ISO 9001

Burner Controls LMG2...

Burner controls for use with forced draught gas or gas / oil burners of small to medium capacity in intermittent operation.

The burner controls are certified to EN 230 and EN 298.

They carry the CE mark based on the directives for gas-fired appliances and electromagnetic compatibility.

The LMG2... and this data sheet are intended for use by OEMs which integrate the burner controls in their products!

Use

Burner controls LMG2... are used for the startup and supervision of single- or two-stage gas or gas / oil burners in intermittent operation. The flame is supervised with a detector electrode or a UV detector QRA... (with auxiliary unit AGQ2...A27).

LMG21... / LMG22... in the same type of housing replace their predecessors LGB21... / LGB22... (refer to «Type summary») and, using the respective adapters, their predecessors LFI7... and LFM1... (refer to «Replacement types» under «Ordering»).

Application-specific features
– Detection of undervoltages
– Air pressure supervision with functional check of the air pressure monitor during startup and operation
– Electric remote reset
– Indication of error code and flame signal by means of LEDs in the lockout reset button
– Precise program times owing to digital handling of signals

Available versions

- **LMG21... / LMG22...** For unlimited burner capacities (output on startup ≤ 120 kW)
  Lockout in the event of flame failure during operation
- **LMG25...** For burner capacities ≤ 120 kW
  Three repetitions in the event of flame failure during operation

Warning notes

To avoid personal injury, damage to property or the environment, the following warning notes must be observed!

- LMG2... are safety devices. It is therefore not permitted to open, interfere with or modify the units!
- The unit must be completely isolated from the mains supply before performing any work in the connection area of the LMG2...
- Check the wiring and all safety functions!
  ⇒ Risk of explosion
- Protection against electric shock hazard on the unit itself and on all electrical connections **must be** ensured through appropriate mounting!
- Press lockout reset button / operating button **only** manually (applying a force of ≤ 10 N), **without** using any tools or pointed objects!
- The connecting wires of the air pressure monitor must be checked for short-circuits!

Engineering notes

- Check the electromagnetic compatibility with adjacent components!
- On applications with actuators, no position feedback signal is delivered to the burner control. The running times of the actuators must be matched to the burner control's program. An additional safety check of the burner with actuator must be made!

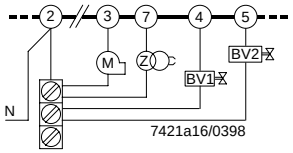
Mounting notes

- The relevant national safety regulations must be complied with!
- Ignition and detector electrode must be located such that arcing over of the ignition spark to the detector electrode cannot occur!
  ⇒ Risk of electric overloads

Installation notes

- Installation and commissioning work may **only** be carried out by qualified personnel!
- Observe the permissible length and shielding of the detector lines!
  ⇒ Refer to «Technical data»
- Ignition cables must always be run separate from the unit and other cables while observing the greatest possible distances!
- Check wiring carefully before putting the burner control into operation!
- Switches, fuses, earthing, etc., must be installed in compliance with local regulations!
- The earthing lug in the plug-in base must be secured with a screw and a lockwasher or similar!
- The connection diagrams shown apply to burner controls with earthed neutral. In the case of ionization current supervision in networks with **non-earthed** neutral, terminal 2 **must** be connected to the earth conductor via an RC unit (part no. ARC 4 668 9066 0)!
- The maximum permissible switching capacity of the connection terminals **may not be exceeded**!
- **No** external mains voltage **may be fed** to the burner control's control outputs. When checking the functioning of devices controlled by the burner control (gas valves, etc.), the burner control **may never be plugged in!**
- In the case of burners with no fan motor, an AGK25 **must** be connected to terminal 3 of the burner control, or else the burner cannot be started!
- For safety reasons, **it is absolutely essential** to feed the neutral wire to the neutral distributor in the plug-in base, or to terminal 2, and from there to the different devices (fan, ignition transformer and gas valves), or to an external neutral distributor!

Example



Electrical connection of ionization current and UV detectors

It is important to achieve practically loss-free signal transmission.

- The length of the detector cable should not exceed 20 m
- The detector cable may not be run together with other cables
  – Line capacitance reduces the magnitude of the flame signal
  – Use separate cables
- Insulation resistance
  – Between detector electrode and ground minimum 50 MΩ
  – Soiled detector electrode holders support creepage currents which reduce the flame signal
- The burner must be earthed in compliance with the regulations; earthing of the boiler alone is not sufficient
- Observe the polarity
  Burner controls LMG2... detect wrong polarity of live and neutral, in which case they initiate lockout at the end of «TSA»

Mechanical design

Burner controls LMG2...

– Plug-in design according to predecessor type LGB2... (refer to «Dimensions»)
– Housing made of impact-proof, heat-resistant plastic
– Housing accommodates the
  - control of the microcontroller
  - electronic flame signal amplifier
  - lockout reset button with integrated red fault indication lamp and green flame signal lamp

Plug-in base

– Made of impact-proof, heat-resistant plastic
– Available with screw terminals AGK11
– Cable entry optionally
  - from the front or laterally by means of cable gland holders AGK65 or cable holders AGK66
  - from below through two holes of 16.2 mm dia.
– Provided with catches on the two narrow sides which engage in the housing of the burner control
  - must audibly click when the LMG2... is plugged in
  - to disengage, a screwdriver must be **slightly** tilted in the appropriate guiding slots, then the burner control slightly lifts
– For length and width of plug-in base and positions of fixing holes, refer to «Dimensions»

Type summary

The type references contained in the following table refer to LMG2... with **no** plug-in base and with **no** flame detector. For ordering information on bases and other accessories, refer to «Ordering».

Type of flame detector	Type reference LMG2...	Approval to EEC directives	tw s max.	t1 s min.	TSA s max.	t3n s appr.	t3 s appr.	t4 s appr.	t10 s min.	t11 s [1] max.	t12 s [1] max.	Behavior in the event of flame failure during
Burner controls for pre-purging **with low flame air volume, without actuator control**												
Detector electrode (FE)	LMG21.130A27[2)3)]	EN298 / 230	8	7	3	2.6	2	8	5	-	-	Lockout
or	LMG21.230A27[4) 3)]	EN298 / 230	8	20	3	2.6	2	8	5	-	-	Lockout
UV detector QRA...	LMG21.330A27[4) 3)]	EN298 / 230	8	30	3	2.6	2	8	5	-	-	Lockout
with	LMG21.350A27[4)7)]	EN298 / 230	8	30	5	4.6	2	10	5	-	-	Lockout
AGQ2...A27	LMG21.550A27[4)]	EN298 / 230	8	50	5	4.6	2	10	5	-	-	Lockout
Burner controls for pre-purging **with nominal air volume, with actuator control**												
Detector electrode (FE)	LMG22.130A27[2) 3)]	EN298 / 230	8	7	3	2.6	3	8	3	12	12	Lockout
or	LMG22.230A27[4) 3)]	EN298 / 230	8	20	3	2.6	3	8	3	16.5	16.5	Lockout
UV detector QRA...	LMG22.233A27	EN298 / 230	8	20	3	2.6	3	8	3	30	30	Lockout
with	LMG22.330A27[3)4)]	EN298 / 230	8	30	3	2.6	3	8	3	12	11	Lockout
AGQ2...A27	LMG22.330A270[4)5)]	EN298 / 230	8	30	3	2.6	3	8	3	12	11	Lockout
Burner controls for pre-purging **with low flame air volume, without actuator control**												
Detector electrode (FE)	LMG25.230A27[3)]	EN298 / 230	8	20	3	2.6	2	8	5	-	-	max. 3 repetitions
or	LMG25.330A27	EN298 / 230	8	30	3	2.6	2	8	5	-	-	max. 3 repetitions
UV detector QRA...	LMG25.350A27	EN298 / 230	8	30	5	4.6	2	10	5	-	-	max. 3 repetitions
with AGQ2...A27												

Legend

tw	Waiting time	t4	Interval «BV1-BV2» or «BV1-LR»
t1	Checked pre-purge time	t10	Specified time for air pressure signal
TSA	Ignition safety time	t11	Programmed opening time for actuator «SA»
t3	Pre-ignition time	t12	Programmed closing time for actuator «SA»
t3n	Ignition time during «TSA»		

1) Maximum running time available for actuators «SA»
2) Also suited for use with flash-steam generators
3) On request, also available for AC 100...110 V, in which case the last two digits read ...17 in place of ...27
4) Also suited for use with direct fired air heaters
5) Without integral fuse; use only in connection with bases AGK86... or with an external microfuse of max. 6.3 A, (slow)

Ordering

Burner control refer to «Type summary»

Flame detectors
– Detector electrode delivered by others
– UV detector QRA... refer to data sheet 7714

Plug-in base with screw terminals **AGK11**

Cable gland holder **AGK65**
– For insertion in the plug-in base
– For 5 x Pg11, one each on the narrow sides, three on the wide side

Cable holder **AGK66**
– For insertion in the plug-in base
– With six knockout holes for cable entries (without cable tension relief)
  - 1 x 8.8 mm dia. and 1 x 17 mm dia. (laterally)
  - 3 x 7 mm dia. (on the front)
  - 1 x rectangular opening 6 x 20 mm (on the front)

Pedestal **AGK21**
Empty housing for increasing the height of the LMG2... to that of the LFM... or LFI7... (for height, refer to «Dimensions»)

RC unit **ARC 4 668 9066 0**
For supervision of the ionization current in networks with **non-earthed** neutral

PTC resistor (AC 230 V) **AGK25**
To generate load on terminal 3
(used with burners with no fan motor, e.g. atmospheric gas burners)

Auxiliary unit for UV supervision **AGQ2.1A27** (cable length 500 mm)
AGQ2.2A27 (cable length 300 mm)
Can be fitted under the plug-in base **(always use B-series)**;
for dimensions, refer to «Dimensions»

Actuators (refer to data sheet 7808) **SQN3...**
Actuators (refer to data sheet 7804) **SQN7...**
Actuators (refer to data sheet 7806) **SQN9...**

Service adapter **KF8872**
For checking the functioning of the burner controls on the burner plant
– Functional check with indicator lamps
  Note: with no load on the output terminals, the respective indicator lamp may light up!
– Detector current measurement with jacks of 4 mm dia.

Test case **KF8843**
For checking the functioning of the burner controls away from the burner plant

Adapters / replacement types
No rewiring required

New type of burner control	Adapter type	Predecessor type
LMG21... with adapter	KF8853-K	LFI7...
	KF8880	LFM1... / LFM1...-F
LMG22... with adapter	KF8853-K	LFI7...
	KF8880	LFM1...

Technical data

LMG2...

Operating voltage AC 230 V +10 % / -15 %
(AC 100 V -15 %...110 V +10 %) on request only

Mains frequency 50 Hz -6 %...60 Hz +6 %
Power consumption 12 VA
Primary fuse max. 10 A, slow
Degree of protection IP 40
Mounting position optional

Identification code to EN 298
LMG21... / LMG22... F T L L X N
LMG25... F T C L X N

Weight
- Burner control approx. 158 g
- Plug-in base AGK11 approx. 80 g
- AGK65... approx. 12 g
- AGK66... approx. 12 g

Max. cable length terminals 8 and 10 20 m

Input current to terminal 12 max. 5 A

Switching capacity of terminals	At cos φ ≥ 0.6	At cos φ = 1
- Terminal 3	max. 2.7 A (15 A during max. 0.5 s)	max. 3 A
- Terminal 4, 5 and 7	max. 1.7 A	max. 2 A
- Terminal 10	max. 1 A	max. 1 A

Environmental conditions
- Transport IEC 721-3-2
  Climatic conditions class 2K2
  Temperature range -40...+60°C
  Humidity < 95 % r.h.
  Mechanical conditions class 2M2
- Operation IEC 721-3-3
  Climatic conditions class 3K5
  Temperature range -20...+60°C
  Humidity < 95 % r.h.
  Condensation, formation of ice and ingress of water are not permitted!

CE conformity
According to the directives of the European Union
Electromagnetic compatibility EMC
89 / 336 EEC incl. 92 / 31 EEC
Directive for gas-fired appliances 90 / 396 EEC

Flame supervision with detector electrode

	At mains voltage UN = AC 230 V
Detector voltage across terminals 1 and 2 or ground (AC voltmeter, Ri ≥ 10 MΩ)	AC 230 V
Switching thresholds (limit values) Switching on (flame on) DC ammeter, Ri ≤ 5 kΩ) Switching off (flame off) (DC ammeter, Ri ≤ 5 kΩ)	 ≥ DC 1 µA [1] ≤ DC 0.5 µA
Max. short-circuit current across terminals 1 and 2 or ground (AC ammeter, Ri ≤ 5 kΩ)	AC 200 µA

[1] Based on the same quality of flame, the detector current with LMG... is approx. 30 % lower than with LGB...

Flame supervision with AGQ2...A27

Operating voltage AC 230 V +10 % / -15 %
Mains frequency 50 Hz -6 %...60 Hz +6 %
Power consumption 4.5 VA
Degree of protection IP 40
Mounting position optional

Weight
- AGQ2...A27 approx. 140 g
- QRA... refer to data sheet 7714

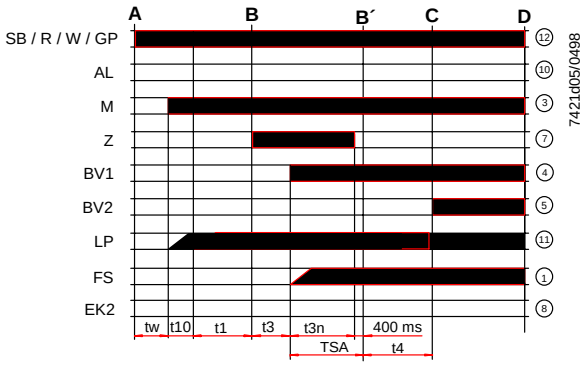
Max. cable length
QRA... to AGQ2...A27 (separate cable) 20 m
AGQ2...A27 to LMG2... 20 m

	At mains voltage UN AC 220 V	 AC 240 V
Detector voltage at QRA... (with no load)		
To the end of «t10» and after a controlled shutdown	DC 620 V	DC 675 V
From the beginning of «t1»	DC 300 V	DC 300 V
Detector voltage Loading by DC meter Ri > 10 MΩ		
To the end of «t10» and after a controlled shutdown	DC 500 V	DC 550 V
From the beginning of «t1»	DC 280 V	DC 280 V
DC current detector signals with UV detector QRA...		
a: measurement made on LMG2...	3 µA	15 µA
b: measurement made on UV detector	200 µA	500 µA

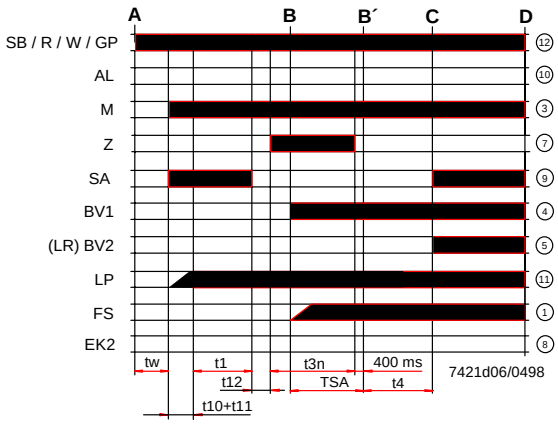
Environmental conditions
- Transport IEC 721-3-2
  Climatic conditions class 2K2
  Temperature range -40...+60°C
  Humidity < 95 % r.h.
  Mechanical conditions class 2M2
- Operation IEC 721-3-3
  Climatic conditions class 3K5
  Temperature range -20...+60°C
  Humidity < 95 % r.h.

Functions

LMG21... / LMG25...



LMG22...



Legend

A	Start command (switching on by «R»)	B-B´	Interval for establishment of flame
C	Operating position of burner reached	C-D	Burner operation
D	Controlled shutdown by «R» • Burner is immediately shut down • Burner control is immediately ready for new startup		
AL	Fault status signal (alarm)	M	Fan motor
BV...	Fuel valve	R	Control thermostat / pressurestat
EK2	Remote reset button	SA	Actuator
FS	Flame signal	SB	Safety limit thermostat
GP	Gas pressure monitor	W	Limit thermostat / pressure monitor
LP	Air pressure monitor	Z	Ignition transformer
LR	Load controller		

Prerequisites for startup

- Burner control is reset
- All contacts in the line are closed
- Fan motor «M» or AGK25 is connected
- Air pressure monitor «LP» is in idle position
- No undervoltage

Undervoltage

Safety shutdown in the event
– the mains voltage is lower than about AC 160 V (based on nominal AC 230 V)
– a restart is made when the mains voltage exceeds AC 195 V (based on nominal AC 230 V)

Checked intermittent operation

After 24 hours of continuous operation at the latest, the burner control initiates a safety shutdown, followed by a restart.

Reversed polarity protection

If the connections of line (terminal 12) and neutral (terminal 2) have been exchanged, the burner control will initiate lockout at the end of «TSA».

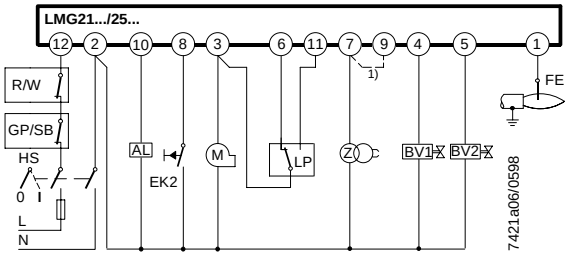
Control program in the event of fault

- If a fault occurs, the supply of fuel will immediately be stopped (< 1 s)
- On restoration of power, a restart will be made with an unabridged program sequence
- If the operating voltage has dropped below the undervoltage threshold (for switching threshold, refer to «Functions»), a restart will be made with an unabridged program sequence
- If there is a premature faulty flame signal during «t1», the burner control will initiate lockout
- Contacts of air pressure monitor «LP» welded in working position: prevention of startup and, after 8.5 seconds, lockout
- Contacts of air pressure monitor «LP» welded in idle position: lockout at the end of «t10»
- Air pressure failure on completion of «t10» ⇒ Lockout
- If the burner does not ignite by the end of «TSA» ⇒ Lockout
- If there is a flame failure during operation
  ⇒ LMG21... / LMG22... lockout
  ⇒ LMG25... three repetitions

Reset of LMG2...

Whenever a lockout occurs, the burner control can immediately be reset!
Keep lockout reset button depressed for a minimum of 0.5 seconds and a maximum of 3 seconds.

Connection diagram
LMG21... / LMG25...



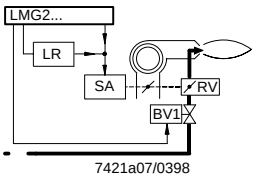
[1]) Wire link required only with LGB21..., not with LMG21... / LMG25...

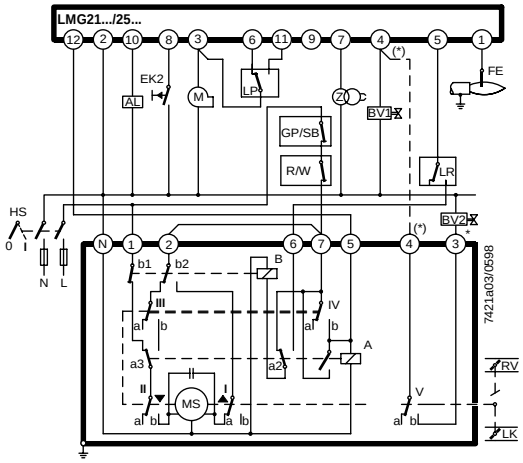
Application examples

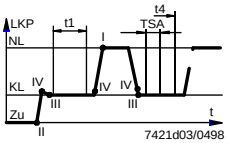
Control of actuators of two-stage or two-stage modulating burners. Checked pre-purging «t1» with low flame air volume. Exactly the same low flame actuator positions during startup and operation!

For information about actuators «SA»:

SQN3...: refer to data sheet 7808
SQN7...: refer to data sheet 7804
SQN9...: refer to data sheet 7806

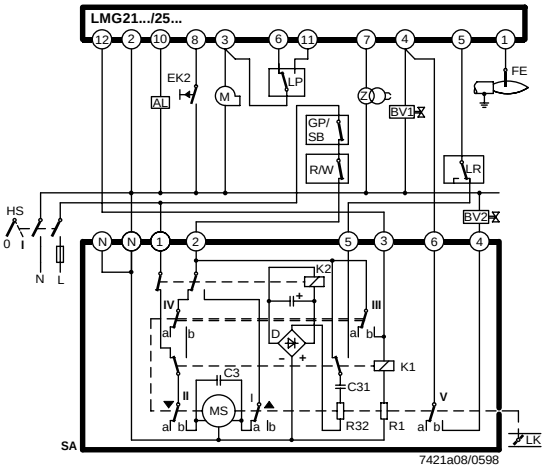




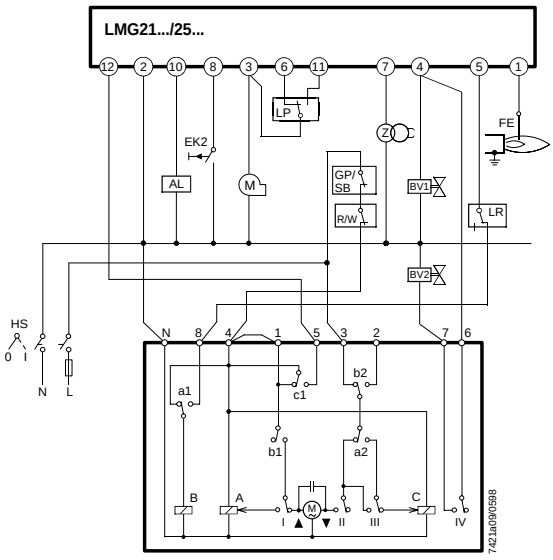


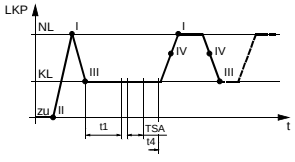
SQN3...121... / two-stage control

*** Note:** with two-stage modulating burners (with gas regulation damper «RV»), «BV2» and the dotted connection between terminals (*) are not required



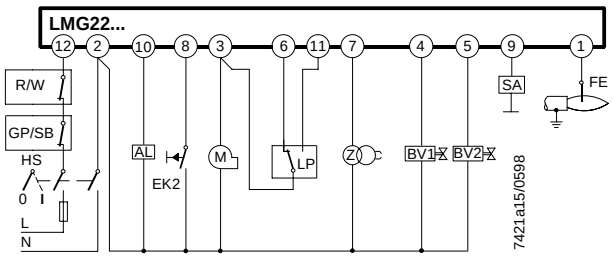
SQN91.140... / two-stage control





SQN7...244 / two-stage control

Connection diagram
LMG22...

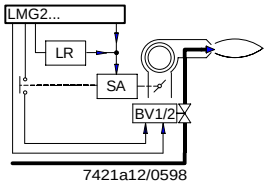


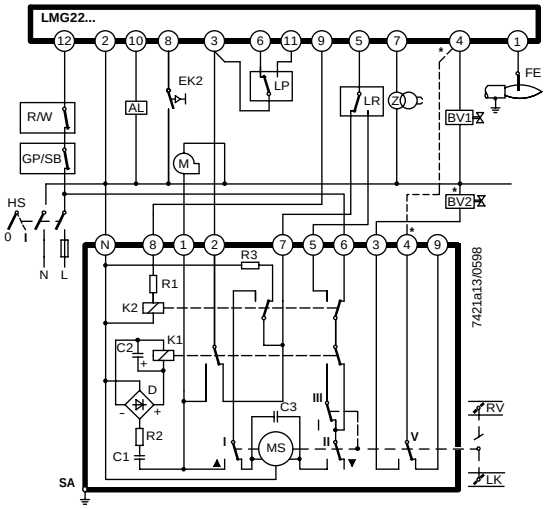
Application examples

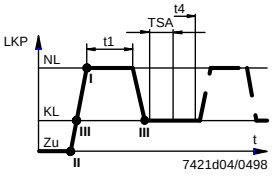
Control of actuators of two-stage or two-stage modulating burners.
Checked pre-purging «t1» with nominal load air volume.

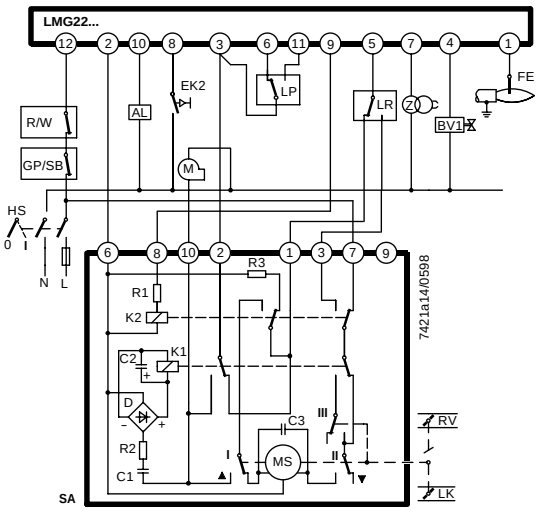
For information about actuators «SA»:

SQN3...: refer to data sheet 7808
SQN7...: refer to data sheet 7804
SQN9...: refer to data sheet 7806





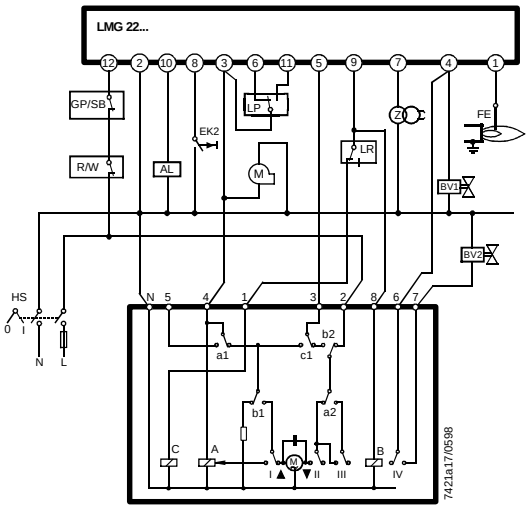


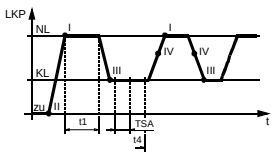


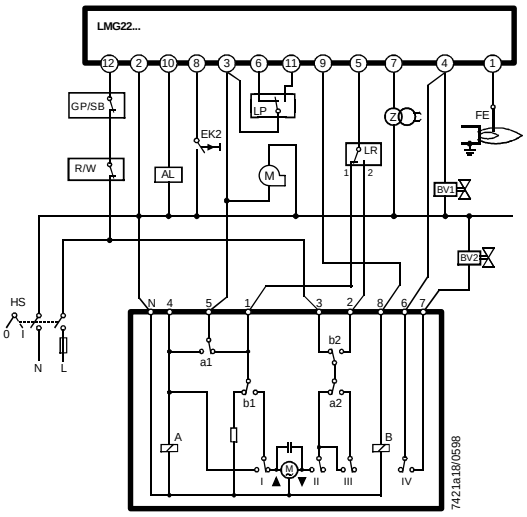
SQN3...151... or SQN3...251...

***** **Note:** with two-stage modulating burners (with gas regulation damper «RV»), «BV2» and the dotted connection between terminals (*) are not required

SQN90.220... / two-stage modulating control





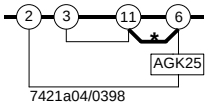


SQN7...454 / two-stage control, single-wire control

SQN7...424 / two-stage control, two-wire control

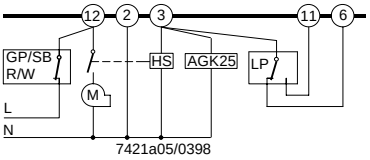
Other application examples

Burner without fan assistance and **without «LP»**



***** **Note:** different from LGB2...

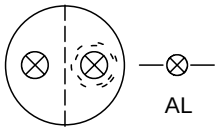
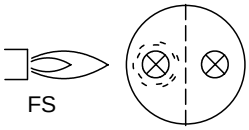
Burner with fan control via auxiliary contactor «HS» **with «LP»**



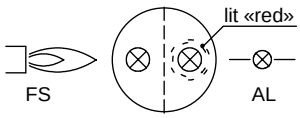
Legend

*AGK25...	PTC resistor
AL	Fault status signal (alarm)
BV...	Fuel valve
Dbr...	Wire link
EK2	Remote lockout reset button
FE	Detector electrode
FS	Flame signal
GP	Gas pressure monitor
HS	Main switch
K1...4	Internal relays
KL	Low flame
LK	Air damper
LKP	Air damper position
LP	Air pressure monitor
LR	Load controller
M	Fan motor
MS	Synchronous motor
NL	Nominal load
QRA...	UV detector
R	Control thermostat / pressurestat
RV	Gas regulation damper
SA	Actuator SQN...
SB	Safety limit thermostat
t	Time
W	Limit thermostat / pressure monitor
Z	Ignition transformer

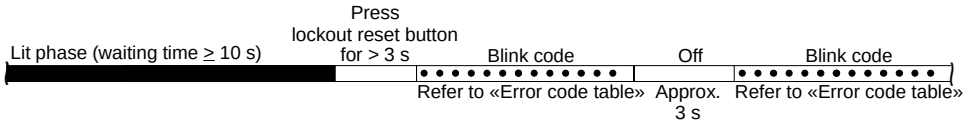
Operating concept

• Burner control has initiated lockout ⇒ Red fault indication lamp lit 	• Reset Press lockout reset button for 0.5...3 s • Diagnosis of cause of fault – Wait > 10 s – Press lockout reset button for > 3 s – Read red fault indication lamp (Error code table)
• Burner control in operation ⇒ Green flame signal lamp lit 	• Restart Press lockout reset button for 0.5...3 s • Read flame establishment time – Press lockout reset button for > 3 s – Read green flame signal lamp (Error code table)

Diagnosis of cause of fault



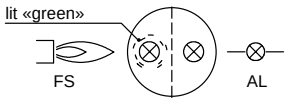
After a lockout, the red fault indication lamp is steady on.
Diagnosis of the cause of fault is based on the following sequence:



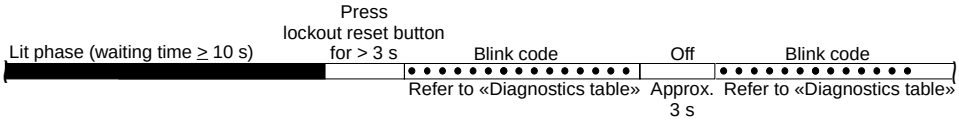
Error code table	
Blink code	Possible cause
2 x ●●	• No establishment of flame at the end of «TSA» – Faulty or soiled detector electrode – Faulty or soiled fuel valves – Poor adjustment of burner
3 x ●●●	• Air pressure monitor does not close – «LP» faulty – Adjustment of «LP» too sensitive – Fan motor does not run
4 x ●●●●	• Air pressure monitor does not open – «LP» faulty – Adjustment of «LP» too sensitive
5 x ●●●●●	• Extraneous light – Usually internal device fault
7 x ●●●●●●●	• Loss of flame during operation – Poor adjustment of burner – Faulty or soiled fuel valves – Short-circuit between detector electrode and ground
8...17 x ●●●●●●●● ..... ●●●●●●●●●● ●●●●●●●	• Free
18 x ●●●●●●●●●● ●●●●●●●●	• Air pressure monitor opens
19 x ●●●●●●●●●● ●●●●●●●●●	• Faulty output contact – Wiring error – External power supply on output terminal
20 x ●●●●●●●●●● ●●●●●●●●●●	• Internal device fault

During the diagnosis of the cause of fault, the control outputs are dead.
– Burner remains shut down
– Exception: «AL» at terminal 10
The burner is switched on again only after pressing the lockout reset button:
– Press lockout reset button for 0.5...3 seconds

Interrogation of flame establishment time



In the running position, the green flame signal lamp is steady on.
The flame establishment time is read based on the following sequence:



Readout is in the form of a blink code (multiples of 0.4 seconds)

Diagnostics table		
Blink code	Flame establishment time with «TSA» = 3 s	Flame establishment time with «TSA» = 5 s
1 x •	≤ 0.4 s	≤ 0.4 s
2 x ••	≤ 0.8 s	≤ 0.8 s
7 x •••••••	≤ 2.8 s	≤ 2.8 s
12 x •••••••••• ••	---	≤ 4.8 s

- The flame establishment time is the period of time from the moment «BV1» opens to the moment the flame signal is detected for the first time
- The flame establishment time remains stored for one startup sequence and is re-ascertained the next time the burner is started up
- During the period of time the flame establishment time is interrogated, the fault status outputs are dead:
  – Burner remains shut down
    It is restarted only after a reset is made
  – Press lockout reset button for 0.5....3 seconds

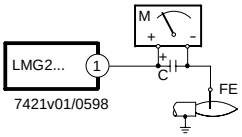
Flame supervision with detector electrode

The conductivity and the rectifying effect of hot flame gases are used for **flame supervision**.

The **flame signal amplifier** responds **only** to the **DC current component** of the flame signal.

⇒ A short-circuit between detector electrode and ground causes the burner control to initiate lockout

Measurement circuit



For detector currents, refer to «Technical data».

Legend

C	Electrolytic capacitor (100...470 µF; DC 10...25 V)
FE	Detector electrode
M	Microammeter (Ri max. = 5000 Ω)

Flame supervision with UV detector QRA... and auxiliary unit AGQ2...A27

For UV detectors QRA..., refer to data sheet 7712.

Auxiliary unit AGQ2...A27

- When using the QRA... in connection with burner controls LMG2..., auxiliary unit AGQ2...**A**27 is required
- Using circuitry (A) or (B), the quench test on ageing UV detectors can be made in two different ways:

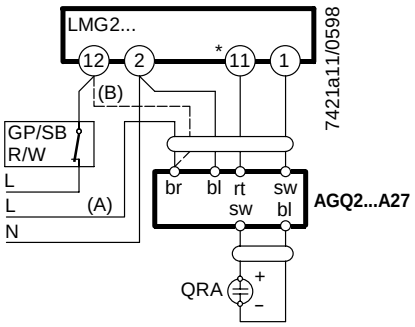
Legend

Type of circuitry:

(A) Operation with a permanent line
- UV test at twice the supply voltage (2 x UN = AC 460 V) across the UV cell on startup and after a controlled shutdown

(B) Operation with a controlled line
- UV test at twice the supply voltage (2 x UN = AC 460 V) on startup **only**, during the interval between controlled startup and air pressure signal
  - No voltage at the UV cell after a controlled shutdown
  - **No** full substitute for mode (A) described above since an aged UV cell can regenerate itself

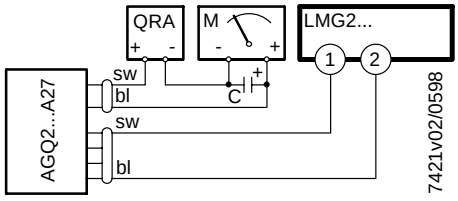
Connection diagram



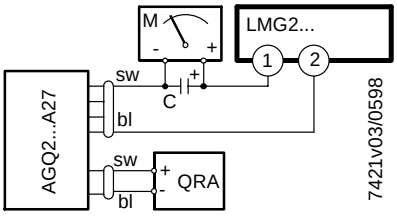
AGQ2.1A27
AQG2.2A27

Measurement circuit

a) Measurement made on UV detector



b) Measurement made on LMG2...

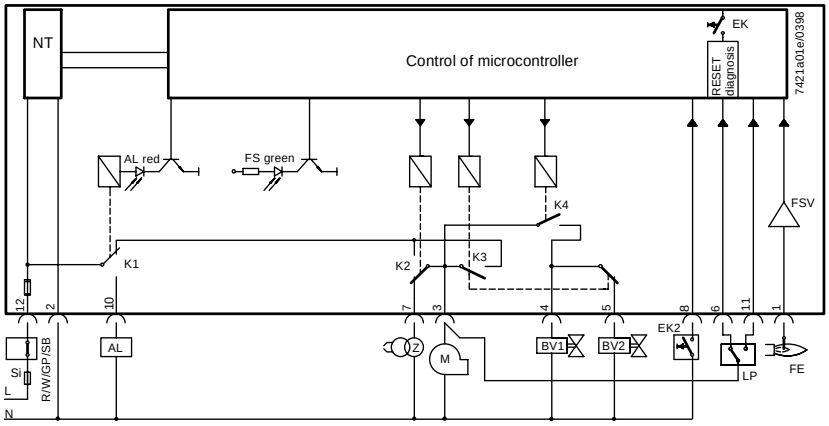


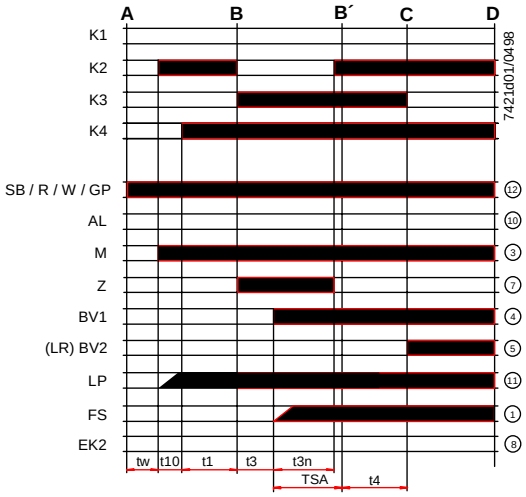
Legend

C	Electrolytic capacitor (100...470 µF; DC 10...25 V)		
bl	blue	M	Microammeter (Ri max. = 5000 Ω)
sw	black	QRA...	UV detector
gr	grey		

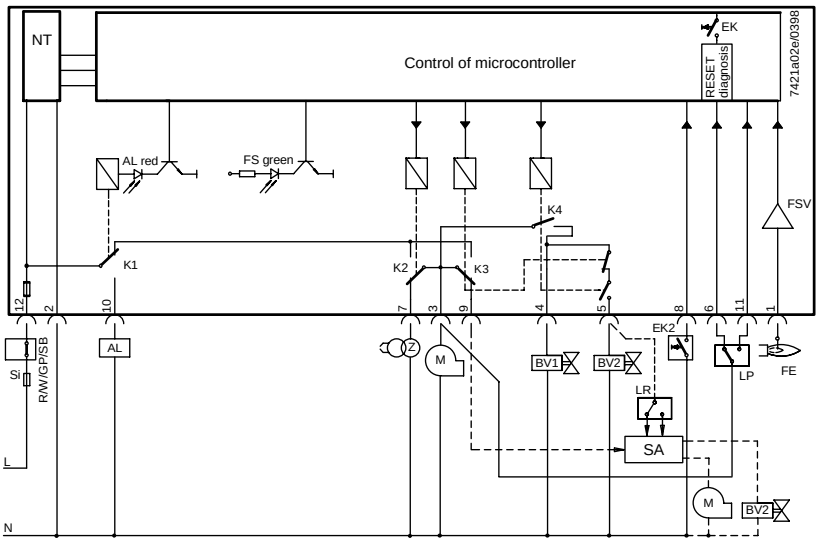
Internal diagram and program sequence

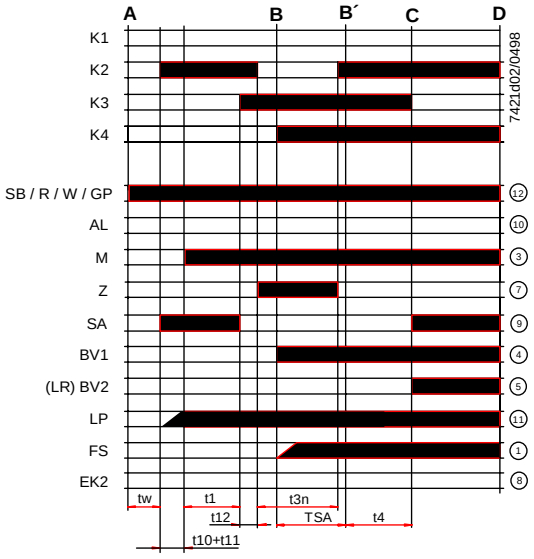
LMG21... / LMG25...





LMG22...



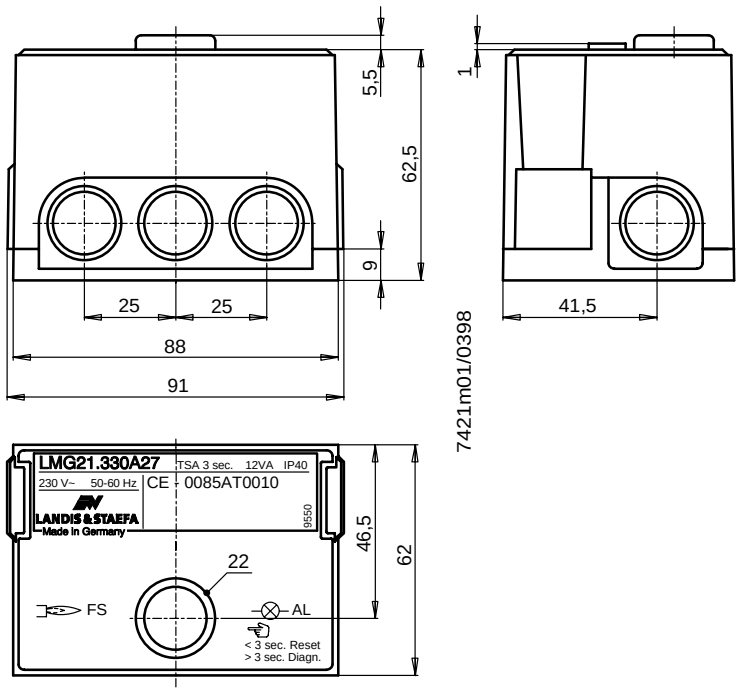


Legend					
	EK	Internal lockout reset button	NT	Power section
	FSV	Flame signal amplifier	Si	Fuse

Dimensions

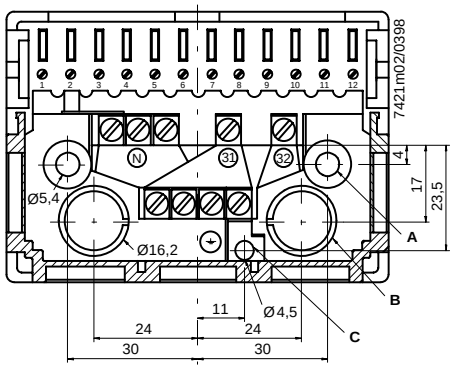
Burner control

Dimensions in mm



Burner control with plug-in base **AGK11...** and cable gland holders **AGK65...**
(can be inserted in the base)

Plug-in base

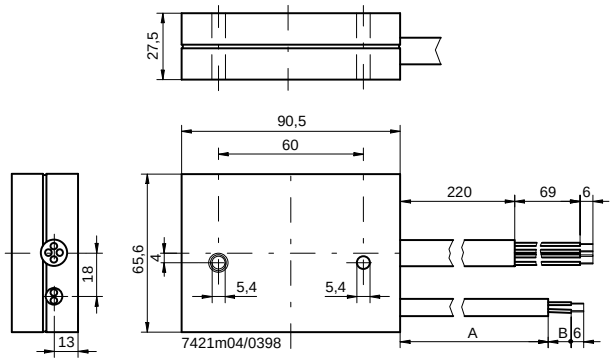


AGK11...
Plug-in base with screw terminals
Hatched: position of cable gland holder or cable holder
«B»: holes for cable entry
«31», «32»: auxiliary terminals
«N»: neutral terminals, connected to neutral input (terminal 2)

Underneath: 4 earth terminals, joining a lug for earthing the burner

Mandatory: (AGK11...)
Connection of earthing lug «C» **and** fixing screws in «A» to the burner ground (using a metric screw with a lockwasher or similar)

Auxiliary unit AGQ2...A27



Type reference	Dimensions	
	A	B
AGQ2.1A27	500	19
AGQ2.2A27	300	34