SIEMENS 7<sup>105</sup>



## **Product Range Overview**

**LME7...** 

LME7s are used for the startup and supervision of multistage or modulating oil or gas burners in intermittent operation. The flame is supervised with an ionization probe, a QRI infrared flame detector, or a QRA UV flame detector. Yellow-burning flames are supervised with QRB1/QRB3 photoresistive detectors or a QRB4 yellow flame detector, and blue-burning flames with a QRC blue flame detector.

- Applications in accordance with EN 267: Forced draft burners for liquid fuels
- Type-tested and approved in accordance with DIN EN 298
- Applications in accordance with EN 676: Automatic forced draft burners for gaseous fuels

#### Features of the LME7:

- Undervoltage detection
- Air pressure supervision with functional check of the air pressure switch during startup and operation
- Electrical remote lockout reset facility
- Multicolor indication of fault state and operating state messages
- Restart limitation
- Accurate control sequence thanks to digital signal handling
- Controlled intermittent operation after 24 hours of continuous operation

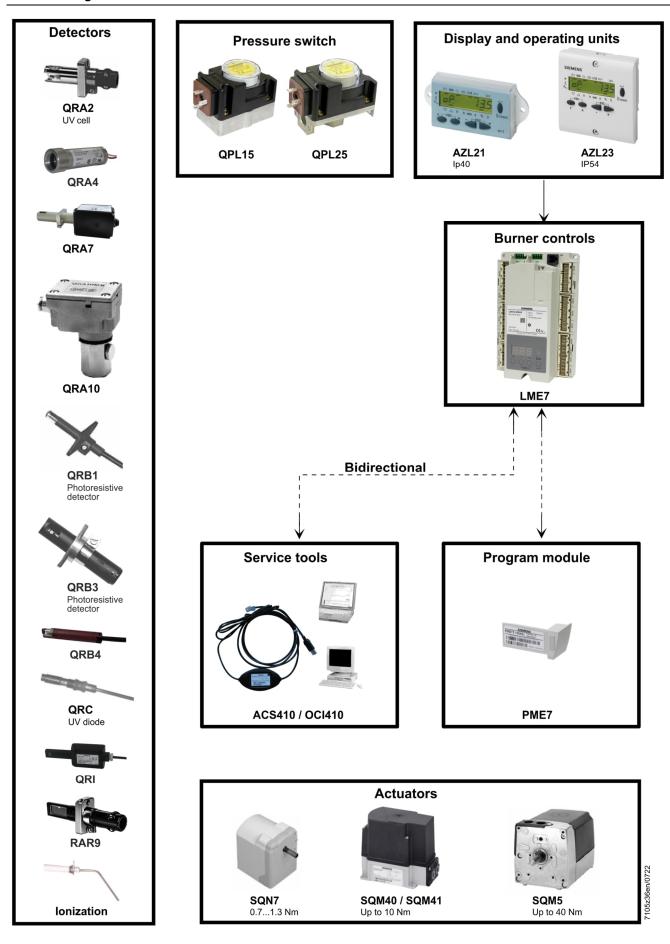
#### **Documentation**

This documentation provides an **overview** of the product range.

#### Target groups

- Sales teams
- In-house staff
- Burner specialists

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## **Burner control**

## LME71/LME72/LME73

Parameterized burner control for the supervision of multistage or modulating forced draft oil/gas burners and atmospheric burners of medium to large capacity in intermittent operation. With controlled air damper control.



Article no.	BPZ:LME71.000A1	BPZ:LME71.000A2	S55333-B205-A100	BPZ:LME72.000A2 *)	BPZ:LME73.000A1	BPZ:LME73.000A2
Туре	LME71.000A1	LME71.000A2	LME71.901A2	LME72.000A2 *)	LME73.000A1	LME73.000A2
Mains voltage 120 V AC	•				•	
Mains voltage 230 V AC		•	•	•		•
Gas pressure switch-min or POC	•	•	•	•	•	•
Pressure switch valve proving	•	•	•	•	•	•
Air pressure switch	•	•	•	•	•	•
Ionization probe	•	•	•	•	•	•
QRA2/QRA4/QRA10	•	•	•		•	•
QRB1/QRB3/QRB4					•	•
QRC						•
Load controller analog input signal (010 V, 420 mA, 0135 $\Omega$ )	•	•	•		•	•
Load controller input, 3-position step input or 2-stage	•	•	•	•	•	•
Actuator control output				•	•	•
Input feedback for actuator with potentiometer $01 \ k\Omega$					•	•
Output PWM control	•	•	•	•	•	•
Onboard LED 7-segment display	•	•	•		•	•
BC interface for AZL2	•	•	•	•	•	•

\*) On request

## **Burner control**

## LME75/LME76

Parameterized burner control for the supervision of multistage or modulating forced draft oil/gas burners and atmospheric burners of medium to large capacity in continuous operation. With controlled air damper control.



Article no.	S55333-B201-A100	S55333-B203-A100	S55333-B202-A100	S55333-B204-A100
Туре	LME75.000A1	LME76.000A1	LME75.000A2	LME76.000A2
Mains voltage 120 V AC	•	•		
Mains voltage 230 V AC			•	•
Pressure switch-min / pressure switch-max or POC  → Depending on the PME75/PME76 and respective parameterization	•	•	•	•
Pressure switch valve proving  → Depending on the PME75/PME76 and respective parameterization	•	•	•	•
Air pressure switch	•	•	•	•
Ionization probe	•	•	•	•
QRA7	•		•	
QRI	•		•	
LFS1		•		•
Load controller analog input signal (010 V, 420 mA, 0135 $\Omega$ )	•	•	•	•
Load controller input, 3-position step input or 2-stage	•	•	•	•
Actuator control output	•	•	•	•
Input 01 $k\Omega$ of the feedback from an actuator with potentiometer	•	•	•	•
Output PWM fan motor (on request)	•	•	•	•
Onboard LED 7-segment display	•	•	•	•
BC interface for AZL2 and OCI410 with ACS410	•	•	•	•
Continuous operation (intermittent mode parameterized)	•	•	•	•

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## **PME71**

Program module for LME71.

With oil or gas burner program sequences for LME71.



## PME71 with 120 V AC mains voltage

Article no.	BPZ:PME71.111A1	BPZ:PME71.112A1	BPZ:PME71.401A1	BPZ:PME71.402A1	BPZ:PME71.901A1
Туре	PME71.111A1	PME71.112A1	PME71.401A1	PME71.402A1	PME71.901A1
Mains voltage 120 V AC	•	•	•	•	•
For operation with LME71.000A1	•	•	•	•	•
For operation with LME72.000A1					
For operation with LME73.000A1					
Forced draft burner gas program	•		•	•	•
Atmospheric burner gas program		•			
1-stage or 1-stage modulating	•	•	•	•	•
2-stage or 1-stage modulating			•	•	•
Pilot burner, simultaneous/alternating	•	•		•	
Modulating via actuator (pneumatic or mechanical fuel-air ratio control)					
Modulating via PWM fan (pneumatic fuel-air ratio control)					•
Fan speed control or fan speed control via analog signal or 3-position step signal					•
Actuator control via analog signal or 3-position step signal for actuator with potentiometer					
3-position step signal for actuator without potentiometer					
Control sequence programmable time	•	•	•	•	•
POC	•	•	•	•	•
Valve proving					•
Valve proving input ON/OFF					

## PME71/PME72

Program module for LME71/LME72. With oil or gas burner program sequences for

LME71/LME72.



## PME71/PME72 with 230 V AC mains voltage

Article no.	BPZ:PME71.111A2	BPZ:PME71.112A2	BPZ:PME71.401A2	BPZ:PME71.402A2	BPZ:PME71.901A2	BPZ:PME72.521A2 *)	BPZ:PME72.541A2 *)
Туре	PME71.111A2	PME71.112A2	PME71.401A2	PME71.402A2	PME71.901A2	PME72.521A2 *)	PME72.541A2 *)
Mains voltage 230 V AC	•	•	•	•	•	•	•
For operation with LME71.000A2	•	•	•	•	•		
For operation with LME72.000A2						•	•
For operation with LME73.000A2							
Forced draft burner gas program	•		•	•	•	•	•
Atmospheric burner gas program		•					
1-stage or 1-stage modulating	•	•	•	•	•	•	•
2-stage or 1-stage modulating			•	•	•	•	•
Pilot burner, simultaneous/alternating	•	•		•			•
Modulating via actuator (pneumatic or mechanical fuel-air ratio control)						•	•
Modulating via PWM fan (pneumatic fuel-air ratio control)					•		
Fan speed control or fan speed control via analog signal or 3-position step signal					•		
Actuator control via analog signal or 3-position step signal for actuator with potentiometer							
3-position step signal for actuator without potentiometer						•	•
Control sequence programmable time	•	•	•	•	•		
POC	•	•	•	•	•	•	•
Valve proving					•		
Valve proving input ON/OFF							

<sup>\*)</sup> On request only

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## **PME73**

Program module for LME73. With oil or gas burner program sequences for LME73.



## PME73 with 230 V AC mains voltage

Article no.	S55333-B318-A100	BPZ:PME73.810A2	BPZ:PME73.811A2	BPZ:PME73.812A2	BPZ:PME73.820A2	BPZ:PME73.830A2	BPZ:PME73.831A2	BPZ:PME73.840A2
Туре	PME73.231A2	PME73.810A2	PME73.811A2	PME73.812A2	PME73.820A2	PME73.830A2	PME73.831A2	PME73.840A2
Mains voltage 230 V AC	•	•	•	•	•	•	•	•
For operation with LME71.000A2								
For operation with LME72.000A2								
For operation with LME73.000A2	•	•	•	•	•	•	•	•
Forced draft burner oil program	•							
Forced draft burner gas program		•	•	•	•	•	•	•
Atmospheric burner gas program								
1-stage or 1-stage modulating	•	•	•	•	•	•	•	•
2-stage or 1-stage modulating	•	•			•	•	•	•
Pilot burner, simultaneous/alternating	•		•	•		•	•	•
Modulating via actuator (pneumatic or mechanical fuel-air ratio control)	•	•	•	•	•	•	•	•
Modulating via PWM fan (pneumatic fuel-air ratio control)								
Fan speed control or fan speed control via analog signal or 3-position step signal								
Actuator control via analog signal or 3-position step signal for actuator with potentiometer	•	•	•	•		•	•	
3-position step signal for actuator without potentiometer	•				•		•	•
Control sequence programmable time	•	•	•	•	•	•	•	•
POC	•	•	•	•	•	•		•
Valve proving		•	•		•	•	•	•
Valve proving input ON/OFF							•	

## PME75/PME76

Program module for LME75/LME76. With oil or gas burner program sequences for LME75/LME76.

## Example:



## PME75/PME76 with 120 V AC mains voltage

Article no.	S55333-B301-A100	S55333-B303-A100	S55333-B305-A100	S55333-B307-A100	S55333-B309-A100	S55333-B311-A100	S55333-B313-A100	S55333-B315-A100
Туре	PME75.231A1	PME75.811A1	PME75.812A1	PME75.831A1	PME76.231A1	PME76.811A1	PME76.812A1	PME76.831A1
Mains voltage 120 V AC	•	•	•	•	•	•	•	•
For operation with LME75.000A1	•	•	•	•				
For operation with LME76.000A1					•	•	•	•
Forced draft burner gas program		•	•	•		•	•	•
Atmospheric burner gas program		•	•	•		•	•	•
Forced draft oil burner	•			•	•			•
1-stage or 1-stage modulating		•	•	•		•	•	•
2-stage or 1-stage modulating	•	•	•	•	•	•	•	•
Simultaneous pilot burners		•	•			•	•	
Alternating pilot burners	•	•	•	•	•	•	•	•
Modulating via actuator (pneumatic or mechanical fuel-air ratio control)	•	•	•	•	•	•	•	•
Actuator control via analog signal or 3-position step signal for actuator with potentiometer  → depending on the parameterization	•	•	•	•	•	•	•	•
3-position step signal for actuator without potentiometer	•	•	•	•	•	•	•	•
Control sequence programmable time	•	•	•	•	•	•	•	•
$POC \to depending$ on the parameterization	•	•	•		•	•	•	
Valve proving $ ightarrow$ depending on the parameterization		•		•		•		•
Valve proving input ON/OFF (via external switch)  → depending on the parameterization				•				•
Gas pressure switch-max $ ightarrow$ depending on the parameterization		•	•	•		•	•	•
Oil pressure switch-min / oil pressure switch-max  → depending on the parameterization	•				•			
Oil preheater / oil temperature limiter	•				•			

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## **PME75/PME76**

Program module for LME75/LME76. With oil or gas burner program sequences for LME75/LME76.

Example:



## PME75/PME76 with 230 V AC mains voltage

Article no.	S55333-B302-A100	S55333-B304-A100	S55333-B306-A100	S55333-B308-A100	S55333-B310-A100	S55333-B312-A100	S55333-B314-A100	S55333-B316-A100
Туре	PME75.231A2	PME75.811A2	PME75.812A2	PME75.831A2	PME76.231A2	PME76.811A2	PME76.812A2	PME76.831A2
Mains voltage 230 V AC	•	•	•	•	•	•	•	•
For operation with LME75.000A2	•	•	•	•				
For operation with LME76.000A2					•	•	•	•
Forced draft burner gas program		•	•	•		•	•	•
Atmospheric burner gas program		•	•	•		•	•	•
Forced draft oil burner	•			•	•			•
1-stage or 1-stage modulating		•	•	•		•	•	•
2-stage or 1-stage modulating	•	•	•	•	•	•	•	•
Simultaneous pilot burners		•	•			•	•	
Alternating pilot burners	•	•	•	•	•	•	•	•
Modulating via actuator (pneumatic or mechanical fuel-air ratio control)	•	•	•	•	•	•	•	•
Actuator control via analog signal or 3-position step signal for actuator with ASZ → depending on the parameterization	•	•	•	•	•	•	•	•
3-position step signal for actuator without potentiometer	•	•	•	•	•	•	•	•
Control sequence programmable time	•	•	•	•	•	•	•	•
$POC \to depending$ on the parameterization	•	•	•		•	•	•	
Valve proving $\rightarrow$ depending on the parameterization		•		•		•		•
Valve proving input ON/OFF (via external switch)  → depending on the parameterization				•				•
Gas pressure switch-max  → depending on the parameterization		•	•	•		•	•	•
Oil pressure switch-min / oil pressure switch-max  → depending on the parameterization	•				•			
Oil preheater / oil temperature limiter  → depending on the parameterization	•				•			

# Display units / operating units and accessories

Article no.	Туре		
BPZ:AZL21.00A9	AZL21.00A9	<ul> <li>Display and operating unit</li> <li>Separate unit for a choice of mounting methods with LCD</li> <li>8 digits</li> <li>5 buttons</li> <li>BC interface to LME7</li> <li>Degree of protection IP40</li> </ul>	TO THE CO OF SET
BPZ:AZL23.00A9	AZL23.00A9	<ul> <li>Display and operating unit</li> <li>Separate unit for a choice of mounting methods with LCD</li> <li>8 digits</li> <li>5 buttons</li> <li>BC interface to LME7</li> <li>Degree of protection IP54</li> </ul>	SHEMENS  TO MUSTON COLUMN  TO
BPZ:AGV50.100	AGV50.100	<ul> <li>Signal cable for AZL2</li> <li>With RJ11 connector</li> <li>Cable length 1 m</li> <li>Packs of 10 pieces</li> <li>Every LME7 must come complete with a cable to connect it to the AZL2 display.</li> </ul>	

## LFS1 flame safeguard C

Only for LME76.

External flame safeguard with approval for continuous operation for the supervision of oil and gas flames.

Article no.	Type	Flame detector	Operating mode
BPZ:LFS1.11A1 BPZ:LFS1.11A2	LFS1.11A1 LFS1.11A2	RAR9	Continuous operation
BPZ:LFS1.21A1 BPZ:LFS1.21A2	LFS1.21A1 LFS1.21A2	Ionization probe	Continuous operation
BPZ:LFS1.21A1 BPZ:LFS1.21A2	LFS1.21A1 LFS1.21A2	QRA2/QRA4/QRA10	Intermittent
BPZ:LFS1.21A1 BPZ:LFS1.21A2	LFS1.21A1 LFS1.21A2	Ionization probe + QRA2/QRA4/QRA10	Intermittent





Note

The operating mode depends on the flame detector used.

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#### **UV flame detector**

QRA2 (only LME71/LME73 or LME76 with LFS1.21)
UV flame detector for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. Plastic insulated bousing, metalized to prevent static

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, lateral illumination.



QRA4 (only LME71/LME73 or LME76 with LFS1.21)

UV flame detector for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control, metal housing, frontal illumination.



QRA7 (only LME75)

UV flame detector for use with Siemens burner controls for the supervision of gas and oil flames.



QRA10 (only LME71/LME73 or LME76 and LFS1.21)

UV flame detector for the supervision of gas flames and yellow or blue-burning oil flames as well as for ignition spark control. Detector housing made of injection molded aluminum with a 1" mounting coupling and connection facility for cooling air.



#### Photoresistive detector

#### QRB1 (only LME71/LME72/LME73)

Photoresistive detector for use with Siemens burner controls, for the supervision of oil flames in the visible range. The QRB1 is primarily used in connection with burner controls for burners of small capacity.



## QRB3 (only LME71/LME72/LME73)

Photoresistive detector for use with Siemens burner controls, for the supervision of oil flames in the visible range. The QRB3 is primarily used in connection with burner controls for burners of small capacity.



## Yellow flame detector

#### QRB4 (only LME71/LME72/LME73)

Yellow flame detector for Siemens burner controls, for supervising oil flames in the visible range. The QRB4 is used in connection with burner controls for oil burners in intermittent operation.



## Blue flame detector

## QRC (only LME71/LME72/LME73)

Blue-flame detector for use with Siemens burner controls, for the supervision of blue and yellow-burning oil or gas flames. The QRC is primarily used in connection with burner controls for burners of small capacity.





Lateral illumination:



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