SIEMENS

AZL21…   AZL23…

AZL2…

Display and operating unit for burner management systems, flame safeguards and burner controls

User Manual

The AZL2… and this User Manual are intended for use by OEMs which integrate the AZL2... in their products!

> ⚠ **Caution!**
> **This documentation is only valid in conjunction with the AZL2 Data Sheet N7542 and the basic documentation of the relevant burner management system, flame safeguard or burner control!**

Supplementary documentation

Product type	Type of documentation	Documentation number
AZL2...	Environmental Product Declaration	E7542
LFS1…	User documentation	A7782
	Data Sheet	N7782
LME39...	Data Sheet	N7106
	Basic Documentation	P7106
LME7...	Data Sheet	N7105
	Basic Documentation	P7105
LMO39...	Data Sheet	N7154
	Basic Documentation	P7154
LMV26...	Data Sheet	N7547
	Basic Documentation	P7547
LMV27...	Data Sheet	N7541
	Basic Documentation	P7541
LMV36...	Data Sheet	N7544
	Basic Documentation	P7544
LMV37...	Data Sheet	N7546
	Basic Documentation	P7546

1 Operation via AZL2…

1.1 Description of the unit/display and buttons

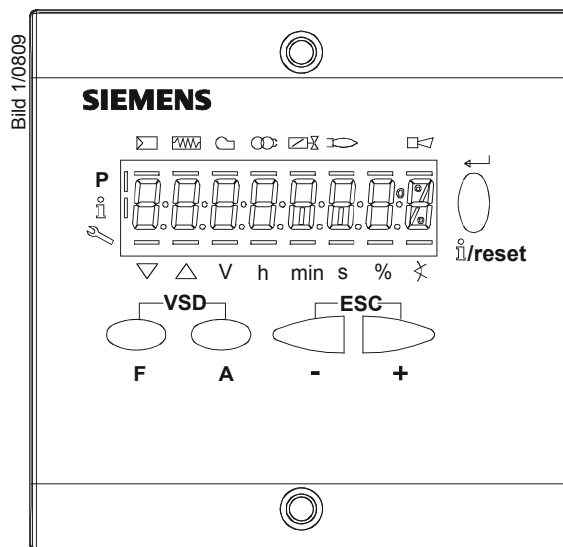Function and operation of versions AZL21… and AZL23… are identical.
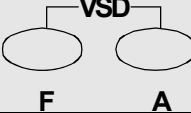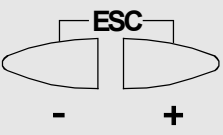
Figure: Description of the unit/display and buttons

Button	Function
F	**Button F** - For adjusting the fuel actuator (keep F depressed and adjust the value by pressing - or +)
A	**Button A** - For adjusting the air actuator (keep A depressed and adjust the value pressing - or +)
VSD **F A**	**A-button and F-button: Parameterization function** - For changing to parameter setting mode **P** (press simultaneously F and A plus - or +)

ⅈ/reset	**Info and Enter button**
	- For navigating in info or service mode
	  * Selection (symbol flashing) (press button for <1 s)
	  * For changing to a lower menu level (press button for 1…3 s)
	  * For changing to a higher menu level (press button for 3…8 s)
	  * For changing the operating mode (press button for >8 s)
	- **Enter** in parameter setting mode
	- **Reset** in the event of fault
	- One menu level down

-	**- button** - For decreasing the value - For navigating during curve adjustments in info or service mode
+	**+ button** - For increasing the value - For navigating during curve adjustments in info or service mode
ESC **- +**	**+ and - button: Escape function** (press - and + simultaneously) - No adoption of value - One menu level up

1.2 Meaning of symbols on the display

Fault status message
Flame present
Valve controlled
Ignition controlled
Fan motor controlled
Oil preheater on
Heat request from controllers

Parameter setting mode — **P**
Info mode
Service mode

Actuator closing
Actuator opening
Unit of current display

Figure: Meaning of display

1.3 Display of info level

Press ⓘ/reset until **InFo** appears.

When releasing ⓘ/reset, you are on the info level.
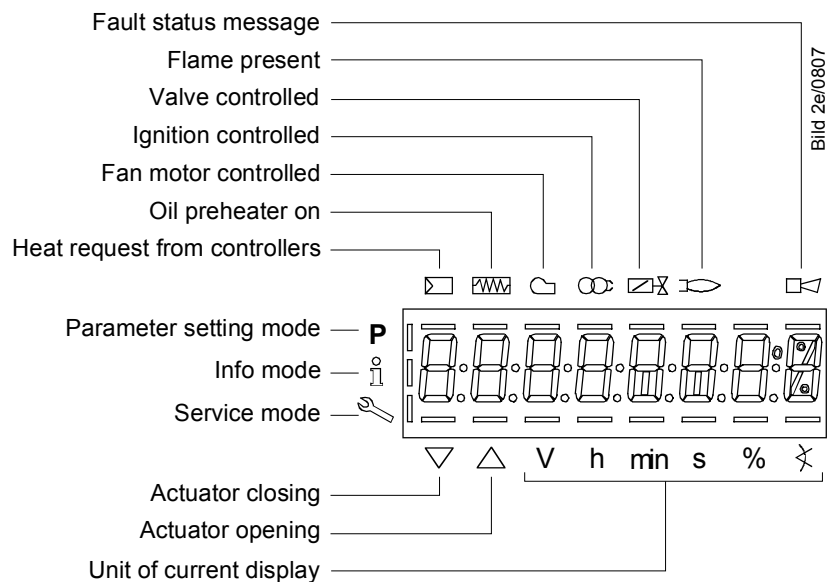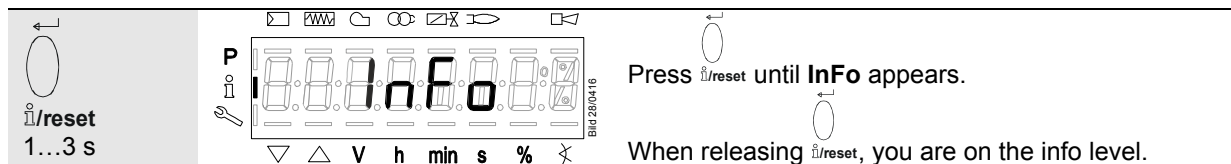
ⓘ/reset
1…3 s

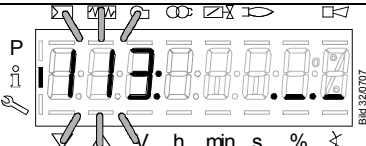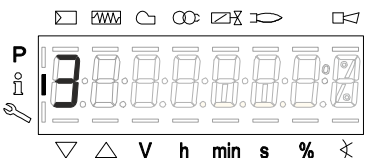| Parameter no.	LFS	LME7	LME39 LMO39	LMV	Meaning
Info level					
167				●	Fuel volume resettable (m³, l, ft³, gal)
162				●	Operating hours resettable
164	●	●	●	●	Startups resettable
163				●	Device operating hours with power applied
166	●	●	●	●	Total number of startups
113	●	●	●	●	Burner identification
107				●	Software version
108				●	Software variant
102	●	●	●	●	Identification date
103	●	●	●	●	Identification number
104				●	Parameter set preassignment: Customer code
105				●	Parameter set preassignment: Version
123		●			Minimum power adjustment
140		●			Mode display AZL2
143				●	Reserved
170.00		●			Relay contact K12 switching cycles
	●				Flame relay (FR) switching cycles
170.01		●			Relay contact K11 switching cycles
	●				Auxiliary relay (HR) switching cycles
170.02		●			Relay contact K2 switching cycles
170.03		●			Relay contact K1 switching cycles
171		●			Maximum relay switching cycles
	●				Warning threshold: 1 million switching cycles
182		●			Flame sensitivity

Table: Display of info level

1.4 Example: Burner identification

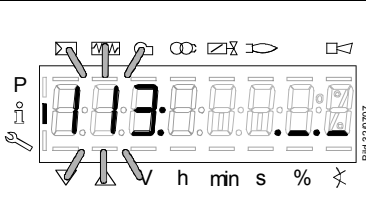 The display shows parameter **113**: flashing on the left, characters **._._** on the right.

Example: **113: ._._**
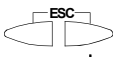
 Press î/reset for 1…3 s to show the burner's identification.

Example: **3**

î/reset
1…3 s

The burner identification can only be set with PC tool ACS410 at the parameter level!

 Press î/reset or - + to return to the display of parameters.

î/reset
or
ESC
- +

To the next parameter	+	-	Back to the previous parameter.

2 Service level
2.1 Display of service level

 Press î/reset for >3 s until **SEr** appears.

When releasing î/reset, you are on the service level.

î/reset

Parameter no.	LFS	LME7	LME39 LMO39	LMV	Meaning
Service level					
951	●	●			Mains voltage
954	●	●		●	Flame intensity
			●		Flame current
960				●	Actual flow rate (fuel throughput in m³/h, l/h, ft³/h, gal/h)
121				●	Manual output
920		●			Current PWM signal fan
	●				Flame intensity::
922				●	Incremental position of the actuators
936		●		●	Normalized speed
161				●	Number of faults
701 . . . 725	●		●	●	Error history: 701-725.01.Code

Table: Display of service level

2.2 Display of service values (example)

2.2.1 Number of faults
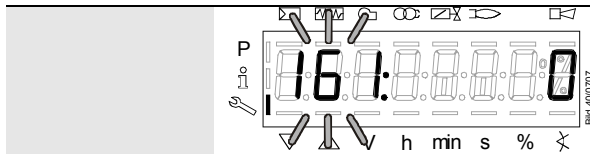
	The display shows parameter **161:** flashing on the left, the number of faults that occurred thus far on the right **0**. Example: Parameter **161: 0**

To the next parameter	**+** or **ủ/reset** <1 s	**-**	Back to the previous parameter.

2.2.2 Error history

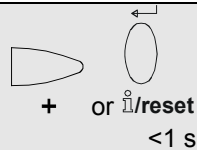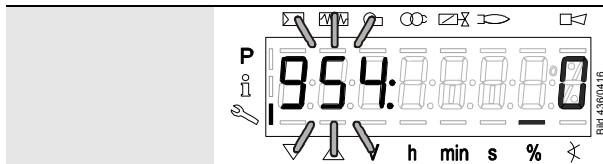See chapter *Parameters with index, with no direct display / Based on the example for parameter 701 Error history* in the relevant documentation of the burner management system, the flame safeguard or the burner control!

☞ Note
Can be deleted for service, see chapter *Parameter list* in the relevant documentation of the burner management system, the flame safeguard or the burner control!

2.2.3 Intensity of flame (LFS, LME7, LMV only)

	The display shows parameter **954:** flashing on the left. On the right, the flame's intensity is displayed as a percentage. Example: **954: 0**

To the next parameter	**+** or **ủ/reset** <1 s	**-**	Back to the previous parameter.

☞ Note
See also chapter *Flame intensity with curve setting* in the relevant documentation of the burner management system, the flame safeguard or the burner control!

2.2.4 Flame current (LME3, LMO3 only)

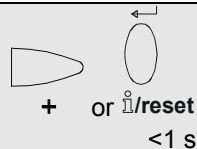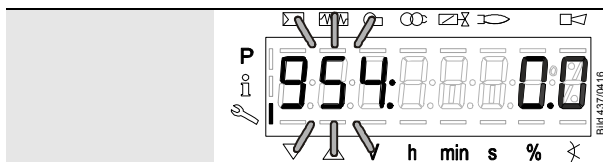|	Parameter **954:** is shown flashing. The flame current is shown in µA in the right-hand area. Example: **954: 0.0**

To the next parameter	**+** or **ủ/reset** <1 s	**-**	Back to the previous parameter.

2.3 Parameters with index, with no direct display
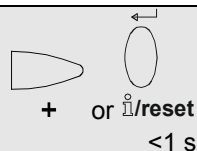### 2.3.1 Based on the example for LMV: parameter 701 error

See chapter *Error code list*.

☞ Note! (LMV... only)
Can be deleted for service, see chapter *Parameter list* in the relevant documentation of the burner management system

HIStorie **700**: for error history.

Press ⌷/reset to go to the parameter level.

Press + to select parameter **701**.

Display: Parameter **701.** flashes, index **01:** and value **201** do not.

Press ⌷/reset to go to index **01:**.

Display: Parameter **701.** does not flash, index **01:** flashes, value **201** does not.

To the next index	+	-	Back to the previous index

Press + to select the index:
.01 = error code
.02 = diagnostic code
.03 = error class
.04 = error phase
.05 = startup counter
.06 = output

Example:
Parameter **701.**, index **05:** for startup counter, diagnostic code ·–·–

3 Error code list

☞ **Note!**
For details on error codes, see chapter *Error code list* in the relevant documentation of the burner management system, the flame safeguard or the burner control!

Error code	Diagnostic code	Meaning for the burner management system, the flame safeguard or the burner control	Recommended measures
no Comm		**No communication between the burner management, the flame safeguard or the burner control and AZL2.**	Check wiring for open-circuit / loose contact
Loc: 167	**Manual locking**	**Manual locking**	

Table: Error code list

4   Table for error codes

Serial number 70x	Code 70x.01	Diagnostic code 70x.02	Error class 70x.03	Phase 70x.04	Startup counter 70x.05	Output 70x.06	Description
701							
702							
703							
704							
705							
706							
707							
708							
709							
710							
711							
712							
713							
714							
715							
716							
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718							
719							
720							
721							
722							
723							
724							
725							

Table: Table for error codes