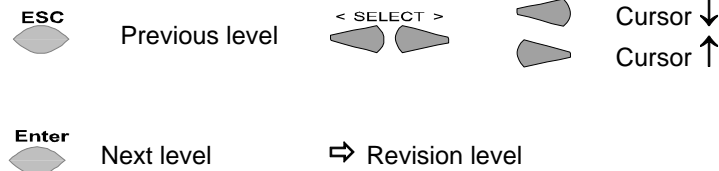


Legend for Operating Instruction and AZL5...

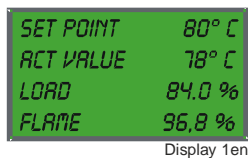


For language option, select:

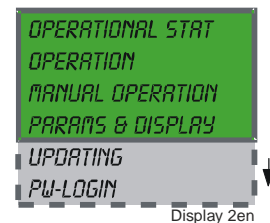
Param&Display ⇒ Access Heating engineer (HL) ⇒ AZL ⇒ Language

Display

Normal operation

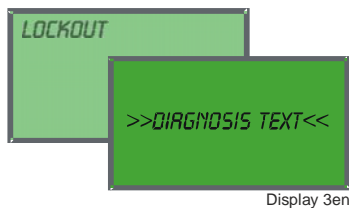


ESC Press ESC, to get into the main menu

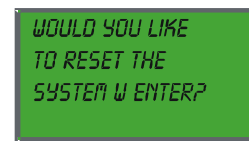


Display depending on burner sequence.

Display of fault or error



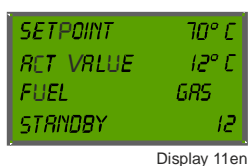
ESC



For fixing the display, press **Enter**.

Extended display LMV52...

Overview positions of actuator and O2 value



Enter

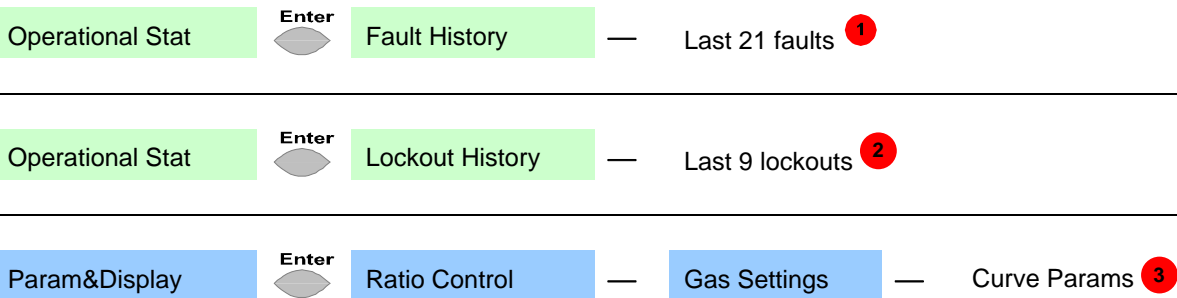
Press ENTER, to switch between this both displays



ESC

Press ESC, to get into the main menu

Menu

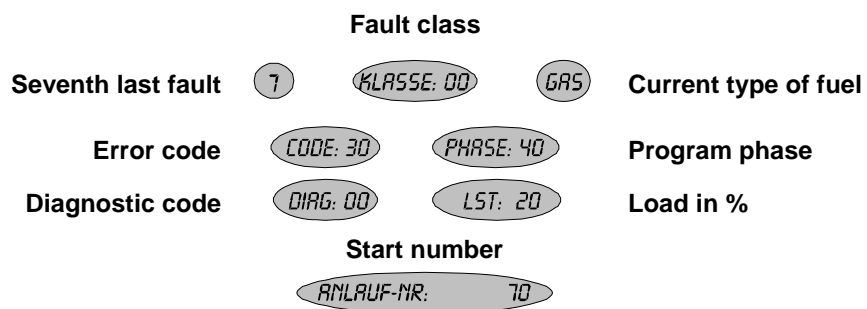


1 Example: Error history

```

7 CLASS: 00 GAS
CODE: 30 PHASE: 40
DIAG: 00 LOD: 20
START NO: 70
  
```

Display 5en



For fixing the display, press



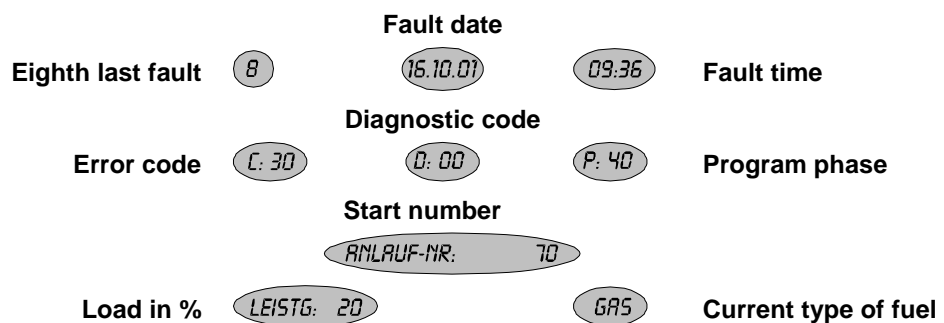
Selection error history

2 Example: Lockout history

```

8 16.10.01 09:36
C:30 D:00 P:40
START NO: 70
LOAD: 20 GAS
  
```

Display 6en



For fixing the display, press



Selection of error history

3 Example: Curve parameter

Changing a curvepoint:

```
POINT | LOAD : 20.0
      | FUEL : 17.6
MAN   | AIR  : 21.9
      | AUX  : 15.0
```



Display 7en

```
POINT | LOAD : 20.0
      | 2 | FUEL : 17.6
MAN   | AIR  : 21.9
      | AUX  : 15.0
```



Display 8en

Setting a curvepoint:

```
POINT | LOAD : 20.0
      | FUEL : 17.6
MAN   | AIR  : 21.9
      | AUX  : 15.0
```



Display 9en

```
POINT | LOAD : 20.0
      | FUEL : 17.6
MAN   | AIR  : 21.9
      | 75.2 | AUX  : 15.0
```



Display 10en

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
OperationalStat					
	NormalOperation				
	Status/Reset				
	FaultHistory				
	LockoutHistory				
	Alarm act/deact				

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
Operation					
	BoilerSetpoint				
		SetpointW1			
		SetpointW2			
	User Maxload				
		User MaxLoadMod			
		User MaxLoadStg			
	Fuel				
		CurrentFuel			
		FuelSelect			
	Date/TimeOfDay				
		DisplayClock			
			Date		
			TimeOfDay		
			Weekday		
		SetClock			
			Date		
			TimeOfDay		
			Weekday		
	HoursRun				
		GasFiring			
		OilStage1/Mod			
		OilStage2			
		OilStage3			
		TotalHoursReset			
		TotalHours			
		SystemOnPower			
	StartCounter				
		GasStartCount			
		OilStartCount			
		TotalStartCountR			
		TotalStartCount			
	Fuel Meter				
		Curr Flow Rate			
		Volume Gas			
		Volume Oil			
		Volume Gas R			
		Volume Oil R			
		Reset Date Gas			
		Reset Date Oil			
	LockoutCounter				
	O2 Module				
		Actual O2 Value			
		O2 Setpoint			
		SupplyAirTemp			
		FlueGas Temp			
		CombEfficiency			
	BurnerID				
	OptgModeSelect				
		InterfacePC			
		GatewayBASon			
		GatewayBASoff			
		Gateway status			
		Type of Gateway			
	O2Ctrl activate				

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
ManualOperation					
	SetLoad				
	Autom/Manual/Off				

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
Params & Display					
	BurnerControl				
		Times			
			TimesStartup1		
				MinTmeStartRel	
				FanRunupTme	
				PrepurgeTmeGas	
				PrepurgeTmeOil	
				PrepurgeSafeGas	
				PrepurgeSafeOil	
				PrepurgePt1Gas	
				PrepurgePt3Gas	
				PrepurgePt1Oil	
				PrepurgePt3Oil	
				PreIgnitionTGas	
				PreIgnitionTOil	
				MinOnTmeOilPump	
			TimesStartup2		
				Interval1Gas	
				Interval1Oil	
				Interval2Gas	
				Interval2Oil	
				PressReacTme	
			TimesShutdown		
				MaxTmeLowFire	
				AfterburnTme	
				PostpurgeT1Gas	
				PostpurgeT1Oil	
				PostpurgeT3Gas	
				PostpurgeT3Oil	
				PostpurgeT3long	
				DelayLackGas	
			TimesGeneral		
				AlarmDelay	
				DelayStartPrev	
				PostpurgeLockout	
				MaxTmeStartRel	
		Configuration			
			ConfigGeneral		
				AlarmStartPrev	
				Standby Error	
				NormDirectStart	
				OilPumpCoupling	
				IgnOilPumpStart	
				ForcedIntermit	
				Skip PrepurgeGas	
				ContinuousPurge	
			ConfigIn/Output		
				RotSpeed PS on	
				RotSpeed PS off	
				Config X5-03	
				Start/PS-Valve	
			ConfigFlameDet		
				ReacExtranLight	
				FlameSignal	
					FlameSig QRI_B

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
					FlameSig ION
			RepetitCounter		
				LossOfFlame	
				HeavyOil	
				StartRelease	
				SafetyLoop	
		ProductID			
			ASN		
			ProductionDate		
			SerialNumber		
			ParamSet Code		
			ParamSet Vers		
		SW Version			
	RatioControl				
		GasSettings			
			Special Positions		
				HomePos	
					HomePosGas
					HomePosAir
					HomePosAux1
					HomePosAux2
					HomePosAux3
					HomePosVSD
				PrepurgePos	
					PrepurgePosAir
					Prepurge PosAux1
					Prepurge PosAux2
					Prepurge PosAux3
					PrepurgePosVSD
				IgnitionPos	
					IgnitionPosGas
					IgnitionPosAir
					IgnitionPosAux1
					IgnitionPosAux2
					IgnitionPosAux3
					IgnitionPosVSD
				PostpurgePos	
					Postpurge PosGas
					PostpurgePosAir
					Postpurge PosAux1
					Postpurge PosAux2
					Postpurge PosAux3
					PostpurgePosVSD
				ProgramStop	
				ResetIgnitPos	
					IgnitionPosGas
					IgnitionPosAir
					IgnitionPosAux1
					IgnitionPosAux2
					IgnitionPosAux3
					IgnitionPosVSD
			CurveParams		
			LoadLimits		
				MinLoadGas	
				MaxLoadGas	
			Load mask out		

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
				LoadMask LowLimit	
				LoadMask HighLim	
			VSD		
			StartPoint Op		
		OilSettings			
			Special Positions		
				HomePos	
					HomePosOil
					HomePosAir
					HomePosAux1
					HomePosAux2
					HomePosAux3
					HomePosVSD
				PrepurgePos	
					PrepurgePosAir
					Prepurge PosAux1
					Prepurge PosAux2
					Prepurge PosAux3
					PrepurgePosVSD
				IgnitionPos	
					IgnitionPosOil
					IgnitionPosAir
					IgnitionPosAux1
					IgnitionPosAux2
					IgnitionPosAux3
					IgnitionPosVSD
				PostpurgePos	
					PostpurgePosOil
					PostpurgePosAir
					PostpurgePosAux1
					PostpurgePosAux2
					PostpurgePosAux3
					PostpurgePosVSD
				ProgramStop	
				ResetIgnitPos	
					IgnitionPosOil
					IgnitionPosAir
					IgnitionPosAux1
					IgnitionPosAux2
					IgnitionPosAux3
					IgnitionPosVSD
			CurveParams		
				Curve Settings	
			LoadLimits		
				MinLoadOil	
				MaxLoadOil	
			Load mask out		
				LoadMask LowLimit	
				LoadMask HighLim	
			VSD		
			StartPoint Op		
		Autom/Manual/Off			
		Times			
			OperatRampMod		
			OperatRampStage		

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
			TimeNoFlame		
		ShutdownBehav			
		ProgramStop			
	O2Contr/Alarm	GasSettings			
			OptgMode		
			O2 Control		
			O2 Alarm		
				O2 Alarm	
				O2 MaxValue	
				NumMinUntilDeact	
			Control Param		
				PI	
					P Low-Fire
					I Low-Fire
					Tau Low-Fire
					P High-Fire
					I High-Fire
					Tau High-Fire
				LowfireAdaptPtNo	
				O2 CtrlThreshold	
				LoadCtrlSuspend	
				O2ModOffset	
				Type Air Change	
				O2MaxManVariable	
				O2MinManVariable	
			Startmode		
				NumberTauSuspend	
				Adjust. Temp O2	
			Type of Fuel		
			Fuel user def		
				V_LNmin	
				V_afNmin	
				V_atrNmin	
				A2	
				B/1000	
		OilSettings			
			OptgMode		
			O2 Control		
			O2 Alarm		
				O2 Alarm	
				O2 MaxValue	
				NumMinUntilDeact	
			Control Param		
				PI	
					P low-fire
					I low-fire
					Tau low-fire
					P High-Fire
					I High-Fire
					Tau High-Fire
				LowfireAdaptPtNo	
				O2 CtrlThreshold	
				LoadCtrlSuspend	
				O2ModOffset	
				Type Air Change	

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
				O2MaxManVariable	
				O2MinManVariable	
			Startmode		
				NumberTauSuspend	
				Adjust. Temp O2	
			Type of Fuel		
			Fuel user def		
				V_LNmin	
				V_afNmin	
				V_atrNmin	
				A2	
				B/1000	
		Cox			
			OptgMode COx Gas		
			OptgMode COx Oil		
			Time COx Alarm		
		Process Data			
			CombEfficiency		
			ManVar O2 Ctrl		
			State O2 Ctrl		
			Air-related Load		
			Diag Reg State		
	LoadController				
		ControllerParam			
			ContrIParamList		
				StandardParam	
				P-Part (Xp)	
				I-Part (Tn)	
				D-Part (Tv)	
			MinActuatorStep		
			SW_FilterTmeCon		
			SetpointW1		
			SetpointW2		
			SD_ModOn		
			SD_ModOff		
			SD_Stage1On		
			SD_Stage1Off		
			SD_Stage2Off		
			SD_Stage3Off		
			ThreshStage2On		
			ThreshStage3On		
		TempLimiter			
			TL_ThreshOff		
			TL_SD_On		
		ColdStart			
			ColdStartOn		
			ThresholdOn		
			StageLoad		
			StageSetp_Mod		
			StageSetp_Stage		
			MaxTmeMod		
			MaxTmeStage		
			ThresholdOff		
			AdditionalSens		
			Temp. ColdStart		
			Setp AddSensor		
			Release Stages		
		Configuration			
			LC_OptgMode		
			Sensor Select		

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
			MeasureRangePtNi		
			var. RangePtNi		
			Ext Inp X61 U/I		
			MRange TempSens		
			MRange PressSens		
			Ext Inp X62 U/I		
			Ext MinSetpoint		
			Ext MaxSetpoint		
			AnalogOutput		
				OutValue Selection	
				CurrMode 0/4mA	
				Scale20 mA perc	
				Scale20mA temp	
				Scale20mA press	
				Scale20mA angle	
				Scale 0/4mA	
		Adaption			
			StartAdaption		
			AdaptionLoad		
		SW Version			
	AZL	Times			
			Sum/WinterTime		
			Time EU/US		
			Language		
			DateFormat		
			PhysicalUnits		
			eBUS		
				Address	
				SendCycleBU	
			Modbus		
				Address	
				Baudrate	
				Parity	
				Timeout	
			Lokal / Remote		
			Remote Mode		
			W3		
		Display Contrast			
		ProductID			
			ASN		
			ProductionDate		
			SerialNumber		
			ParamSet Code		
			ParamSet Vers		
		SW Version			
	Actuators				
		Addressing			
			1 AirActuator		
			2 GasActuat(Oil)		
			3 OilActuator		
			4 AuxActuator		
			5 AuxActuator2		
			6 AuxActuator3		
		DirectionRot			
			DeleteCurves		
		ProductID			
			1 AirActuator		

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
			2 GasActuat(Oil)		
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
			3 OilActuator		
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
			4 AuxActuator		
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
			5 AuxActuator2		
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
			6 AuxActuator3		
				ASN	
				ProductionDate	
				SerialNumber	
				ParamSet Code	
				ParamSet Vers	
		SW Version			
			1 AirActuator		
			2 GasActuat(Oil)		
			3 OilActuator		
			4 AuxActuator		
			5 AuxActuator2		
			6 AuxActuator3		
	VSD Module				
		Configuration			
			ReleaseContct VSD		
			Speed		
				Num Puls per R	
				Standardization	
				StandardizedSp	
				AbsoluteSpeed	
				Setpoint Output	
			Fuel Meter		
				PulseValueGas	
				PulseValueOil	
		Process Data			

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
			Max Stat Dev		
			Max Dyn Dev		
			Num Dev >0.3%		
			Num Dev >0.5%		
			Absolute Speed		
		ProductID			
			ASN		
			ProductionDate		
			SerialNumber		
			ParamSet Code		
			ParamSet Vers		
		SW Version			
	O2 Module				
		Configuration			
			O2 Sensor		
			O2SensServTim		
			O2SensServTimRes		
			SupAirTempSens		
			FlueGasTempSens		
			MaxTempFIGasGas		
			MaxTempFIGasOil		
		Process Data			
			Actual O2 Value		
			O2 Setpoint		
			SupplyAirTemp		
			FlueGasTemp		
			CombEfficiency		
			QGO SensorTemp		
			QGO HeatingLoad		
			QGO Resistance		
		ProductID			
			ASN		
			ProductionDate		
			SerialNumber		
			ParamSet Code		
			ParamSet Vers		
		SW Version			
	Flue Gas Recirc.				
		FGR-Mode			
		FGR-sensor			
		actTmpFGR-sensor			
		ThresholdFGR Gas			
		DelaytimeFGR Gas			
		Factor FGR Gas			
		OperationTempGas			
		ThresholdFGR Oil			
		DelaytimeFGR Oil			
		Factor FGR Oil			
		OperationTempOil			
		FGR MinPos			
		FGR MaxPos Fact			
	SystemConfig				
		LC_OptgMode			
		Ext Inp X62 U/I			
		TempLimiter			

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
			TL_Thresh_Off		
			TL_SD_On		
			Sensor Select		
			MeasureRangePtNi		
		O2Ctrl/LimitrGas			
		O2Ctrl/LimitrGas			
		LC Analog Output			
		allowed Pot.diff			
		OptgMode COx Gas			
		OptgMode COx Oil			
	HoursRun				
		GasFiring			
		OilStage1/Mod			
		OilStage2			
		OilStage3			
		TotalHoursReset			
		TotalHours			
		SystemOnPower			
		Reset			
			GasFiring		
			OilStage1/Mod		
			OilStage2		
			OilStage3		
			TotalHoursReset		
	StartCounter				
		GasStartCount			
		OilStartCount			
		TotalStartCountR			
		TotalStartCount			
		Reset			
			GasStartCount		
			OilStartCount		
			TotalStartCountR		
	Fuel Meter				
		Curr Flow Rate			
		Volume Gas			
		Volume Oil			
		Volume Gas R			
		Volume Oil R			
		Reset DateGas			
		Reset DateOil			

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Menu level 6
Updating					
	ParamBackup				
		BackupInfo			
			Date		
			TimeOfDay		
			BU included?		
			AZL included?		
			LC included?		
			ACT1 included?		
			ACT2 included?		
			ACT3 included?		
			ACT4 included?		
			ACT5 included?		
			ACT6 included?		
			VSD included?		
			O2 included?		
		LMV5x → AZL			
		AZL → LMV5x			
	Load_SW_from_PC				
PW Login					
PW Logout					
SafetyCheckFunct					
	LossFlameTest				
	SLT Test				
	SLT-Testload Mod				
	SLT-Testload Stg				

Use of TÜV test function must be carried out by qualified staff!

Required information for service purpose

Plant: _____

Burner data: _____

Burner management system LMV52...

	ASN	Production date	Software version
Burner control			
Load controller			
AZL5...			
Air actuator			
Gas actuator			
Oil actuator			
Auxiliary actuator			

General data burner management system LMV52...

Date	Time	Name	Operating hours				Device on power	Starts			Number of errors
			Gas	Oil stage 1	Oil stage 2	Total		Oil	Gas	Total	

Lockout history

No.	Date	Time	Code	Diagnostic code	Error phase	Startup	Load	Fuel	Description of fault
1									
2									
3									
4									
5									
6									
7									
8									
9									

Error history

No.	Class	Fuel	Code	Phase	Diagnostic code	Load	Startup	Description of fault
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								



Note!

Alternative to the tables, a backup for offline operating mode can be stored and send via the ACS450 software.