessary
	Ionization probe	●	Not necessary
	Yellow flame detector QRB4	---	With AGQ6.2
Two flame detectors connected – e.g., separate flame supervision for pilot flame and main flame	UV flame detector QRA2, QRA4, QRA10	●	With AGQ6.1
	Ionization probe	●	With AGQ6.1
<b>Flame detectors for continuous operation</b>			
One flame detector connected	Ionization probe	●	Not necessary
	UV flame detector QRA7	---	With AGQ6.3
	Infrared flame detector QRI	---	With AGQ6.3
	Photocell detector RAR	---	With AGQ6.2
	External flame safeguard	---	With AGQ6.4
Two flame detectors connected – e.g., separate flame supervision for pilot flame and main flame	Ionization probe	●	With AGQ6.1
	UV flame detector QRA7	---	With AGQ6.3
	Infrared flame detector QRI	---	With AGQ6.3

**LMV6 burner management system**



The configurable LMV6 burner management system with coordinated system components is designed to control and supervise forced draft burners of medium to large capacity. LMV6 units have fixed and configurable inputs and outputs to suit their application. The inputs and outputs can be extended using the AGG6 extension modules and the CAN bus interface.

**General functions of all LMV6 units:**

- Fault status messages counter
- Error history
- Separate hours run meter for each fuel
- Separate start counter for each fuel
- Continuous fan (configurable pressure switch for releasing the valve output)
- Lack of gas program
- Program stop function
- Forced intermittent operation (can be deactivated)
- Part load shutdown
- Alarm in case of start prevention
- Parameterizable program times and functions

Functions (cont'd)

		LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Inputs and outputs of the LMV6</b>													
<b>Digital inputs (120 V~ / 230 V~)</b>	Number of permanently assigned digital inputs (●):	10	11	11	8	8	6	8	8	8	8	8	8
	Maximum number of configurable digital inputs (o):	0	0	0	4	4	6	4	4	4	4	4	4
	Safety loop:	●	●	●	●	●	●	●	●	●	●	●	●
	Reset / lockout	●	●	●	●	●	●	●	●	●	●	●	●
	Thermostat contact for flue gas recirculation (FGR)	●	●	●	o	o	o	o	o	o	o	o	o
	Load controller OPEN with 3-point controller or stage 2	●	●	●	●	●	●	●	●	●	●	●	●
	Load controller CLOSED with 3-point controller or stage 3 (OPEN and CLOSED)	●	●	●	●	●	●	●	●	●	●	●	●
	Heat request (ON/OFF)	●	●	●	●	●	●	●	●	●	●	●	●
	Burner flange	---	●	●	o	o	o	o	o	o	o	o	o
	Start release for 'Fuel 1' (oil/gas)	---	---	---	o	o	o	o	o	o	o	o	o
	Start release for 'Fuel 2' (oil/gas)	---	---	---	o	o	o	o	o	o	---	o	o
	Fuel selection 'Fuel 1' (oil/gas) or 'Fuel 2' (oil/gas)	---	---	---	●	●	●	●	●	●	---	●	●
	Air pressure switch	●	●	●	●	●	●	●	●	●	●	●	●
	Air pressure switch 2 (e.g., for operation with a variable speed drive)	---	---	---	o	o	o	o	o	o	o	o	o
	Gas pressure switch valve proving	●	●	●	o	o	o	o	o	o	o	o	o
	Gas pressure switch-max	●	●	●	o	o	o	o	o	o	o	o	o
	Gas pressure switch-min	●	●	●	o	o	o	o	o	o	o	o	o
	Gas pressure switch-min with valve proving (combined)	---	---	---	o	o	o	o	o	o	o	o	o
Oil pressure switch-min	---	---	---	o	o	o	o	o	o	o	o	o	
Oil pressure switch-max	---	---	---	o	o	o	o	o	o	o	o	o	

Legend: ● = Function permanently assigned

o = Function optionally configurable

--- = Function not possible

## Functions (cont'd)



### Note

The digital inputs for functions with configurable assignment can sometimes be assigned twice for different fuels in dual-fuel operation. This requires the digital inputs to be switched over. For further information, refer to the LMV6 Basic Documentation (P7560).  
Further digital inputs can be assigned via the AGG6.320Ax extension module.

		LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Inputs and outputs of the LMV6</b>													
<b>Digital inputs</b> (120 V~ / 230 V~)	Gas valve closing contact (CPI/POC)	---	---	---	o	o	o	o	o	o	o	o	o
	Flue gas recirculation pressure switch	---	---	---	o	o	o	o	o	o	o	o	o
	Heavy oil direct start	---	---	---	o	o	o	o	o	o	o	o	o
	Input for switching off specific functions (e.g., O2 control, operation without flue gas recirculation (FGR))	---	---	---	o	o	o	o	o	o	o	o	o
	Input for high-temperature operation, no flame supervision and prepurging if combustion chamber temperature is > 750°C	---	---	---	---	---	---	---	o	o	o	o	o
	Startup stop, start/stop for non-safety-related multi-burner applications	---	---	---	o	o	o	o	o	o	o	o	o
<b>Digital outputs</b> (relays) (120 V~ / 230 V~)	<b>Number of permanently assigned digital outputs (●):</b>	6	7	7	5	5	5	5	5	5	5	5	5
	<b>Maximum number of configurable digital outputs (o):</b>	0	0	0	5	5	5	5	5	5	5	5	5
	Alarm	●	●	●	●	●	●	●	●	●	●	●	●
	Fuel valve V1, fuel 1	●	●	●	●	●	●	●	●	●	●	●	●
	Fuel valve V2, fuel 1	●	●	●	●	●	●	●	●	●	●	●	●
	Fuel valve V3, fuel 1 / pilot valve PV	●	●	●	o	o	o	o	o	o	o	o	o
	Fuel valve V1, fuel 2	---	---	---	o	o	o	o	o	o	---	o	o
	Fuel valve V2, fuel 2	---	---	---	o	o	o	o	o	o	---	o	o
	Fuel valve V3, fuel 2	---	---	---	o	o	o	o	o	o	---	o	o
	Ignition transformer	●	●	●	●	●	●	●	●	●	●	●	●
	Operating display	---	●	●	o	o	o	o	o	o	o	o	o
	Oil pump / magnetic coupling	---	---	---	o	o	o	o	o	o	o	o	o
	Start Signal	---	---	---	●	●	●	●	●	●	●	●	●
	Pressure switch release valve	---	---	---	o	o	o	o	o	o	o	o	o

Legend: ● = Function permanently assigned      o = Function optionally configurable      --- = Function not possible



Functions (cont'd)

		LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Inputs and outputs of the LMV6</b>													
<b>Digital inputs (SELV)</b>	<b>Number of permanently assigned digital inputs (●):</b>	---	1	1	1	1	0	1	1	1	1	1	1
	<b>Maximum number of configurable digital inputs (o):</b>	---	---	---	1	1	2	1	1	1	1	1	1
	Variable speed drive, alarm input	---	●	●	●	●	---	●	●	●	●	●	●
	Load controller setpoint changeover	---	---	---	o	o	o	o	o	o	o	o	o
	Further functions (TBC)	---	---	---	o	o	o	o	o	o	o	o	o
<b>Digital outputs (SELV), relays</b>	Variable speed drive (release signal)	---	●	●	●	●	---	●	●	●	●	●	●
<b>Analog inputs (SELV)</b>	<b>Number of permanently assigned analog inputs (●):</b>	---	1	1	2	2	2	3	3	3	3	3	3
	Pulse input for the speed feedback signal from the variable speed drive	---	●	●	●	●	---	●	●	●	●	●	●
	Pulse input for fuel meter 1	---	---	---	●	●	●	●	●	●	●	●	●
	Pulse input for fuel meter 2	---	---	---	---	---	●	●	●	●	●	●	●
	<b>Number of analog inputs 0 to 10 V, 2 to 10 V, or 4 to 20 mA</b>	---	1	1	3	3	3	3	3	3	3	3	3
	<b>Number of additional analog inputs (●):</b>	---	1	1	1	1	3	3	3	3	3	3	3
	Pt1000, Ni1000	---	●	●	●	●	---	---	---	---	---	---	---
	Pt100 / Pt1000, Ni1000 / 2 x Pt1000, Ni1000	---	---	---	---	---	●	●	●	●	●	●	●
	Pt100 / Pt1000, Ni1000 / 2 x Pt1000, Ni1000 / thermal elements / 2 x thermal elements	---	---	---	---	---	●	●	●	●	●	●	●
Pt100 / Pt1000, Ni1000 / 2 x Pt1000, Ni1000 / thermal elements / 2 x thermal elements	---	---	---	---	---	●	●	●	●	●	●	●	

Legend: ● = Function permanently assigned      o = Function optionally configurable      --- = Function not possible

Functions (cont'd)

		LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Inputs and outputs of the LMV6</b>													
<b>Analog outputs (SELV)</b>	Number of permanently assigned analog outputs (●):	---	1	1	1	1	0	1	1	1	1	1	1
	Maximum number of configurable analog outputs (o):	---	---	---	---	---	2	1	1	1	1	1	1
	4 to 20 mA variable speed drive control	---	●	●	●	●	---	●	●	●	●	●	●
	4 to 20 mA load output, burner load	---	---	---	---	---	o	o	o	o	o	o	o
	4 to 20 mA output of the O2 value, temperature, pressure, flame, load or other selectable values	---	---	---	---	---	o	o	o	o	o	o	o
<b>Interfaces</b>	I/O bus – process bus – CAN bus	●	●	●	●	●	●	●	●	●	●	●	●
	Modbus RTU interface RS-485	---	1	1	2	2	2	2	2	2	2	2	2

Legend: ● = Function permanently assigned      o = Function optionally configurable      --- = Function not possible

Functions (cont'd)

Functions of the LMV6 (24 V / SELV)

	LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Variable speed drive, connections, and functions</b>												
Input: Speed feedback signal in variable speed drive operation	---	●	●	●	●	---	●	●	●	●	●	●
Input: Alarm message from variable speed drive (12 to 24 V)	---	●	●	●	●	---	●	●	●	●	●	●
Output: Variable speed drive control, 4 to 20 mA	---	●	●	●	●	---	●	●	●	●	●	●
Output: Variable speed drive release contact, potential-free	---	●	●	●	●	---	●	●	●	●	●	●
<b>Pulse input for fuel meter</b>												
Fuel 1 (gas or oil)	---	---	---	●	●	●	●	●	●	●	●	●
Fuel 2 (gas or oil)	---	---	---	---	---	●	●	●	●	●	●	●

Functions (cont'd)

	LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Residual oxygen (O2) control together with QGC</b>												
O2 control function	---	---	---	---	●	---	---	●	●	●	●	●
O2 alarm function	---	---	---	---	●	---	---	●	●	●	●	●
<b>Supply air and flue gas temperature detection together with QGC</b>												
Flue gas temperature detection together with QGC	---	---	---	---	●	---	---	---	---	●	●	●
Flue gas temperature detection via temperature sensor and analog input	---	---	---	---	●	---	●	●	●	●	●	●
Warning when flue gas temperature is too high	---	---	---	---	●	---	●	●	●	●	●	●
Calculation of technical combustion efficiency factor	---	---	---	---	●	---	●	●	●	●	●	●
Supply air temperature detection via temperature sensor and analog input	---	---	---	---	●	---	●	●	●	●	●	●
<b>Load controller</b>												
Predefined load or predefined setpoint, 0 to 20 mA, 4 to 20 mA, 0 to 10 V, 2 to 10 V	---	●	●	●	●	●	●	●	●	●	●	●
Actual value temperature or actual value pressure	---	---	---	●	●	●	●	●	●	●	●	●
External predefined setpoint, temperature, or pressure	---	---	---	●	●	●	●	●	●	●	●	●
Outside temperature	---	---	---	●	●	●	●	●	●	●	●	●
Setpoint shift or setpoint changeover	---	---	---	●	●	●	●	●	●	●	●	●
Cold start thermal shock protection	---	---	---	●	●	●	●	●	●	●	●	●
Adaptive boiler temperature control function or boiler pressure control function	---	---	---	●	●	●	●	●	●	●	●	●
Limit thermostat	---	---	---	---	---	●	●	●	●	●	●	●

Functions (cont'd)

	LMV60.110A2	LMV62.110A2	LMV62.111A2	LMV62.500	LMV62.540	LMV63.320	LMV63.510	LMV63.520	LMV63.521	LMV63.550	LMV63.560	LMV63.561
<b>Safety temperature limiter or safety pressure limiter (in accordance with EN 14597)</b>												
Via temperature sensor input Pt100, Pt1000, or LG-Ni1000	---	---	---	---	---	---	---	---	---	---	---	---
Via analog inputs 0 to 10 V, 2 to 10 V, 0 to 20 mA, or 4 to 20 mA	---	---	---	---	---	---	---	---	---	---	---	---
<b>Flue gas recirculation (FGR)</b>												
Flue gas recirculation (FGR): Time triggered	●	●	●	---	---	---	●	●	●	●	●	●
Flue gas recirculation (FGR): Temperature triggered	●	●	●	---	---	---	●	●	●	●	●	●
Flue gas recirculation (FGR) (temperature-compensated)	---	---	●	---	---	---	---	---	●	---	---	●

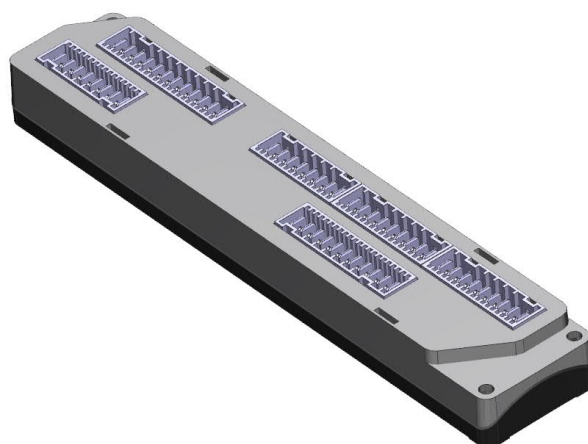
**AGG6 I/O port extension module**



The extension modules allow additional inputs and outputs to be assigned functions. The inputs and outputs are a combination of fixed and configurable to suit their application. They can be connected to the LMV6 with ease via the CAN bus interface. The dimensions are the same as those for the LMV6.

	Type	AGG6.320A2
	Article no.	S55854-Z602-A100
<b>Inputs and outputs of the AGG6</b>		
Digital inputs (120 V~ / 230 V~)	Fixed assignment:	
	Safety loop	●
	Number of configurable assignments:	11
Digital outputs (relays) (120 V~ / 230 V~)	Fixed assignment:	
	Safety loop	●
	Number of configurable assignments:	10
Digital inputs (SELV)	Number of configurable assignments:	---
Digital outputs (SELV, relays)	Number of configurable assignments:	---
Analog inputs (SELV)	Fixed assignment:	
	Pulse input for variable speed drive speed feedback signal	---
	Pulse input for fuel meter	---
	Number of configurable assignments:	
	0 to 10 V, 2 to 10 V, or 4 to 20 mA	---
Analog outputs (SELV)	PT100 or PT1000, Ni1000 or 2 x PT1000, Ni1000 or thermal elements, or 2 x thermal elements	---
	Number of configurable assignments:	
Analog outputs (SELV)	4 to 20 mA or variable speed drive control at 4 to 20 mA	---
	Number of configurable assignments:	
Interfaces	I/O bus – process bus – CAN bus	●
<b>Flame signal amplifier</b>		
	Integrated into extension module	---
	Plug-in space for AGQ6	---
<b>Maximum equipment for</b>		
	LMV60	1
	LMV62	1
	LMV63	1

**RAST5 extension module AGG6.100**

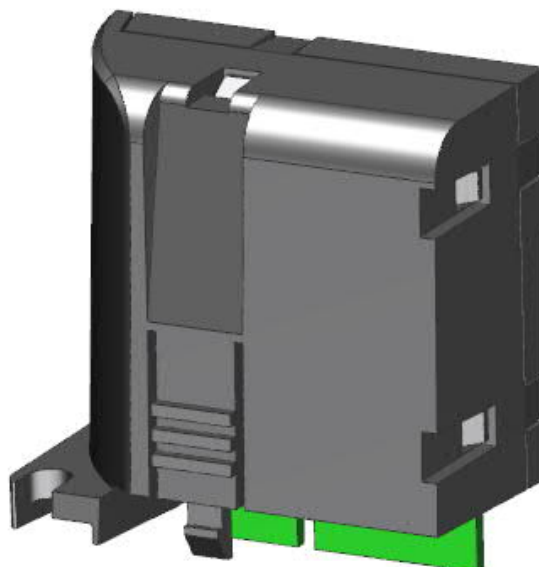


With the RAST5 extension module, the single-pole outputs of the LMV6 are distributed to the RAST5 all-pole outputs. Dimensions 250 x 40 mm.

Type	<b>AGG6.100A9</b>
Article no.	<b>SSN</b>
<b>Possible RAST5 extension</b>	
LMV60	●
LMV62	●
LMV63	●



**AGQ6 flame signal amplifier module for LMV6**



An AGQ6 flame signal amplifier module can be plugged into the LMV6.

	Suitable for flame detectors	Type	Article no.
<b>Flame detectors for intermittent operation</b>			
UV flame detector or ionization	QRA2, QRA2M, QRA4, QRA10, or ionization	<b>AGQ6.1</b>	<b>S55855-Z801-A100</b>
Yellow flame detector	QRB4	<b>AGQ6.2</b>	<b>S55855-Z802-A100</b>
Blue-flame detector	QRC	<b>AGQ6.2</b>	<b>S55855-Z802-A100</b>
<b>Flame detectors for continuous operation</b>			
Ionization	Ionization	<b>AGQ6.1</b>	<b>S55855-Z801-A100</b>
UV flame detector	QRA7	<b>AGQ6.3</b>	<b>S55855-Z803-A100</b>
Infrared flame detector	QRI	<b>AGQ6.3</b>	<b>S55855-Z803-A100</b>
Photocell detector	RAR	<b>AGQ6.2</b>	<b>S55855-Z802-A100</b>
External flame safeguard	---	<b>AGQ6.4</b>	<b>S55855-Z804-A100</b>

**AZL66 display and operating unit AZL66 for LMV6**



Display and operating unit, separate unit for front-panel installation with 4.3" TFT display. Push-turn controller encoder as a central input element and 2 additional buttons, real-time clock with 10 years' power reserve, multiple languages, USB interface, and LED for visualization of the burner status.

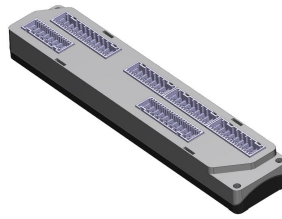
	Type	AZL66.00A8	AZL66.10A8
	Article no.	S55629-H301-A100	S55629-H302-A100
<b>Functions</b>			
Real-time clock with power reserve (e.g., to record the time at which faults occur)		●	●
Graphic display 4.3" TFT with 480 x 272 pixels		●	●
Parameter-setting functions and display functions		●	●
Saving of fault histories and error histories		●	●
13 languages pre-installed		●	●
Reset		●	●
Burner rapid shutdown using button combinations		●	●
3 access levels, 2 of which have password protection		●	●
Parameter backup and restore functions		●	●
<b>Communication interfaces</b>			
USB port ● For operation with ACS460 PC software		●	●
WLAN interface: ● For wireless PC operation with ACS460 PC software ● For connection to smartphones or tablets for service and diagnostics		---	●

**Burner management system**

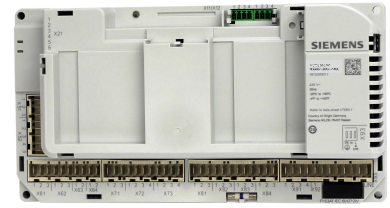


LMV6

**Extension module**



AGG6.100



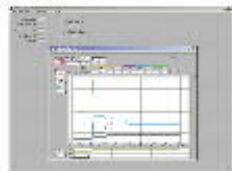
AGG6.320

**Display and operating unit**



AZL66

**Service tool**



ACS460

**Actuators**



SQM4

**Power supply unit**



AGG6.200A5

**Detector**

**Temperature sensor**



FGT-PT1000

**Intermittent operation**



QRA2

**Continuous operation**



Ionization



QAE21



QRA4



QRA7



QBE2003-P / QBE2103-P



QRA10



QRI

**Pressure sensor**



QAE3010 / QAE3075



QRB4



RAR9

**O2 sensor**

QGC

**Butterfly valve**



VKF1x



VKGx0

**Proportional controlling element**



VKP40

7560z01en/0821

## Product presentation

### Burner management system

The LMV6 burner management system is a microprocessor-based burner control with coordinated system components for controlling and monitoring forced draft burners of medium to large capacity.



All LMV6 units are approved for intermittent operation and continuous operation in accordance with DIN EN 298.

Article no.	Type (ASN)	For forced draft gas burners	For forced draft oil burners or forced draft gas burners	With dual-fuel operation	Max. number of actuators	With variable speed drive	With flue gas recirculation function		With load controller	With O2 control	Parameter set	Mains voltage
							Temperature compensation					
							Without	With				
S55402-C403-A100	LMV60.110A2	•	---	---	3		•	---	---	---	---	230 V~
SSN	LMV62.110A2	•	---	---	4	•	•	---	---	---	---	230 V~
SSN	LMV62.111A2	•	---	---	4	•	•	•	---	---	---	230 V~
SSN	LMV62.500xx	---	•	•	4	•	---	---	•	---	---	---
SSN	LMV62.540xx	---	•	•	4	•	---	---	•	•	---	---
SSN	LMV63.320xx	---	•	---	6	---	---	---	•	---	---	---
SSN	LMV63.510xx	---	•	---	6	•	•	•	•	•	---	---
SSN	LMV63.520xx	---	•	•	6	•	•	---	•	---	---	---
SSN	LMV63.521xx	---	•	•	6	•	•	•	•	---	---	---
SSN	LMV63.550xx	---	•	---	6	•	•	---	•	•	---	---
SSN	LMV63.560xx	---	•	•	6	•	•	---	•	•	---	---
SSN	LMV63.561xx	---	•	•	6	•	•	•	•	•	---	---

### Extension module

#### I/O extension module

The extension modules allow additional inputs and outputs to be assigned functions. The inputs and outputs are a combination of fixed and configurable to suit their application. They can be connected to the LMV6 with ease via the CAN bus interface.

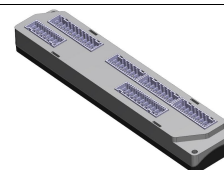


Article no.	Type	Mains voltage
SSN	AGG6.320A1	120 V~
S55854-Z602-A100	AGG6.320A2	230 V~

### RAST5 extension module

#### AGG6.100

Article no: **SSN**



#### RAST5 extension module

With the RAST5 extension module, the single-pole outputs of the LMV6 are distributed to the RAST5 all-pole outputs.

**Shielding plate**

**AGG6.500**

Article no: **S55854-Z604-A100**

Two-part shielding plate with terminals.

Individual shielding plates are delivered in packages of up to 10 units each.

- For shielding the CAN bus connection from the low voltage cable of the LMV6 to the variable speed drive
- For shielding the low-voltage inputs/outputs
- For shielding the inputs/outputs of the temperature sensor, pressure sensor, and speed sensor

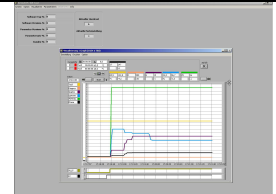


**Service tool**

**ACS460**

Article no: **SSN**

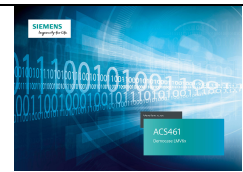
PC tool for convenient programming and burner adjustment, process visualization, data recording, AZL66, and AZL66 software update



**ACS461**

Article no: **SSN**

PC software for the KF8866.1A2



**KF8866.1A2**

Article no: **S55860-Z101-A100**

Demo case for training and demonstration of the LMV6 outside a real burner. Various burner statuses and processes can be simulated with the KF8866.1A2 and the ACS461 PC software.



**Display and operating unit**

**AZL66**

Display and operating unit, separate unit for front-panel installation with 4.3" TFT display, 8 x 32 characters, 2 buttons, turning knob, real-time clock, USB interface, multiple languages.



Article no.	Type (ASN)	Language
<b>S55629-H301-A100</b>	<b>AZL66.00A8</b>	German, English, Italian, Spanish, French, Finnish, Hungarian, Dutch, Portuguese, Russian, Turkish, Korean, Chinese
<b>S55629-H302-A100</b>	<b>AZL66.10A8</b>	German, English, Italian, Spanish, French, Finnish, Hungarian, Dutch, Portuguese, Russian, Turkish, Korean, Chinese

## Product presentation (continued)

### Sensor

#### QGC

Oxygen sensors, the QGC units are used to measure the residual oxygen content in the flue gases from combustion plants burning natural gas and light fuel oil. Together with the control unit, the QGC supervises and controls the combustion process.

Photo

Article no.	Type	Mains voltage
<b>SSN</b>	<b>QGC15</b>	
<b>SSN</b>	<b>QGC20</b>	

### Sensor

#### QRA2

UV flame detector for use with Siemens burner controls, for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. Plastic insulated housing, metalized to prevent static charging caused by the air flow from the fan, for direct mounting on the burner. Delivery optional with or without flange and clamp. Suitable for intermittent operation.



Article no.	Type	Sensitivity	Flange with clamp	Terminal cover	UV cell for replacement
<b>BPZ:QRA2</b>	<b>QRA2</b>	Normal	Without	Black	AGR 4 502 1131 0
<b>BPZ:QRA2(1)</b>	<b>QRA2(1)</b>	Normal	With 4 241 8855 0 / 4 199 8806 0	Black	AGR 4 502 1131 0
<b>BPZ:QRA2(2)</b>	<b>QRA2(2)</b>	Normal	With 4 241 8898 0 / 4 199 8806 0	Black	AGR 4 502 1131 0
<b>BPZ:QRA2.9 1)</b>	<b>QRA2.9 1)</b>	Normal	Without	Black	AGR 4 502 1131 0
<b>BPZ:QRA2M</b>	<b>QRA2M</b>	High	Without	Green	AGR 4 502 4065 0
<b>BPZ:QRA2M(1)</b>	<b>QRA2M(1)</b>	High	With 4 241 8855 0 / 4 199 8806 0	Green	AGR 4 502 4065 0
<b>BPZ:QRA2M(2)</b>	<b>QRA2M(2)</b>	High	With 4 241 8898 0 / 4 199 8806 0	Green	AGR 4 502 4065 0

1) With heat-resistant housing for ambient temperatures of up to 200°C for a short time (up to a few seconds)

### Sensor

#### QRA4

UV flame detector for use with Siemens burner controls, for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. For frontal illumination. Housing made of aluminum with 3/4"-14NPSM connecting thread, for fitting the detector to the burner or boiler. Suitable for intermittent operation.



Article no.	Type	Sensitivity
<b>BPZ:QRA4.U</b>	<b>QRA4.U</b>	Normal
<b>BPZ:QRA4M.U</b>	<b>QRA4M.U</b>	High

**Sensor**

**QRA7**

UV flame detector for use with Siemens burner controls for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. The detector's UV cell is located behind a swiveling shutter at the front end of the detector tube which is flanged to the housing. A quartz-glass window protects the tube and the shutter against dirt. The detector's housing accommodates a stepper motor to drive the shutter and the electronics to control the shutter. Suitable for continuous operation.



Article no.	Type	Sensitivity	Detector tube length	Mains voltage	UV cell for replacement
BPZ:QRA73.A27	QRA73.A27	Normal	125 mm	230 V~	AGR 4 502 4065 0
BPZ:QRA73.A17	QRA73.A17	Normal	125 mm	120 V~	AGR 4 502 4065 0
BPZ:QRA75.A27	QRA75.A27	Normal	69 mm	230 V~	AGR 4 502 4065 0
BPZ:QRA75.A17	QRA75.A17	Normal	69 mm	120 V~	AGR 4 502 4065 0

Accessories QRA7

**AGM23**

Article no.: **BZP:AGM23**

- QRA7 connecting cable
- 2 m with connector
- Europe



**AGM23U**

Article no.: **BZP:AGM23U**

- QRA7 connecting cable
- 4 m with connector
- US



**Sensor**

**QRA10**

UV flame detector for use with Siemens burner controls, for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. Sensor housing made of injection molded aluminum with a 1" mounting coupling and connection facility for cooling air. The housing of this detector is fastened with a bayonet fitting which allows it to be secured either directly to the 1" mounting coupling or to the AGG06. The 1" mounting coupling can be screwed onto a viewing tube or onto the AGG07. The attached Pg cable gland can be removed and replaced if a different detector cable is to be used. Suitable for intermittent operation.



Article no.	Type	Sensitivity	UV cell for replacement
BPZ:QRA10.C	QRA10.C	Normal	AGR 4 502 1131 0
BPZ:QRA10M.C	QRA10M.C	High	AGR 4 502 4065 0

Sensor

**QRB4**

Yellow flame detector for use with Siemens burner controls, for supervising yellow-burning oil flames in the visible light spectrum. Suitable for intermittent operation.






Article no.	Type	Sensitivity / casing color		Housing length (G) (mm)	Visible cable length (L) (cm)	Stripped length (M) (mm)	Cable end		Accessories	
		Normal / black	High / red				Ferrule	Stripped	Included: AGK42 flange and AGK43 clamp	Mounted: Plug
S55723-S201-A100	QRB4A-B036A25	●	---	68	36	25	---	---	---	---
S55723-S223-A100	QRB4A-B036B40	●	---	68	36	40	●	●	---	---
S55723-S210-A100	QRB4A-B036B40B	●	---	68	36	40	●	●	---	●
S55723-S202-A100	QRB4A-B050B70	●	---	68	50	70	●	●	---	---
S55723-S207-A100	QRB4A-B050B70A	●	---	68	50	70	●	●	●	---
S55723-S211-A100	QRB4A-B050B70B	●	---	68	50	70	●	●	---	●
S55723-S203-A100	QRB4A-B070B70	●	---	68	70	70	●	●	---	---
S55723-S208-A100	QRB4A-B070B70A	●	---	68	70	70	●	●	●	---
S55723-S212-A100	QRB4A-B070B70B	●	---	68	70	70	●	●	---	●
S55723-S219-A100	QRB4A-B110B70	●	---	68	110	70	●	●	---	---
S55723-S204-A100	QRB4A-B150B70	●	---	68	150	70	●	●	---	---
S55723-S226-A100	QRB4A-B150B70A	●	---	68	150	70	●	●	●	---
S55723-S225-A100	QRB4A-B150B70B	●	---	68	150	70	●	●	---	●
S55723-S222-A100	QRB4B-B025B40B	---	●	68	25	40	●	●	---	●
S55723-S205-A100	QRB4B-B036A25	---	●	68	36	25	---	---	---	---
S55723-S224-A100	QRB4B-B036B40	---	●	68	36	40	●	●	---	---
S55723-S213-A100	QRB4B-B036B40B	---	●	68	36	40	●	●	---	●
S55723-S206-A100	QRB4B-B050B70	---	●	68	50	70	●	●	---	---
S55723-S209-A100	QRB4B-B050B70A	---	●	68	50	70	●	●	●	---
S55723-S214-A100	QRB4B-B050B70B	---	●	68	50	70	●	●	---	●
S55723-S221-A100	QRB4B-B070B70	---	●	68	70	70	●	●	---	---
S55723-S215-A100	QRB4B-B070B70B	---	●	68	70	70	●	●	---	●
S55723-S216-A100	QRB4B-C036B40	---	●	108	36	40	●	●	---	---
S55723-S217-A100	QRB4B-C036B40B	---	●	108	36	40	●	●	---	●
S55723-S220-A100	QRB4B-D030A25	---	●	140	30	25	---	---	---	---
S55723-S218-A100	QRB4B-D050B40B	---	●	140	50	40	●	●	---	●



**Product presentation** (continued)

QRB4 accessories  
(version without plug)

Item	Article no. <sup>1)</sup>	Type
 Flange, 36 mm spacing	S55856-Z401-A100	AGK42
 Clamp	S55856-Z402-A100	AGK43
 Flange, with elongated hole	S55856-Z403-A100	AGK44

<sup>1)</sup> To be specified when ordering individual items.

**Sensor**

**QRI**

Infrared flame detector for use with Siemens burner controls for the supervision of gas, oil and other flames that emit infrared light. The QRI are suited for burners of any capacity. The QRI contains an integrated flame signal amplifier and has an impact-proof housing made of black plastic. The QRI can be secured to the burner within its adjusting range, using the freely positionable clamp and the flange provided. The 3-core connecting cable is firmly connected to the QRI and secured by cable strain relief. Suitable for intermittent operation or continuous operation.



Article no.	Type	Illumination	Cable length (L)	Cable end	Accessories
BPZ:QRI2A2.B180B	QRI2A2.B180B	Frontal illumination	180 cm	Stripped	---
BPZ:QRI2B2.B180B	QRI2B2.B180B	Lateral illumination	180 cm	Stripped	---
BPZ:QRI2B2.B180B1	QRI2B2.B180B1	Lateral illumination	180 cm	Stripped	4 241 8898 0 Straight flange with clamp

**Sensor**

**RAR9**

Photocell detector for use with Siemens burner controls for the supervision of yellow-burning oil flames in the visible range. Suitable for continuous operation.



Article no.	Type	Length of detector cable <sup>*)</sup>	Clamp and flange	Photocell made of
BPZ:RAR9	RAR9	Max. 100 m	Without clamp / flange	Silicon
BPZ:RAR9(1)	RAR9(1)	Max. 100 m	With clamp and flange with radius	Silicon
BPZ:RAR9(2)	RAR9(2)	Max. 100 m	With clamp and straight flange	Silicon

<sup>\*)</sup> The specifications in the data sheet for the respective automatic burner control also apply

Accessories RAR9

Article	Order number
Flange with radius	4 241 8855 0
Straight flange	4 241 8898 0
Clamp	4 199 8806 0

**AGG09**

Article no. **BPZ:AGG09**  
**IP40 kit** for RAR9. Cable sealing element Ø 5 to 8 mm



**Sensor**

**QAE21**

Immersion temperature sensor, passive sensors for detecting the water temperature in pipes and tanks



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**FGT-PT1000**

Immersion temperature sensor, active or passive sensors for detecting the water temperature in pipes and tanks



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**QAE3010 / QAE3075**

Immersion temperature sensor, active or passive sensors up to 200°C, for detecting temperatures in liquid and gaseous media (e.g., heating water or steam applications) in heating, ventilation, and air-conditioning plants.



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**QBE2003-P / QBE2103-P**

Pressure sensor for neutral and slightly aggressive liquids and gases, for measuring relative pressures in heating (steam), ventilation, and air-conditioning applications



Actuators

**SQM45 / SQM46 / SQM47 / SQM48**

Actuator, activation and feedback via CAN bus, stepper motor, front mounting



Article no.	Type	Nominal output torque / holding torque 2) (max.) Nm	Running time for 90°  (min.) s	Shaft 1)  No.
<b>S55451-D201-C100</b>	<b>SQM45.291C8</b>	3	10	1
<b>S55451-D205-C100</b>	<b>SQM45.295C8</b>	3	10	5
<b>S55451-D501-C100</b>	<b>SQM46.491C8</b>	10	30	1
<b>S55451-D505-C100</b>	<b>SQM46.495C8</b>	10	30	5
<b>S55451-D607-C100</b>	<b>SQM47.497C8</b>	20	30	7
<b>S55451-D307-C100</b>	<b>SQM48.697C9</b>	35	60	7

Legend

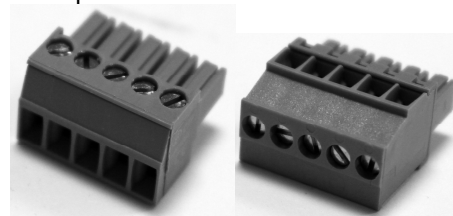
- 1) Refer to *Dimensions* in Data Sheet N7820
- 2) With supply voltage applied at an ambient temperature of 20°C

Connector sets

**AGG9.xxx**

The individual connectors are only supplied in fixed packaging units (FPU).

Example:



Note

The connectors can only be ordered as single connectors in the respective quantities of the packaging units (FPU), see column 'FPU'.

Article no.	Type	Connector type	Terminal	Unit type	FPU (quantity)
S55854-Z505-A100	AGG9.220	RAST5	X63	LMV6	200
S55854-Z506-A100	AGG9.221	RAST5	X64	LMV6	200
S55854-Z501-A100	AGG9.326	RAST5	X51	LMV6	200
S55854-Z503-A100	AGG9.327	RAST5	X61	LMV6	200
S55854-Z504-A100	AGG9.328	RAST5	X62	LMV6	200
S55854-Z507-A100	AGG9.329	RAST5	X71	LMV6	200
S55854-Z511-A100	AGG9.330	RAST5	X81	LMV6	200
S55854-Z512-A100	AGG9.331	RAST5	X82	LMV6	200
S55854-Z513-A100	AGG9.332	RAST5	X83	LMV6	200
S55854-Z514-A100	AGG9.333	RAST5	X84	LMV6	200
S55854-Z516-A100	AGG9.334	RAST5	X92	LMV6	200
S55854-Z518-A100	AGG9.335	RAST5	X161	AGG6.200A5	200
S55854-Z508-A100	AGG9.418	RAST5	X72	LMV6	200
S55854-Z509-A100	AGG9.419	RAST5	X73	LMV6	200
S55854-Z515-A100	AGG9.420	RAST5	X91	LMV6	200
S55854-Z533-A100	AGG9.421	RAST3.81 (4P)	X14	AZL66	175
S55854-Z502-A100	AGG9.506	RAST5	X52	LMV6	200
S55854-Z517-A100	AGG9.507	RAST5	X93	LMV6	200
S55854-Z519-A100	AGG9.826	RAST3.5 (2P)	X33	LMV6	500
S55854-Z521-A100	AGG9.836	RAST3.5 (3P)	X24	LMV6	400
S55854-Z527-A100	AGG9.837	RAST3.5 (3P)	X34	LMV6	400
S55854-Z528-A100	AGG9.838	RAST3.5 (3P)	X48	LMV6	400
S55854-Z522-A100	AGG9.846	RAST3.5 (4P)	X11	LMV6	300
S55854-Z529-A100	AGG9.847	RAST3.5 (4P)	X12	LMV6	300
S55854-Z537-A100	AGG9.848	RAST3.5 (4P)	X15	SQM4	300
S55854-Z538-A100	AGG9.849	RAST3.5 (4P)	X16	SQM4	300
S55854-Z523-A100	AGG9.856	RAST3.5 (5P)	X31	LMV6	250
S55854-Z525-A100	AGG9.857	RAST3.5 (5P)	5-pole	SQM4	250
S55854-Z531-A100	AGG9.858	RAST3.5 (5P)	X45	LMV6	250
S55854-Z534-A100	AGG9.862	RAST3.5 (5P)	X23	LMV6	200
S55854-Z535-A100	AGG9.863	RAST3.5 (6P)	X32	LMV6	200
S55854-Z536-A100	AGG9.864	RAST3.5 (6P)	X46	LMV6	200
S55854-Z539-A100	AGG9.865	RAST3.5 (6P)	X21	AGQ6.4	200
S55854-Z524-A100	AGG9.866	RAST3.5 (6P)	X22	LMV6	200
S55854-Z532-A100	AGG9.881	RAST3.5 (8P)	X13	AGG6.200A5	84

Product presentation (continued)

Individual connector set

AGG6.7x0

Example:



Connection terminals	No. of poles	Unit	Function (Part A)	Individual connector set for...		
				LMV60	LMV62 LMV63	AGG6.200A5
				S55854-Z605-A100 AGG6.710	S55854-Z606-A100 AGG6.720	S55854-Z607-A100 AGG6.730
				<b>Quantities</b>		

<b>RAST5</b>						
Code	No. of poles	Unit	Function	LMV60	LMV62 LMV63	AGG6.200A5
X51	3	LMV6	Flame detector	1	1	---
X52	5	LMV6	Flame detector	1	1	---
X61	3	LMV6	Gas pressure switch-min (Pmin)	1	1	---
X62	3	LMV6	Gas pressure switch-max (Pmax)	1	1	---
X63	2	LMV6	Valve proving (P LT)	1	1	---
X64	2	LMV6	Air pressure switch (LP)	1	1	---
X71	3	LMV6	Start release, burner flange	1	1	---
X72	4	LMV6	Fan (M), operating lamp, start signal	1	1	---
X73	4	LMV6	Load controller (LR), flue gas recirculation (FGR)	1	1	---
X81	3	LMV6	Safety valve (SV)	1	1	---
X82	3	LMV6	Ignition (Z)	1	1	---
X83	3	LMV6	Pilot valve (PV)	1	1	---
X84	3	LMV6	Fuel valve (V2)	1	1	---
X91	4	LMV6	Fuel valve (V1)	1	1	---
X92	3	LMV6	Alarm (AL), reset (EK)	1	1	---
X93	5	LMV6	Power supply, safety loop (SK)	1	1	---
X161	3	AGG6.200A5	Power supply	---	---	1

Product presentation (continued)

Connection terminals	No. of poles	Unit	Function (Part B)	Individual connector set for...		
				LMV60	LMV62 LMV63	AGG6.200A5
				S55854-Z605-A100 AGG6.710	S55854-Z606-A100 AGG6.720	S55854-Z607-A100 AGG6.730
Quantities						

**RAST3.5**

Terminal	No. of poles	Unit	Function	LMV60	LMV62 LMV63	AGG6.200A5
X11	4	LMV6	CAN bus	1	1	---
X12	4	LMV6	CAN bus	1	1	---
X13	8	AGG6.200A5	CAN bus	---	---	1
X15	4	SQM4x	CAN bus	3	3	2
X16	4	SQM4x	CAN bus	3	3	2
X21	6	AGQ6.4	External flame safeguard	---	---	1
X22	6	LMV6	Modbus	---	1	---
X23	6	LMV6	Temperature sensor	---	1	---
X24	3	LMV6	Temperature sensor	---	1	---
X31	5	LMV6	Analog inputs 2 to 10 V, 4 to 20 mA, 24 V DC, setpoint changeover	---	1	---
X32	6	LMV6	Analog inputs 2 to 10 V, 4 to 20 mA	---	1	---
X33	2	LMV6	Output 4 to 20 mA	---	1	---
X34	3	LMV6	Fuel meter	---	1	---
X45	5	LMV6	Output: PWM fan motor	---	1	---
X46	6	LMV6	Variable speed drive	---	1	---
X47	2	LMV6	Output: 4 to 20 mA power supply, variable speed drive	---	1	---
X48	3	LMV6	Fuel meter	---	1	---

**RAST3.81**

Terminal	No. of poles	Unit	Function	LMV60	LMV62 LMV63	AGG6.200A5
X14	4	AZL66	CAN bus	1	1	---

Accessories

**AGG6.200A5**

Power supply unit 230 V~, for CAN bus users.



Article no.	Type	Mains voltage
<b>S55854-Z601-A100</b>	<b>AGG6.200A5</b>	230 V~

**AGG5.31x**

Speed control accessories set for LMV6 systems, consisting of sensor disk, sensor, and mounting kit.



Article no.	Type	Sensor disk
<b>BPZ:AGG5.310</b>	<b>AGG5.310</b>	∅ 50 mm
<b>BPZ:AGG5.315</b>	<b>AGG5.315</b>	∅ 92 mm

**Cable**

**AGG6.635**

Article no: **S55854-Z608-A100**

- Ready-fitted CAN bus connecting cable between the basic unit (RAST3.5 connector) and AZL66 (RAST3.81 connector)
- Cable length 3 m
- Feed lines 2 x 0.5 mm<sup>2</sup>



**AGG6.641**

Article no: **S55854-Z609-A100**

- CAN bus connecting cable between LMV6 and system components
- Shielded 4-core cable
- Cable length 100 m
- Feed lines 2 x 1.25 mm<sup>2</sup>

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**AGG5.812**

Article no: **BPZ:AGG5.812**

Separate cable entry, single pack, minimum order quantity of 50 units



**Note!**

Only the specified connecting cables may be used.



**Gas damper and air damper with mounting kit**

**VKF1**  
Butterfly valves



Article no.	Type <b>VKF10</b>	DN [mm]	Leakage rate where $\Delta p = 0.5 \text{ kPa air}$
<b>S55592-G101-A100</b>	<b>VKF10.032</b>	32 + 40	< 2%
<b>S55592-G102-A100</b>	<b>VKF10.040</b>	40 + 50	< 2%
<b>S55592-G103-A100</b>	<b>VKF10.050</b>	50 + 65	< 2%
<b>S55592-G104-A100</b>	<b>VKF10.065</b>	65 + 80	< 2%
<b>S55592-G105-A100</b>	<b>VKF10.080</b>	80 + 100	< 2%
<b>S55592-G106-A100</b>	<b>VKF10.100</b>	100 + 125	< 2%
<b>S55592-G107-A100</b>	<b>VKF10.125</b>	125 + 150	< 2%
<b>S55592-G108-A100</b>	<b>VKF10.150</b>	150 + 200	< 2%
<b>S55592-G109-A100</b>	<b>VKF10.200</b>	200	< 2%

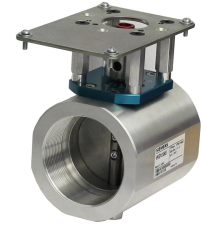
Article no.	Type <b>VKF11</b>	DN [mm]	Leakage rate where $\Delta p = 0.5 \text{ kPa air}$
<b>S55592-G110-A100</b>	<b>VKF11.032</b>	32 + 40	< 0.5%
<b>S55592-G111-A100</b>	<b>VKF11.040</b>	40 + 50	< 0.5%
<b>S55592-G112-A100</b>	<b>VKF11.050</b>	50 + 65	< 0.5%
<b>S55592-G113-A100</b>	<b>VKF11.065</b>	65 + 80	< 0.5%
<b>S55592-G114-A100</b>	<b>VKF11.080</b>	80 + 100	< 0.5%
<b>S55592-G115-A100</b>	<b>VKF11.100</b>	100 + 125	< 0.5%
<b>S55592-G116-A100</b>	<b>VKF11.125</b>	125 + 150	< 0.5%
<b>S55592-G117-A100</b>	<b>VKF11.150</b>	150 + 200	< 0.5%
<b>S55592-G118-A100</b>	<b>VKF11.200</b>	200	< 0.5%

Legend  
DN Nominal diameter





**Note!**  
Only suitable for SQM4x.xx5xx actuators.


**VKG**  
Butterfly valves



Article no.	Type	Article no.	Type	Housing size	Tube size
S55592-G301-A100	VKG10.032ER	S55592-G306-A100	VKG20.032ER	DN32	1¼"
S55592-G302-A100	VKG10.040ER	S55592-G307-A100	VKG20.040ER	DN40	1½"
S55592-G303-A100	VKG10.050ER	S55592-G308-A100	VKG20.050ER	DN50	2"
S55592-G304-A100	VKG10.065ER	S55592-G309-A100	VKG20.065ER	DN65	2½"
S55592-G305-A100	VKG10.080ER	S55592-G310-A100	VKG20.080ER	DN80	3"

 **Note!**  
In the VKG10, the damper corresponds to the pipe diameter. In the VKG20, the damper reduces the nominal size by one increment – for example, DN32 corresponds to DN25.

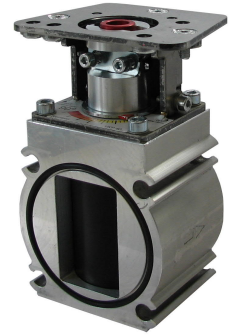
 **Note!**  
Only suitable for SQM4x.xx5xx actuators.

 **Note!**  
The mounting plate and screws are included in the scope of delivery and already pre-assembled.

**Proportional controlling element**

**VKP40**

Proportional controlling element for mounting between threaded flanges in gas trains.



Article no.	Type	Housing size	Nominal size of the built-in rotary cylinder	Available flange sizes AGF10
BPZ:VKP40.15	VKP40.15	DN40	15	½"
BPZ:VKP40.20	VKP40.20	DN40	20	¾"
BPZ:VKP40.25	VKP40.25	DN40	25	1"
BPZ:VKP40.32	VKP40.32	DN40	32	1 ¼"
BPZ:VKP40.40	VKP40.40	DN40	40	1 ½"
BPZ:VKP40.50	VKP40.50	DN40	50	2"
BPZ:VKP40.50H	VKP40.50H	DN40	50 H	2"
BPZ:VKP40.50S	VKP40.50S	DN40	50 S	2"

**AGF10 flange**

(to be ordered separately)

- Flanges for connecting the VGD20
- Order flanges individually
- Flanges can be combined with the VGD20 as desired



The following flange sizes and threads are available:

Flange		Nominal size (RP)	Length in mm
Article no.	Type		
BPZ:AGF10.15	AGF10.15	½"	26
BPZ:AGF10.20	AGF10.20	¾"	26
BPZ:AGF10.25	AGF10.25	1"	26
BPZ:AGF10.32	AGF10.32	1 ¼"	26
BPZ:AGF10.40	AGF10.40	1 ½"	26
BPZ:AGF10.50	AGF10.50	2"	30

**ASK33.1 mounting plate**

Article no: **BPZ:ASK33.1**

(to be ordered separately)

Larger mounting plate required to replace existing mounting plate for mounting the SQM4x.xx5xx actuators.



**Note!**

The required screws are included in the basic packaging for the VKP40.

**LMV6 Available Documentation (NEW)**

Type (ASN)	Designation	Documentation
ACS460	PC software	CC1J7355
ACS461	PC software for KF8866.1A2	CC1U7997
AGF10	Flange	
AGG5.310	Speed control accessories set	CC1M7550.1
AGG5.315	Inductive sensor	CC1P7560
AGG6.635	Ready-fitted CAN bus connecting cable	CC1P7560
AGG6.641	CAN bus connecting cable	CC1P7560
AGG6.500	CAN bus shielding plate for LMV6	CC1P7560
AGG6.200A5	100 to 240 V~ power supply unit	CC1P7560
AGG6.710	Individual connector set	CC1N7560
AGG6.720	Individual connector set	CC1N7560
AGG6.730	Individual connector set	CC1N7560
AGG9.xxx	Connector sets	CC1N7560
AGM23	QRA7 connecting cable	CC1N7712
AGM23U	QRA7 connecting cable	CC1N7712
AGO20	Flue gas collectors	CC1N7842
AGQ6.1	Flame signal amplifier module Ionization probe / QRA2 / QRA4 / QRA10 / QRA7 / QRI	CC1P7560
AGQ6.2	QRB4 flame signal amplifier module	CC1P7560
AGQ6.3	Flame signal amplifier module for QRA7	CC1P7560
AGQ6.4	Flame signal amplifier module for external flame safeguard	CC1P7560
ASK33.1	Mounting kit	74 319 0843 0
AZL66	<b>Display and operating unit</b>	
	Operating Instructions	CC1U7562
	Data sheet	CC1N7562
FGT-Pt1000	Flue gas temperature sensor	CE1N1846
KF8866.1A2	Demo case	CC1U7997
LMV6	<b>Burner management system</b>	
	LMV60.110A2 User Documentation	A7560.1
	LMV62 User Documentation	A7560.2
	LMV63 User Documentation	A7560.3
	Setting and error lists	CC1I7560
	Data sheet	CC1N7560
	Basic Documentation	CC1P7560
	Product Range Overview	CC1Q7560
Installation Guide	CC1J7560	
QAE21	Immersion temperature sensor	CE1N1781
QAE3010 / QAE3075	Immersion temperature sensor	CC1N1794
QBE2003-P / QBE2103-P	Pressure sensor	A6V10432494_de
QGC	<b>Oxygen sensor</b>	

Type (ASN)	Designation	Documentation
	Data sheet	CC1N78xx
	Basic Documentation	CC1P78xx
QRA2	UV flame detector	CC1N7712
QRA2M	UV flame detector	CC1N7712
QRA4	UV flame detector	CC1N7711
QRA7	UV flame detector	CC1N7712
QRA10	UV flame detector	CC1N7712
QRB4	Yellow flame detector	CC1N7720
QRI2	Infrared flame detector	CC1N7719
RAR9	Photocell detector	CC1N7713
SQM4	Actuators	CC1N7820
VKF1	Butterfly valves	CC1N7673
VKG	Gas damper	CC1N7652
VKP40	Proportional controlling element	CC1N7646