



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

Detectors



QRA2
UV cell



QRA4



QRA7



QRA10



QRB1
Photoresistive detector



QRB3
Photoresistive detector



QRB4



QRC
UV diode



QRI




RAR9


Ionization



Pressure switch




QPL15




QPL25

Display and operating units



AZL21
Ip40




AZL23
IP54

Burner controls




LME7

Service tools



ACS410 / OCI410

Program module



PME7

Actuators



SQN7
0.7...1.3 Nm



SQM40 / SQM41
Up to 10 Nm



SQM5
Up to 40 Nm

Bidirectional

7105z-36en/0722

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 |
|--|-----------------|-----------------|------------------|--------------------|-----------------|-----------------|
| Type | 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 (0...10 V, 4...20 mA, 0...135 Ω) | ● | ● | ● | -- | ● | ● |
| Load controller input, 3-position step input or 2-stage | ● | ● | ● | ● | ● | ● |
| Actuator control output | -- | -- | -- | ● | ● | ● |
| Input feedback for actuator with potentiometer 0...1 kΩ | -- | -- | -- | -- | ● | ● |
| 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 |
|--|------------------|------------------|------------------|------------------|
| Type | 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 (0...10 V, 4...20 mA, 0...135 Ω) | ● | ● | ● | ● |
| Load controller input, 3-position step input or 2-stage | ● | ● | ● | ● |
| Actuator control output | ● | ● | ● | ● |
| Input 0...1 kΩ 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) | ● | ● | ● | ● |

Product presentation (continued)

Program module

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 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Type | 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 | -- | -- | -- | -- | -- |

Product presentation (continued)

Program module **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 *) |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------|--------------------|
| Type | 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 | -- | -- | -- | -- | -- | -- | -- |

*) On request only

Product presentation (continued)

Program module

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 |
|--|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Type | 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 | -- | -- | -- | -- | -- | -- | ● | -- |

Program module

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 |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Type | 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 → depending on the parameterization | ● | ● | ● | --- | ● | ● | ● | --- |
| Valve proving → 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 | ● | --- | --- | --- | ● | --- | --- | --- |

Product presentation (continued)

Program module

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 |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Type | 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 → depending on the parameterization | ● | ● | ● | --- | ● | ● | ● | --- |
| Valve proving → 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 | ● | --- | --- | --- | ● | --- | --- | --- |

Product presentation (continued)

Display units / operating units and accessories

| Article no. | Type | |
|----------------|------------|--|
| BPZ:AZL21.00A9 | AZL21.00A9 | Display and operating unit <ul style="list-style-type: none"> • Separate unit for a choice of mounting methods with LCD • 8 digits • 5 buttons • BC interface to LME7 • Degree of protection IP40 |
| BPZ:AZL23.00A9 | AZL23.00A9 | Display and operating unit <ul style="list-style-type: none"> • Separate unit for a choice of mounting methods with LCD • 8 digits • 5 buttons • BC interface to LME7 • Degree of protection IP54 |
| BPZ:AGV50.100 | AGV50.100 | Signal cable for AZL2 <ul style="list-style-type: none"> • With RJ11 connector • Cable length 1 m • Packs of 10 pieces Every LME7 must come complete with a cable to connect it to the AZL2 display. |



LFS1 flame safeguard **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.

Product presentation (continued)

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 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.

Frontal illumination:



Lateral illumination:



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