

## **LMV60.110A2 LMV62.xxxA2**

**Burner management system**

## **Addendum to User Manual OEM**

## **Parameter list and error code list**

**The LMV6 and these lists are intended for original equipment manufacturers (OEMs) using the LMV6 in or on their products.**

Applies to the following software versions

LMV60.110A2:..... V2.100

LMV62.xxxA2..... V2.100

AZL66: ..... V2.100

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# 1 Typographical conventions

## 1.1 Safety notes

These lists contain notes that must be observed to ensure your personal safety and to prevent material damage. The instructions and notes are highlighted by a warning triangle or information symbol and are presented as follows, depending on the hazard level:



**Warning** means that death, severe personal injury or substantial damage to property **can** occur if adequate precautionary measures are not taken.



**Note** draws your attention to **important information** on the product, on product handling, or to a special part of the documentation.

## 1.2 Qualified personnel

Only **qualified personnel** are allowed to start up and operate the LMV6. Qualified personnel in the context of the safety-related notes contained in this document are persons who are authorized to commission, ground, and tag units, systems and electrical circuits in compliance with established safety practices and standards.

## 1.3 Correct use

Note the following:

The LMV6 may only be used for the applications described in the technical documentation and only in conjunction with devices or components from other suppliers that have been approved or recommended by Siemens.

The product can only function correctly and safely if shipped, stored, set up and installed correctly, and operated and maintained as specified.

# 2 Safety notes



**Warning!**  
**Additional notes to be observed!**  
All the safety, warning, and technical notes given in the LMV6 Basic Documentation (P7560), the AZL66 Data Sheet (U7562), and the AZL66 User Manual (U7562) also apply to this document. To avoid injury to persons, damage to property or the environment, the following warning notes must be observed!

## 3 Overview

### 3.1 Target groups

The tables in this document contain all available settings up to the service level.

- OEM development engineers

### 3.2 Supplementary documentation

Product type	Designation	Documentation type	Documentation number
LMV6	Burner management system	Environmental declaration	E7560 *)
LMV6	Burner management system	Installation guide	J7560
LMV60.110A2	Burner management system	Data sheet	N7560
LMV62.xxxA2	Burner management system	Data sheet	N7560
LMV60.110A2	Burner management system	Basic documentation	P7560
LMV62.xxxA2	Burner management system	Basic documentation	P7560
LMV6	Burner management system	Product range overview This document contains a complete overview	Q7560

AZL66	Display and operating unit	Environmental declaration	E7562 *)
AZL66	Display and operating unit	Data sheet	N7562
AZL66	Display and operating unit	User manual	U7562

\*) On request only



#### Note

This document only refers to the *product type* – not the product designation. See the table below for details.

Product type	Product designation
AZL66	Display and operating unit
LMV6	Burner management system

## 4 Menu list and parameter list

### 4.1 AZL66 menu structure with parameter definitions

A parameter is defined for each line of the AZL66 menu.

Name of column	Description
Menu level	This parameter name or submenu level corresponds with the name on the menu
Description	Brief explanation of the parameter and submenu level
Value range	Definition of setting limits within which the parameter can be changed
Access rights	Definition of access rights. Parameters can be set by: <b>AB</b> : End user <b>HF (SO)</b> : Heating engineer <b>OEM</b> : Manufacturer of the original product
Basic parameter setting	Factory-set parameter
LMV6	Line marked with an x: Line displayed with an LMV6



#### Note








The basic parameter settings made in the factory can vary by country or depending on country-specific requirements.

If required, the code or version of the parameter set can be displayed by the AZL66. In that case, select menu item *Factory ID* from the LMV6 menu.




## 5 Parameter list (AZL66)

### Abbreviations for password level:

AB (PO)	End user
OEM	Manufacturer of the original product
HF (SO)	Heating engineer

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.x1xA2
		Min.	Max.			Read	Write		
	Main menu							•	•
	Configuration							•	•
0000	System configuration							•	•
0101–0149	Activate system components							•	•
0101	R: Air actuator		OFF ON		ON	OEM	OEM	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0102	R: Gas actuator		OFF ON		ON	OEM	OEM	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0104	R: Auxiliary actuator 1		OFF ON		OFF	OEM	OEM		•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0105	R: Auxiliary actuator 2		OFF ON		OFF	OEM	OEM		•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0106	R: Auxiliary actuator 3 / FGR		OFF ON		OFF	OEM	OEM	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0130	R: QGC		OFF ON		OFF	OEM	OEM		•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0151	Actuators: Addressing		Air actuator Gas actuator Auxiliary actuator 1 Auxiliary actuator 2 Auxiliary actuator 3 / FGR		No factory setting	HF (SO)	HF (SO)	•	•
0161–0169	Actuators: Direction of rotation							•	•
0161	R: Air actuator		Counterclockwise Clockwise		Counterclockwise	OEM	OEM	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0162	R: Gas actuator		Counterclockwise		Counterclockwise	OEM	OEM	•	•



Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
			Clockwise						
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0164	R: Auxiliary actuator 1		Counterclockwise Clockwise		Counterclockwise	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0165	R: Auxiliary actuator 2		Counterclockwise Clockwise		Counterclockwise	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0166	R: Auxiliary actuator 3 / FGR		Counterclockwise Clockwise		Counterclockwise	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0901–0929	Restart counter							•	•
0901	Extraneous light during startup	0	5	1	0	OEM	OEM	•	•
	Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0902	Extraneous light during shutdown	0	5	1	0	OEM	OEM	•	•
	Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0903–0906	Fuel 1: Faulty flame							•	•
0903	No flame at the end of TSA1 + TSA2	0	3	1	0	OEM	OEM	•	•
	Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0905	Loss of flame in operation	0	127	1	0	HF (SO)	HF (SO)	•	•
	Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0920	Air pressure error during prepurging	0	1	1	0	OEM	OEM	•	•
	Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0924	Start prevention	0	127	1	3	HF (SO)	HF (SO)	•	•
	Note Changing the parameter setting!								

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
	If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0925	Safety loop	0	127	1	3	HF (SO)	HF (SO)	•	•
	 Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
0928	Variable speed drive (VSD)	0	2	1	2	OEM	OEM		•
	 Note Changing the parameter setting! If the parameter settings are changed, the new parameter settings are only adopted when the LMV6 has been manually locked and unlocked (reset) by means of a subsequent manual reset.								
<b>1000</b>	<b>Fuel 1</b>							•	•
1100	LMV6 burner control							•	•
1001–1114	Times before ignition							•	•
1102	Fan run-up time	1 s	59 s	0.1 s	2 s	HF (SO)	HF (SO)	•	•
1103	Prepurge time	1 s	800 s	1 s	20 s	HF (SO)	HF (SO)	•	•
1105	Prepurging without flue gas recirculation (FGR)	1 s	800 s	1 s	10 s	HF (SO)	HF (SO)	•	•
1106	Prepurge time with flue gas recirculation (FGR)	1 s	800 s	1 s	10 s	HF (SO)	HF (SO)	•	•
1107	Preignition time	0.2 s	59 s	0.1 s	2 s	HF (SO)	HF (SO)	•	•
1115–1124	Times after ignition							•	•
1115	Safety time 1 (TSA1)	1 s	5 s	0.1 s	3 s	OEM	OEM	•	•
1116	Interval 1	1 s	59 s	0.1 s	2 s	HF (SO)	HF (SO)	•	•
1117	Safety time 2 (TSA2)	1 s	10 s	0.1 s	3 s	OEM	OEM	•	•
1118	Interval 2	1 s	630 s	1 s	2 s	HF (SO)	HF (SO)	•	•
1125–1134	Times: Shutdown							•	•
1125	Maximum time to low-fire in operation	1 s	630 s	1 s	20 s	HF (SO)	HF (SO)	•	•
1127	Postpurge time	1 s	1600 s	1 s	5 s	HF (SO)	HF (SO)	•	•
1128	Postpurge time without flue gas recirculation (FGR)	1 s	1600 s	1 s	1 s	HF (SO)	HF (SO)	•	•
1129	Postpurge time with flue gas recirculation (FGR)	1 s	1600 s	1 s	5 s	HF (SO)	HF (SO)	•	•
1130	Maximum time until air pressure OFF in home run	1 s	300 s	1 s	30 s	HF (SO)	HF (SO)	•	•
1131	Maximum time until flame OFF	1 s	59 s	1 s	8 s	HF (SO)	HF (SO)	•	•
1135–1139	General times							•	•
1135	Time until alarm in standby	1 s	630 s	1 s	20 s	HF (SO)	HF (SO)	•	•
1136	Time until display message in standby	1 s	630 s	1 s	10 s	HF (SO)	HF (SO)	•	•
1137	Pressure switch: Tolerance time	0.1 s	10 s	0.1 s	2 s	HF (SO)	HF (SO)	•	•
1145–1159	LMV6 configuration							•	•
1145	R: Fuel train		No fuel train Gas direct ignition Gas pilot ignition 1 Gas pilot ignition 2		No fuel train	OEM	OEM	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
1146	Forced intermittent		OFF ON		ON	HF (SO)	OEM	•	•



Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.x1xA2
		Min.	Max.			Read	Write		
1149	R: Check: Minimum gas pressure		OFF ON		ON	OEM	OEM	•	•
	<p>Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.</p>								
1150	R: Check: Maximum gas pressure		OFF ON		ON	OEM	OEM	•	•
	<p>Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.</p>								
1151	Alarm in case of start prevention		OFF ON		OFF	HF (SO)	HF (SO)	•	•
1200	Valve proving							•	•
1201	R: Valve proving – type and time		No valve proving Valve proving during startup Valve proving during shutdown Valve proving during startup and shutdown		Valve proving during startup	OEM	OEM	•	•
	<p>Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.</p>								
1202	Valve proving – evacuation time	0.1 s	10 s	0.1 s	3 s	OEM	OEM	•	•
1203	Valve proving – test time atmospheric	0.1 s	1620 s	0.1 s	10 s	OEM	OEM	•	•
1204	Valve proving – filling time	0.1 s	10 s	0.1 s	3 s	OEM	OEM	•	•
1205	Valve proving – test time gas pressure	0.1 s	1620 s	0.1 s	10 s	OEM	OEM	•	•
1300–1699	Ratio control							•	•
1301–1320	Curve setting: Preadjustments							•	•
1301	Air actuator: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1302	Air actuator: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1303	Gas actuator: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1304	Gas actuator: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1307	Auxiliary actuator 1: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1308	Auxiliary actuator 1: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1309	Auxiliary actuator 2: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1310	Auxiliary actuator 2: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1311	Auxiliary actuator 3 / FGR: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1312	Auxiliary actuator 3 / FGR: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1317	Variable speed drive (VSD): Speed at 0%	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1318	Variable speed drive (VSD): Speed at 100%	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1350	Curve setting					HF (SO)	HF (SO)	•	•
1410–1541	Special positions							•	•
1410–1421	No-load positions							•	•
1410	Air actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1411	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1413	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1414	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1415	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1418	Variable speed drive (VSD)	0%	100%	0.1%	0%	HF (SO)	HF (SO)		•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
1430–1441	Prepurge positions 1							•	•
1430	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1431	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1433	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1434	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1435	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1438	Variable speed drive (VSD)	100%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1450–1461	Prepurge positions 2 / FGR							•	•
1450	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1451	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1453	Auxiliary actuator 1	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1454	Auxiliary actuator 2	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1455	Auxiliary actuator 3 / FGR	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1458	Variable speed drive (VSD)	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1470–1481	Ignition positions 1 (TSA1)							•	•
1470	Air actuator	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1471	Gas actuator	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1473	Auxiliary actuator 1	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)		•
1474	Auxiliary actuator 2	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)		•
1475	Auxiliary actuator 3 / FGR	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1478	Variable speed drive (VSD)	10%	100%	0.1%	Invalid	HF (SO)	HF (SO)		•
1490–1501	Ignition positions 2 (TSA2)							•	•
1490	Air actuator	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1491	Gas actuator	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1493	Auxiliary actuator 1	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)		•
1494	Auxiliary actuator 2	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)		•
1495	Auxiliary actuator 3 / FGR	0°	90°	0.1°	Invalid	HF (SO)	HF (SO)	•	•
1498	Variable speed drive (VSD)	10%	100%	0.1%	Invalid	HF (SO)	HF (SO)		•
1510–1521	Postpurge positions 1							•	•
1510	Air actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1511	Gas actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1513	Auxiliary actuator 1	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1514	Auxiliary actuator 2	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1515	Auxiliary actuator 3 / FGR	0°	90°	0.1°	25°	HF (SO)	HF (SO)	•	•
1518	Variable speed drive (VSD)	10%	100%	0.1%	50%	HF (SO)	HF (SO)		•
1530–1541	Postpurge positions 2 / FGR							•	•
1530	Air actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1531	Gas actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1533	Auxiliary actuator 1	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1534	Auxiliary actuator 2	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1535	Auxiliary actuator 3 / FGR	0°	90°	0.1°	25°	HF (SO)	HF (SO)	•	•
1538	Variable speed drive (VSD)	10%	100%	0.1%	50%	HF (SO)	HF (SO)		•
1599	Program stop		Deactivated		Deactivated	HF (SO)	HF (SO)	•	•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
			Stop in prepurging part 1 (phase 30) Stop in prepurging part 2 / FGR (phase 34) Stop in ignition 1 (phase 38) Stop in interval 1 (phase 44) Stop in interval 2 (phase 52) Stop in postpurging part 1 (phase 74) Stop in postpurging part 2 (phase 78)						
1601–1620	Ratio control: Configuration							•	•
1602	Minimum load	0%	100%	1%	0%	HF (SO)	HF (SO)	•	•
1603	Maximum load	0%	100%	1%	100%	HF (SO)	HF (SO)	•	•
1620	Position tolerance	0.3°	1.2°	0.1°	0.3°	OEM	OEM	•	•
1650–1659	Actuators: Configuration							•	•
1650	Air actuator		Deactivated Activated		Activated	HF (SO)	HF (SO)	•	•
1651	Gas actuator		Deactivated Activated		Activated	HF (SO)	HF (SO)	•	•
1653	Auxiliary actuator 1		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1654	Auxiliary actuator 2		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1655	Auxiliary actuator 3 / FGR		Deactivated Activated Activated FGR		Deactivated	HF (SO)	HF (SO)	•	•
1658	Variable speed drive (VSD)		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1670–1672	Times							•	•
1670	Running speed outside the operation	10 s	120 s	1 s	10 s	HF (SO)	HF (SO)	•	•
1672	Running speed in operation	30 s	120 s	1 s	30 s	HF (SO)	HF (SO)	•	•
1700	Flue gas recirculation (FGR)							•	•
1701	R: FGR operating mode		Auxiliary actuator 3 / FGR on curve Trigger activated Deactivated Temperature-compensated		Deactivated	HF (SO)	HF (SO)	•	•
	 Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
	 Note Auxiliary actuator 3 / FGR behavior! If flue gas recirculation (FGR) is active, auxiliary actuator 3 / FGR follows the parameterized ratio control curve, taking into consideration the specific parameters for flue gas recirculation (FGR) (e.g., 1702, 1455, 1535). Auxiliary actuator 3 / FGR is always kept in the MIN flue gas recirculation (FGR) position after the ignition position until a certain time or temperature is reached. If flue gas recirculation (FGR) is deactivated, auxiliary actuator 3 / FGR follows the ratio control curve (e.g., 1415, 1450–1461).								
1702	Trigger		External contact Time Temperature		Time	HF (SO)	HF (SO)		•
1703	Time until trigger ON	1 s	1620 s	1 s	5 min	HF (SO)	HF (SO)	•	•
1704	Temperature until trigger ON	0°C	400°C	1°C	200°C	HF (SO)	HF (SO)		•
1705	Debouncing time on contact	1 s	300 s	1 s	10 s	HF (SO)	HF (SO)	•	•
1706	R: Pt1000 / X24 temperature sensor		Deactivated Pt1000		Deactivated	OEM	OEM		•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
1720	Flue gas recirculation (FGR): Current temperature	100°C	800°C	0.1°C	---	AB (PO)	---		•
1740	Auxiliary actuator 3 / FGR: MIN position	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1750	Flue gas recirculation (FGR): Manual control		AUTO OFF ON		AUTO	HF (SO)	HF (SO)	•	•
1761–1764	Flue gas recirculation (FGR): Temperature-compensated								•
1761	Flue gas recirculation (FGR): Temperature compensated operating mode		Manually deactivated Activated Automatically deactivated Activated with auto-deactivation		Activated	HF (SO)	HF (SO)		•
1762	Flue gas recirculation (FGR): Adjustment factor	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1763	Flue gas recirculation (FGR): Maximum position factor	0%	100%	0.1%	10%	HF (SO)	HF (SO)		•
1764	Delay time until temperature compensation starts	0 s	600 s	1 s	0 s	HF (SO)	HF (SO)		•
1800	Flame detector								•
	Configuration								•
1801	Flame detector 1: Selection for logic		Internal Flame module		Internal	OEM	OEM		•
1802	Flame detector 2: Selection for logic		Internal Flame module		Flame module	OEM	OEM		•
1803	Flame logic: Extraneous light		Flame 1 Flame 2 Flame 1 or 2		Flame 1	OEM	OEM		•
1804	Flame logic: Pilot		Flame 1 Flame 2 Flame 1 and not 2 Flame 2 and not 1 Flame 1 and 2 Flame 1 or 2		Flame 1	OEM	OEM		•
1805	Flame logic: Operation		Flame 1 Flame 2 Flame 1 and not 2 Flame 2 and not 1 Flame 1 and 2 Flame 1 or 2		Flame 1	OEM	OEM		•
1806	Afterburn time: Pilot	0 s	10 s	1 s	8 s	OEM	OEM		•
1824	LMV6: Mounted flame modules		No flame module Internal flame module AGQ6.1: ION or QRA2/QRA4/QRA10 AGQ6.2: QRB or QRC AGQ6.3: QRI or QRA7 AGQ6.4: External flame detector AGQ6.5 AGQ6.6 No valid flame module		No flame module	AB (PO)	---		•
	Note Description of the flame modules. Refer to LMV6 Basic Documentation (P7560).								
1830–1835	Process data								•
1830	Resulting flame intensity	0%	100%	0.1%	---	AB (PO)	---		•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
1831	Resulting logical flame signal	0	1	0.1	---	AB (PO)	---		•
1832	Detector 1: Flame intensity	0%	100%	0.1%	---	AB (PO)	---		•
1833	Detector 1: Logical flame signal	0	1	0.1	---	AB (PO)	---		•
1834	Detector 2: Flame intensity	0%	100%	0.1%	---	AB (PO)	---		•
1835	Detector 2: Logical flame signal	0	1	0.1	---	AB (PO)	---		•
<b>5000</b>	<b>Load controller</b>								•
5100	Configuration								•
5115	External input X32		Deactivated 4...20 mA 0...20 mA 2...10 V 0...10 V		Deactivated	HF (SO)	HF (SO)		•
<b>6000</b>	<b>Variable speed drive (VSD)</b>								•
	Configuration								•
6002	Tolerance: Quick shutdown	0%	100%	1%	10%	OEM	OEM		•
6007	Lowest supervised speed	10%	40%	1%	10%	OEM	OEM		•
6015	Variable speed drive (VSD): Alarm input logic		Alarm when OFF Alarm when ON		Alarm when OFF	HF (SO)	HF (SO)		•
6016	Current output: Scaling		4...20 mA 0...20 mA 0/4...20 mA		0...20 mA	HF (SO)	HF (SO)		•
	Speed								•
6020	Activate standardization		OFF ON		OFF	HF (SO)	HF (SO)		•
6021	Status: Standardization					HF (SO)	---		•
6022	Absolute speed	0 rpm	6500 rpm	0.1 rpm	0 rpm	AB (PO)	---		•
6025	Determined speed = 100%	0 rpm	6500 rpm	0.1 rpm	---	HF (SO)	---		•
6050	Ramp time down	0 s	0 s	0.1 s	0 s	HF (SO)	---		•
6051	Ramp time up	0 s	0 s	0.1 s	0 s	HF (SO)	---		•
6060	Current output with standardization	0 V	100 V	0.1 V	0 V	HF (SO)	HF (SO)		•
6061	Variable speed drive (VSD): Speed control: P-part	0.1%	60%	0.1%	50%	OEM	OEM		•
6062	Variable speed drive (VSD): Speed control: I-part	0.5%	40%	1%	25%	OEM	OEM		•
	Process data								•
6101	Absolute speed	0 rpm	6500 rpm	0.1 rpm	0 rpm	AB (PO)	---		•
6102	Variable speed drive (VSD): Alarm signal	0	1	0	1	AB (PO)	---		•
6104	Current output	0%	100%	0.1%	0%	AB (PO)	---		•
<b>7000</b>	<b>QGC</b>								•
7100-7157	QGC								•
7100-7109	Configuration								•
7100	COe: Threshold	1000 ppm	10000 ppm	1 ppm	1000 ppm	HF (SO)	HF (SO)		•
7101	COe: Hysteresis	100 ppm	1000 ppm	1 ppm	100 ppm	HF (SO)	HF (SO)		•
7150-7157	Process data								•
7151	Current O2 concentration	0%	30%	0.1%	0%	AB (PO)	---		•
7152	Ambient air pressure	0 mbar	100 mbar	0.1 mbar	0 mbar	AB (PO)	---		•
7153	COe: Indicator		ON OFF		OFF	AB (PO)	---		•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
7154	Flue gas temperature	-2000°C	1200°C	0.1°C	0°C	AB (PO)	---		•
7156	Current COe concentration	0 ppm	65535 ppm	0.1 ppm	0 ppm	HF (SO)	---		•
<b>Guided commissioning</b>									
1145	R: Fuel train		No fuel train Gas direct ignition Gas pilot ignition 1 Gas pilot ignition 2		No fuel train	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0101–0149	Activate system components							•	•
0101	R: Air actuator		OFF ON		ON	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0102	R: Gas actuator		OFF ON		ON	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0104	R: Auxiliary actuator 1		OFF ON		OFF	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0105	R: Auxiliary actuator 2		OFF ON		OFF	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0106	R: Auxiliary actuator 3 / FGR		OFF ON		OFF	OEM	OEM	•	
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0130	R: QGC		OFF ON		OFF	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0151	Actuator: Addressing		Air actuator Gas actuator Auxiliary actuator 1 Auxiliary actuator 2 Auxiliary actuator 3 / FGR		No factory setting	HF (SO)	HF (SO)	•	•
0161–0169	Actuators: Direction of rotation							•	•
0161	R: Air actuator		Counterclockwise Clockwise		Counterclockwise	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0162	R: Gas actuator		Counterclockwise Clockwise		Counterclockwise	OEM	OEM	•	•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0164	R: Auxiliary actuator 1		Counterclockwise Clockwise		Counterclockwise	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0165	R: Auxiliary actuator 2		Counterclockwise Clockwise		Counterclockwise	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
0166	R: Auxiliary actuator 3 / FGR		Counterclockwise Clockwise		Counterclockwise	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
1410	Air actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1411	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1413	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1414	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1415	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1418	Variable speed drive (VSD)	0%	100%	0.1%	0%	HF (SO)	HF (SO)		•
1650–1659	Actuators: Configuration							•	•
1650	Air actuator		Deactivated Activated		Activated	HF (SO)	HF (SO)	•	•
1651	Gas actuator		Deactivated Activated		Activated	HF (SO)	HF (SO)	•	•
1653	Auxiliary actuator 1		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1654	Auxiliary actuator 2		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1655	Auxiliary actuator 3 / FGR		Deactivated Activated Activated FGR		Deactivated	HF (SO)	HF (SO)	•	•
1658	Variable speed drive (VSD)		Deactivated Activated		Deactivated	HF (SO)	HF (SO)		•
1430–1441	Prepurge positions 1							•	•
1430	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1431	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1433	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1434	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1435	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1438	Variable speed drive (VSD)	100%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1450–1461	Prepurge positions 2 / FGR							•	•
1450	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1451	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1453	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1454	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
1455	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1458	Variable speed drive (VSD)	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1470–1481	Ignition positions 1 (TSA1)							•	•
1470	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1471	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1473	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1474	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1475	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1478	Variable speed drive (VSD)	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1490–1501	Ignition positions 2 (TSA2)							•	•
1490	Air actuator	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1491	Gas actuator	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1493	Auxiliary actuator 1	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1494	Auxiliary actuator 2	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1495	Auxiliary actuator 3 / FGR	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1498	Variable speed drive (VSD)	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1510–1521	Postpurge positions 1							•	•
1510	Air actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1511	Gas actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1513	Auxiliary actuator 1	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1514	Auxiliary actuator 2	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1515	Auxiliary actuator 3 / FGR	0°	90°	0.1°	25°	HF (SO)	HF (SO)	•	•
1518	Variable speed drive (VSD)	10%	100%	0.1%	50%	HF (SO)	HF (SO)		•
1530–1541	Postpurge positions 2 / FGR							•	•
1530	Air actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1531	Gas actuator	0°	90°	0.1°	15°	HF (SO)	HF (SO)	•	•
1533	Auxiliary actuator 1	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1534	Auxiliary actuator 2	0°	90°	0.1°	25°	HF (SO)	HF (SO)		•
1535	Auxiliary actuator 3 / FGR	0°	90°	0.1°	25°	HF (SO)	HF (SO)	•	•
1538	Variable speed drive (VSD)	10%	100%	0.1%	50%	HF (SO)	HF (SO)		•
1201	R: Valve proving – type and time		No valve proving Valve proving during startup Valve proving during shutdown Valve proving during startup and shutdown		Valve proving during startup	OEM	OEM	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
1700	Flue gas recirculation (FGR)							•	•
1701	R: FGR operating mode		Auxiliary actuator 3 / FGR on curve Trigger activated Deactivated Temperature-compensated		Deactivated	HF (SO)	HF (SO)	•	•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
	Note								



Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
	Auxiliary actuator 3 / FGR behavior! If flue gas recirculation (FGR) is active, auxiliary actuator 3 / FGR follows the parameterized ratio control curve, taking into consideration the specific parameters for flue gas recirculation (FGR) (e.g., 1702, 1455, 1535). Auxiliary actuator 3 / FGR is always kept in the MIN flue gas recirculation (FGR) position after the ignition position until a certain time or temperature is reached. If flue gas recirculation (FGR) is deactivated, auxiliary actuator 3 / FGR follows the ratio control curve (e.g., 1415, 1450–1461).								
1702	Trigger		External contact Time Temperature		Time	HF (SO)	HF (SO)		•
1703	Time until trigger ON	1 s	1620 s	1 s	5 min	HF (SO)	HF (SO)	•	•
1704	Temperature until trigger ON	0°C	400°C	0.1°C	200°C	HF (SO)	HF (SO)		•
1706	R: Pt1000 / X24 temperature sensor		Deactivated Pt1000		Deactivated	OEM	OEM		•
	Note Changing the parameter settings! If the parameter setting is changed, a manual reset is required.								
1740	Auxiliary actuator 3 / FGR: MIN position	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
6000	Variable speed drive (VSD)								•
6016	Current output: Scaling		4...20 mA 0...20 mA 0/4...20 mA		0...20 mA	HF (SO)	HF (SO)		•
6020	Activate standardization		ON OFF		Off	HF (SO)	HF (SO)		•
6021	Status: Standardization					HF (SO)	---		•
6022	Absolute speed	0 rpm	6500 rpm	0.1 rpm	0 rpm	HF (SO)	---		•
6025	Determined speed = 100%	0 rpm	6500 rpm	0.1 rpm	---	HF (SO)	---		•
6050	Ramp time down	0 s	0 s	0.1 s	0 s	HF (SO)	---		•
6051	Ramp time up	0 s	0 s	0.1 s	0 s	HF (SO)	---		•
1599	Program stop		Deactivated Stop in prepurging part 1 (phase 30) Stop in prepurging part 2 / FGR (phase 34) Stop in ignition 1 (phase 38) Stop in interval 1 (phase 44) Stop in interval 2 (phase 52) Stop in postpurging part 1 (phase 74) Stop in postpurging part 2 (phase 78)		Deactivated	HF (SO)	HF (SO)	•	•
1301–1320	Curve setting: Preadjustments							•	•
1301	Air actuator: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1302	Air actuator: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1303	Gas actuator: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1304	Gas actuator: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1307	Auxiliary actuator 1: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1308	Auxiliary actuator 1: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1309	Auxiliary actuator 2: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)		•
1310	Auxiliary actuator 2: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)		•
1311	Auxiliary actuator 3 / FGR: Angle at 0%	0°	90°	0.1°	0°	HF (SO)	HF (SO)	•	•
1312	Auxiliary actuator 3 / FGR: Angle at 100%	0°	90°	0.1°	90°	HF (SO)	HF (SO)	•	•
1317	Variable speed drive (VSD): Speed at 0%	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•
1318	Variable speed drive (VSD): Speed at 100%	10%	100%	0.1%	100%	HF (SO)	HF (SO)		•







Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
1350	Curve setting					HF (SO)	HF (SO)	•	•
1602	Minimum load	0%	100%	1%	0%	HF (SO)	HF (SO)	•	•
1603	Maximum load	0%	100%	1%	100%	HF (SO)	HF (SO)	•	•
	<b>Diagnosis</b>							•	•
	Error history / fault history							•	•
	Process data					AB (PO)	---	•	•
7351	Actual load	0%	100%	1%	0%	AB (PO)	---		•
7352	Air actuator: Position	-1800°	180°	0.1°	180°	AB (PO)	---		•
7353	Gas actuator: Position	-1800°	180°	0.1°	180°	AB (PO)	---		•
7354	Auxiliary actuator 1: Position	-1800°	180°	0.1°	180°	AB (PO)	---		•
7355	Auxiliary actuator 2: Position	-1800°	180°	0.1°	180°	AB (PO)	---		•
7356	Auxiliary actuator 3 / FGR: Position	-1800°	180°	0.1°	180°	AB (PO)	---		•
7365	Variable speed drive (VSD): Speed	-500%	100%	0.1%	100%	AB (PO)	---		•
7370	Phase					AB (PO)	---		•
3498	Active load source					AB (PO)	---		•
8003	Burner identification					AB (PO)	OEM	•	•
	<b>Maintenance</b>							•	•
	Backup of all data points					AB (PO)	AB (PO)	•	•
	Restore: System					HF (SO)	HF (SO)		•
0201–0345	Factory ID							•	•
0201–0211	LMV6							•	•
0201	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0202	Date of production	0	65535	0.1	0	AB (PO)	---	•	•
0205	Firmware: Main version	0	65535	0.1	0	AB (PO)	---	•	•
0206	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---	•	•
0211	Software revision	0	4294967295	0.1	0	AB (PO)	---	•	•
0215–0225	AZL66							•	•
0215	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0216	Date of production	0	65535	0.1	0	AB (PO)	---	•	•
0219	Firmware: Main version	0	65535	0.1	0	AB (PO)	---	•	•
0220	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---	•	•
0225	Software revision	0	4294967295	0.1	0	AB (PO)	---	•	•
0231–0241	Air actuator							•	•
0231	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0232	Date of production	0	65535	0.1	0	AB (PO)	---	•	•
0235	Firmware: Main version	0	65535	0.1	0	AB (PO)	---	•	•
0236	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---	•	•
0241	Software revision	0	4294967295	0.1	0	AB (PO)	---	•	•
0245–0255	Gas actuator							•	•
0245	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0246	Date of production	0	65535	0.1	0	AB (PO)	---	•	•
0249	Firmware: Main version	0	65535	0.1	0	AB (PO)	---	•	•
0250	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---	•	•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
0255	Software revision	0	4294967295	0.1	0	AB (PO)	---	•	•
0275–0285	Auxiliary actuator 1								•
0275	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0276	Date of production	0	65535	0.1	0	AB (PO)	---		•
0279	Firmware: Main version	0	65535	0.1	0	AB (PO)	---		•
0280	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---		•
0285	Software revision	0	4294967295	0.1	0	AB (PO)	---		•
0291–0301	Auxiliary actuator 2								•
0291	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0292	Date of production	0	65535	0.1	0	AB (PO)	---		•
0295	Firmware: Main version	0	65535	0.1	0	AB (PO)	---		•
0296	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---		•
0301	Software revision	0	4294967295	0.1	0	AB (PO)	---		•
0305–0315	Auxiliary actuator 3 / FGR							•	•
0305	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0306	Date of production	0	65535	0.1	0	AB (PO)	---	•	•
0309	Firmware: Main version	0	65535	0.1	0	AB (PO)	---	•	•
0310	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---	•	•
0315	Software revision	0	4294967295	0.1	0	AB (PO)	---	•	•
0700–0710	QGC								•
0700	Type (ASN)	0	65535	0.1	0	AB (PO)	---		•
0701	Date of production	0	65535	0.1	0	AB (PO)	---		•
0704	Firmware: Main version	0	65535	0.1	0	AB (PO)	---		•
0705	Firmware: Sub-version	0	65535	0.1	0	AB (PO)	---		•
0710	Software revision	0	4294967295	0.1	0	AB (PO)	---		•
0370	Manual operation	0%	100%	1%	---	HF (SO)	HF (SO)		•
0375	Maximum user load	25%	100%	0.1%	100%	AB (PO)	AB (PO)		•
9030–9035	Operating hours							•	•
9030	Total operation (h) read only	0 h		1 h	0 h	AB (PO)	---	•	•
9031	Total operation (h) adjustable	0 h	90001 h	1 h	0 h	AB (PO)	AB (PO)	•	•
9035	LMV6 is live (h)	0 h		1 h	0 h	AB (PO)	---	•	•
9040–9044	Startup counter							•	•
9040	Total startups read only	0	999999	1	0	AB (PO)	---	•	•
9041	Total number of startups adjustable	0	999999	1	0	AB (PO)	AB (PO)	•	•
	<b>Settings &amp; help</b>							•	•
	Password							•	•
	Enter password							•	•
	Change password							•	•
0453	Password: Timeout	1 min	480 min	1 s	5 min	OEM	OEM	•	•
0001	Language		German English 中文 Italiano Español		English	AB (PO)	AB (PO)	•	•

Parameters	Function	Value range		Increment	Factory setting	Access rights		LMV60.110A2	LMV62.X1xA2
		Min.	Max.			Read	Write		
			Suomalainen Français Magyar 한국어 Nederlands Português Русский Türk						
0401–0430	Connections								•
	Mode								•
0411	Server address	10	247	1	10	AB (PO)	AB (PO)		•
0412	Baud rate		9600 14400 19200 38400 57600 115200		9600				•
0414	Timeout	0 s	7200 s	1 s	0 s	AB (PO)	AB (PO)		•
0413	Parity		None Even Odd		None	AB (PO)	AB (PO)		•
0415	Local / remote		LOCAL Modbus active		Local	AB (PO)	---		•
0416	Remote mode		Automatic operation Load target through Modbus Burner OFF		Automatic operation	AB (PO)	---		•
0441–0445	Date/time								•
0441	Date	0	2147483647	1	01/01/2020	AB (PO)	AB (PO)		•
0442	Time	0	2147483647	1	0	AB (PO)	AB (PO)		•
0451–0453	Display								•
0453	Display shutdown time	600 s	28800 s	1 s	5 min	OEM	OEM		•
0454	Physical units	Metric	US	1	Metric	AB (PO)	AB (PO)		•

## 6 Error history

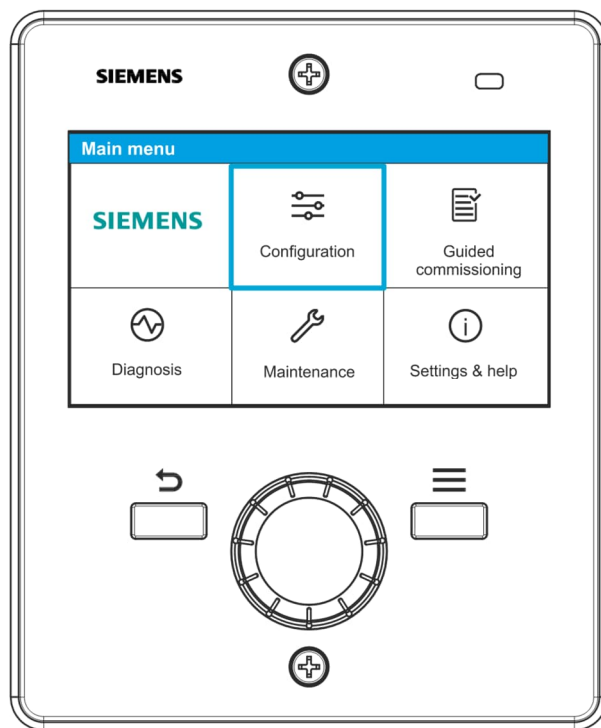
AZL66 display

Error history		
	<b>5100</b> Manual lockout	16
	<b>1009</b> Start prevention due to extraneous light	15
	<b>5100</b> Manual lockout	15
	<b>1042</b> Fuel 1: Restart counter elapsed: No flam...	14
	<b>1005</b> No flame in the first safety time (TSA1)	14
	<b>1041</b> Restart counter elapsed: Extraneous light ...	13

7562z42en/0822

Color code of the error or warning	Meaning
Yellow	Error or warning still active
Red	Error or warning still active
Gray	Error or /warning no longer active

## 7 Meaning of buttons



7562z08en/1021

Graphics	Function	Function
None	Turning knob TURN	<ul style="list-style-type: none"> <li>• Navigate through tile views or list views</li> <li>• Can be turned clockwise or down</li> <li>• Can be turned counterclockwise or up</li> <li>• Change parameter values</li> </ul>
None	Turning knob PUSH	<ul style="list-style-type: none"> <li>• Select a tile / menu item</li> <li>• Confirm a change to a parameter value</li> <li>• Acknowledge messages</li> </ul>
	Back (Return)	Exit a tile / menu item / value adjuster without making further changes
	Menu	<ul style="list-style-type: none"> <li>• Jump to the top level of the menu tree (possible from anywhere)</li> <li>• Access to additional functions (if available)</li> </ul>

## 8 Error code list (AZL66)


### Error code abbreviations:

1xxx Application error

3xxx Configuration error

5xxx System error





Error code	AZL66 display	
	Short text	Long text (recommended measures)
0	Error-free	Error-free
1001	Air pressure OFF	Air pressure switch: Check pressure setting and cabling
1002	Air pressure OFF during prepurging	Air pressure switch: Check pressure setting and cabling
1003	Air pressure ON	Air pressure switch: Check pressure setting and cabling
1004	Start prevention due to air pressure	Air pressure switch: Check pressure setting and cabling
1005	No flame in the first safety time (TSA1)	Check gas supply, gas mixture, pressure setting, fuel valve cabling, and flame detector arrangement
1006	Loss of flame in operation	Check gas supply, gas mixture, pressure setting, fuel valve cabling, and flame detector arrangement
1007	Extraneous light during startup	Check flame detector
1008	Extraneous light during shutdown	Check flame detector
1009	Start prevention due to extraneous light	Check flame detector
1011	Air actuator: Position error	Check whether air actuator is overloaded. Replace actuator if error occurs constantly
1012	Gas actuator: Position error	Check whether gas actuator is overloaded. Replace actuator if error occurs constantly
1014	Auxiliary actuator 1: Position error	Check whether auxiliary actuator 1 is overloaded. Replace actuator if error occurs constantly
1015	Auxiliary actuator 2: Position error	Check whether auxiliary actuator 2 is overloaded. Replace actuator if error occurs constantly
1016	Auxiliary actuator 3 / FGR: Position error	Check whether auxiliary actuator 3 / FGR is overloaded. Replace actuator if error occurs constantly
1019	Variable speed drive (VSD): Speed error	Check whether the fan motor can follow the specification of the LMV6
1020	Check gas supply	Gas pressure switch-min: Check gas supply and setting
1021	Pressure switch-min: Invalid signal	Check connector and cabling. Replace LMV6 if error occurs constantly
1022	Valve proving: Gas side leaking	Check gas side fuel valve
1023	Valve proving: Burner side leaking	Check burner side fuel valve
1024	Pressure switch valve proving: Invalid signal	Check connector and cabling. Replace LMV6 if error occurs constantly
1030	Check gas supply	Gas pressure switch-min: Check pressure setting, cabling, and gas supply
1031	Check gas supply	Gas pressure switch-max: Check pressure setting, cabling, and gas supply
1032	Check gas supply	Gas pressure switch-min: Check pressure setting, cabling, and gas supply
1033	Safety loop: Start prevention	Check cabling and components in the safety loop
1034	Safety loop open	Check cabling and components in the safety loop
1035	Error: Mains voltage	Check mains voltage or connector and cabling
1040	Restart counter elapsed: Extraneous light during startup	Check flame detector and application
1041	Restart counter elapsed: Extraneous light during shutdown	Check flame detector and application
1042	Fuel 1: Restart counter elapsed: No flame at the end of TSA1	Check error history for relevant entries
1045	Fuel 1: Restart counter elapsed: No flame at the end of TSA2	Check error history for relevant entries
1048	Fuel 1: Restart counter elapsed: Loss of flame during operation	Check error history for relevant entries
1051	Restart counter elapsed: Air pressure in prepurging	Check air flow and settings of air pressure switch
1052	Restart counter elapsed: Actuator error	Check actuators
1053	Restart counter elapsed: Relay error	Replace LMV6 if error occurs constantly

Error code	AZL66 display	
	Short text	Long text (recommended measures)
1055	Internal error	Replace LMV6 if error occurs constantly
1056	Restart counter elapsed: Start prevention	Check error history for relevant entries
1057	Restart counter elapsed: Safety loop	Check cabling and components in the safety loop
1058	Restart counter elapsed: Combustion optimization	Check combustion optimization components
1059	Duplicate addresses	Check and correct the actuator addresses using the blink code.
		Note Actuators addressed incorrectly! If the actuator is addressed incorrectly, press and hold the addressing button (approx. 10 seconds) until the actuator LED lights up permanently and then address the actuator correctly.
1060	Restart counter elapsed: Variable speed drive (VSD)	Check error history for relevant entries
1063	No flame in the first safety time (TSA1) after previous loss of flame in operation	Check gas supply, pressure setting, fuel valve cabling, and flame detector arrangement
1064	No flame in the second safety time (TSA2) after previous loss of flame in operation	Check gas supply, pressure setting, fuel valve cabling, and flame detector arrangement
1066	No flame in interval 1	Check gas supply, gas mixture, pressure setting, fuel valve cabling, and flame detector arrangement
1067	No flame in the second safety time (TSA2)	Check gas supply, gas mixture, pressure setting, fuel valve cabling, and flame detector arrangement
1068	Variable speed drive (VSD): Quick shutdown	Variable speed drive (VSD): Check connector, cabling, and speed feedback
1080	Alarm from variable speed drive (VSD)	Variable speed drive (VSD): Check the setting of the parameters: Ramp times, motor settings
1090	Timeout in safety phase	Safety phase >30 s
1100	Flame module was not detected	Reset system
1110	Burner flange open	Check connector and cabling



Error code	AZL66 display	
	Short text	Long text (recommended measures)
3000	Lockout due to system changes	A reset via unlocking is required after making changes to basic system parameters (R)
3001	No fuel train defined	Check parameter 1145
3002	Fuel train not supported	Adjust parameter 1145 to the existing fuel valve configuration
3003	Air actuator: No ignition position	Check parameter 1470
3004	Gas actuator: No ignition position	Check parameter 1471
3006	Auxiliary actuator 1: No ignition position	Check parameter 1473
3007	Auxiliary actuator 2: No ignition position	Check parameter 1474
3008	Auxiliary actuator 3 / FGR: No ignition position	Check parameter 1475
3011	Variable speed drive (VSD): No ignition speed 1	Check parameter 1478
3013	Variable speed drive (VSD): Speed error	Variable speed drive (VSD): Check connector, cabling, and mounting of the speed sensor
3021	Air actuator: Main flame – No ignition position	Check parameter 1490
3022	Gas actuator: Main flame – No ignition position	Check parameter 1491
3024	Auxiliary actuator 1: Main flame – No ignition position	Check parameter 1493
3025	Auxiliary actuator 2: Main flame – No ignition position	Check parameter 1494
3026	Auxiliary actuator 3 / FGR: Main flame – No ignition position	Check parameter 1495
3029	Variable speed drive (VSD): No ignition speed 2	Check parameter 1498
3030	Air actuator not compatible with LMV6	Check type (ASN) and version of the actuator
3031	Gas actuator not compatible with LMV6	Check type (ASN) and version of the actuator
3033	Auxiliary actuator 1 not compatible with LMV6	Check type (ASN) and version of the actuator
3034	Auxiliary actuator 2 not compatible with LMV6	Check type (ASN) and version of the actuator
3035	Auxiliary actuator 3 / FGR not compatible with LMV6	Check type (ASN) and version of the actuator
3038	QGC not compatible with LMV6	Check type (ASN) and version of the QGC
3040	Curve setting: Curve is in an undefined zone	Make curve settings for the entire working range
3050	Air actuator: Invalid no-load position	Check parameter 1410
3051	Gas actuator: Invalid no-load position	Check parameter 1411
3053	Auxiliary actuator 1: Invalid no-load position	Check parameter 1413
3054	Auxiliary actuator 2: Invalid no-load position	Check parameter 1414
3055	Auxiliary actuator 3 / FGR: Invalid no-load position	Check parameter 1415
3058	Variable speed drive (VSD): Invalid no-load position	Check parameter 1418
3060	Air actuator: Invalid prepurge position 1	Check parameter 1430
3061	Gas actuator: Invalid prepurge position 1	Check parameter 1431
3063	Auxiliary actuator 1: Invalid prepurge position 1	Check parameter 1433
3064	Auxiliary actuator 2: Invalid prepurge position 1	Check parameter 1434
3065	Auxiliary actuator 3 / FGR: Invalid prepurge position 1	Check parameter 1435
3068	Variable speed drive (VSD): Invalid prepurge position 1	Check parameter 1438
3070	Air actuator: Invalid prepurge position 2	Check parameter 1450
3071	Gas actuator: Invalid prepurge position 2	Check parameter 1451
3073	Auxiliary actuator 1: Invalid prepurge position 2	Check parameter 1453
3074	Auxiliary actuator 2: Invalid prepurge position 2	Check parameter 1454
3075	Auxiliary actuator 3 / FGR: Invalid prepurge position 2	Check parameter 1455
3078	Variable speed drive 2 (VSD2): Invalid prepurge position 2	Check parameter 1458
3080	Air actuator: Invalid postpurge position 1	Check parameter 1510
3081	Gas actuator: Invalid postpurge position 1	Check parameter 1511
3083	Auxiliary actuator 1: Invalid postpurge position 1	Check parameter 1513
3084	Auxiliary actuator 2: Invalid postpurge position 1	Check parameter 1514
3085	Auxiliary actuator 3 / FGR: Invalid postpurge position 1	Check parameter 1515
3088	Variable speed drive (VSD): Invalid postpurge position 1	Check parameter 1519
3090	Air actuator: Invalid postpurge position 2	Check parameter 1530

Error code	AZL66 display	
	Short text	Long text (recommended measures)
3091	Gas actuator: Invalid postpurge position 2	Check parameter 1531
3093	Auxiliary actuator 1: Invalid postpurge position 2	Check parameter 1533
3094	Auxiliary actuator 2: Invalid postpurge position 2	Check parameter 1534
3095	Auxiliary actuator 3 / FGR: Invalid postpurge position 2	Check parameter 1535
3098	Variable speed drive (VSD): Invalid postpurge position 2	Check parameter 1538
3100	Air actuator: Invalid FGR MIN position	Check parameter 1735
3101	Gas actuator: Invalid FGR MIN position	Check parameter 1736
3103	Auxiliary actuator 1: Invalid FGR MIN position	Check parameter 1738
3104	Auxiliary actuator 2: Invalid FGR MIN position	Check parameter 1739
3105	Auxiliary actuator 3 / FGR: Invalid FGR MIN position	Check parameter 1740
3108	Variable speed drive (VSD): Invalid FGR MIN minimum speed	Check parameter
3110	Air actuator: Ratio control curve – Invalid values	Air actuator: Check ratio control curve
3111	Gas actuator: Ratio control curve – Invalid values	Gas actuator: Check ratio control curve
3113	Auxiliary actuator 1: Ratio control curve – Invalid values	Auxiliary actuator 1: Check ratio control curve
3114	Auxiliary actuator 2: Ratio control curve – Invalid values	Auxiliary actuator 2: Check ratio control curve
3115	Auxiliary actuator 3 / FGR: Ratio control curve – Invalid values	Auxiliary actuator 3 / FGR: Check ratio control curve
3118	Ratio control curves: Load – Invalid values	Check ratio curve in relation to load assignment
3119	Variable speed drive (VSD): Invalid speed in the ratio control curve	Variable speed drive (VSD): Check ratio control curve
3130	Variable speed drive (VSD): Speed in the ratio control curve too low	Variable speed drive (VSD): Check ratio control curve
3132	Variable speed drive (VSD): Speed too low	Variable speed drive (VSD): Check speeds in parameter 1410-1541 Special positions
3140	Variable speed drive (VSD): Incorrect direction of rotation of the fan	Check the mounting of the sensor disk or change the direction of rotation of the fan motor
3150	Variable speed drive (VSD): Standardization not possible	Put system in standby
3152	Variable speed drive (VSD): Standardization not possible	Close burner flange
3154	Variable speed drive (VSD): Standardization not possible	Activate the variable speed drive (VSD) in parameter 1658
3156	Variable speed drive (VSD) not standardized	Perform standardization in parameter 1620
3160	Undefined temperature value in the curve	Complete the setting of the temperature-compensated flue gas recirculation (FGR)
3161	Invalid temperature value in the curve	All temperatures in the flue gas recirculation (FGR) curve must be between 20°C and 1000°C
3162	Temperature is not valid	Check plug and cabling of the temperature sensor
3170	Function not available	Air actuator not available
3171	Function not available	Gas actuator not available
3172	Function not available	Modulating ratio control not available
3173	Function not available	Three-stage ratio control not available
3174	Function not available	Two-stage ratio control not available
3175	Function not available	Curve-switched flue gas recirculation (FGR) not available
3176	Function not available	Temperature-compensated flue gas recirculation (FGR) not available
3177	Function not available	Contact-triggered flue gas recirculation (FGR) not available
3179	Function not available	Auxiliary actuator 1 not available
3180	Function not available	Auxiliary actuator 2 not available
3181	Function not available	Auxiliary actuator 3 / FGR not available
3184	Function not available	Variable speed drive (VSD): Function not available
3200	Program stop is active	Check parameter 1599

Error code	AZL66 display	
	Short text	Long text (recommended measures)
5001	Internal error	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5002	CAN bus error	Check CAN cabling and terminating resistors
5003	Error: QGC	Check CAN cabling and terminating resistors
5004	Error: QGC	Check CAN cabling and terminating resistors
5006	Air actuator: No feedback	Check connector and cabling
5007	Gas actuator: No feedback	Check connector and cabling
5009	Auxiliary actuator 1: No feedback	Check connector and cabling
5010	Auxiliary actuator 2: No feedback	Check connector and cabling
5011	Auxiliary actuator 3 / FGR: No feedback	Check connector and cabling
5014	Error: Air actuator	Check connector and cabling. Replace actuator if error occurs constantly
5015	Error: Gas actuator	Check connector and cabling. Replace actuator if error occurs constantly
5017	Error: Auxiliary actuator 1	Check connector and cabling. Replace actuator if error occurs constantly
5018	Error: Auxiliary actuator 2	Check connector and cabling. Replace actuator if error occurs constantly
5019	Error: Auxiliary actuator 3 / FGR	Check connector and cabling. Replace actuator if error occurs constantly
5022	Internal error: Flame detection	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5023	Flame detector test failed	Check connector and cabling. Replace flame detector if error occurs constantly
5024	Internal error: Relay control	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5025	Internal error: Mains voltage inputs	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5050	Error: Air actuator	Check parameter 0101 is "ON". Check addressing, connector, and cabling. Replace actuator if error occurs constantly
5051	Error: Gas actuator	Check parameter 0102 is "ON". Check addressing, connector, and cabling. Replace actuator if error occurs constantly
5053	Error: Auxiliary actuator 1	Check parameter 0104 is "ON". Check addressing, connector, and cabling. Replace actuator if error occurs constantly
5054	Error: Auxiliary actuator 2	Check parameter 0105 is "ON". Check addressing, connector, and cabling. Replace actuator if error occurs constantly
5055	Error: Auxiliary actuator 3 / FGR	Check parameter 0106 is "ON". Check addressing, connector, and cabling. Replace actuator if error occurs constantly
5058	Contact position error: Safety relay	Replace LMV6 if error occurs constantly
5059	Contact position error: Relay V1 X91 pin 4	Replace LMV6 if error occurs constantly
5060	Contact position error: Relay V2 X84 pin 3	Replace LMV6 if error occurs constantly
5061	Contact position error: Relay PV X83 pin 3	Replace LMV6 if error occurs constantly
5062	Contact position error: Relay ignition X82 pin 3	Replace LMV6 if error occurs constantly
5063	Contact position error: Relay 9	Replace LMV6 if error occurs constantly

Error code	AZL66 display	
	Short text	Long text (recommended measures)
5064	Contact position error: Relay 10	Replace LMV6 if error occurs constantly
5065	Contact position error: Relay 11 Operating light	Replace LMV6 if error occurs constantly
5066	Internal error: SR relay supervision	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5067	Internal error: V1 relay supervision	Check signals and wiring of terminal X91. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5068	Internal error: V2 relay supervision	Check signals and wiring of terminal X84. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5069	Internal error: PV relay supervision	Check signals and wiring of terminal X83. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5070	Internal error: Ignition relay supervision	Check signals and wiring of terminal X82. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5071	Internal error: V1 relay supervision	Check signals and wiring of terminal X72 pin 4. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5072	Internal error: V2 relay supervision	Check signals and wiring of terminal X72 pin 3. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.
5073	Internal error: V3 relay supervision	Check signals and wiring of terminal X72 pin 2. Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b>

Error code	AZL66 display	
	Short text	Long text (recommended measures)
		<b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5074	Lack of feedback from the AZL66 during curve setting	Check cabling of the AZL66
5075	Error: Actuator – Data access	Check connector and cabling. Replace actuator if error occurs constantly.
5080	>250,000 startups achieved	Recommendation: Call service and replace LMV6
5090	Internal error: Flame detection	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5091	Internal error: Flame detection	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5100	Manual lockout	The operator has initiated manual locking
5101	Error: QGC	Check connector, cabling, and QGC
5103	I/O module in LMV6 has an error	OK if a parameter has been changed. Otherwise check wiring and setting of the I/O module in the LMV6.
5104	I/O module in the extension module is in the lockout position	OK if a parameter has been changed. Otherwise check wiring and setting of the I/O module in the expansion module.
5105	Error: Air actuator	Check connector and cabling. Replace actuator if error occurs constantly.
5106	Error: Gas actuator	Check connector and cabling. Replace actuator if error occurs constantly.
5108	Error: Auxiliary actuator 1	Check connector and cabling. Replace actuator if error occurs constantly.
5109	Error: Auxiliary actuator 2	Check connector and cabling. Replace actuator if error occurs constantly.
5110	Error: Auxiliary actuator 3 / FGR	Check connector and cabling. Replace actuator if error occurs constantly.
5120	Internal error	Replace LMV6 if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5121	Internal error	Replace extension module if error occurs constantly
		<b>Warning!</b> <b>Internal error!</b> <b>In the event of internal errors, a safety check must be carried out following a reset. Failure to observe this information poses a risk of the safety functions being impaired. Also refer to entries listed previously in the error history.</b>
5122	QGC not compatible with LMV6	Check QGC version
5130	I/O module in LMV6 in the lockout position	OK if a parameter has been changed. Otherwise check wiring and setting of the I/O module in the LMV6.
5131	I/O module in the extension module is in the lockout position	OK if a parameter has been changed. Otherwise check wiring and setting of the I/O module in the expansion module.
5555	Unknown error	Update AZL66 with newer software version

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