

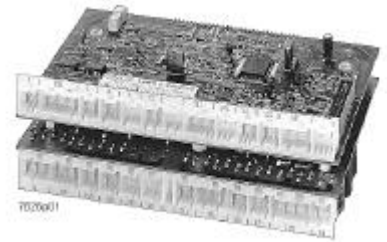


FM739

Gas Burner Controls

with automatic ignition and control functions for the heating and domestic hot water circuit

LGM11.34...



Microprocessor-based gas burner controls providing all control functions required by modern gas-fired heating boilers in intermittent operation with automatic ignition LGM11.34... have been designed for use in small gas heaters (wall-mounting or floor-standing) with modulating premix burners, offering high efficiencies and extremely low emission levels.

Main Features

- **High level of flexibility:**
All LGM11.34-specific burner, controller and plant parameters can be set with the help of an external handheld operation unit.
- **Customer-specific parameter settings:**
Landis & Gyr presets the burner- and controller-specific parameters according to prior agreement with the customer.
- **Approvals:**
The burner controls are tested to EN 298 and DIN 3440 (test of thermal reset limit thermostat, for recommended detector configuration only) and are CE-certified.

Functions

(Version 6.08)

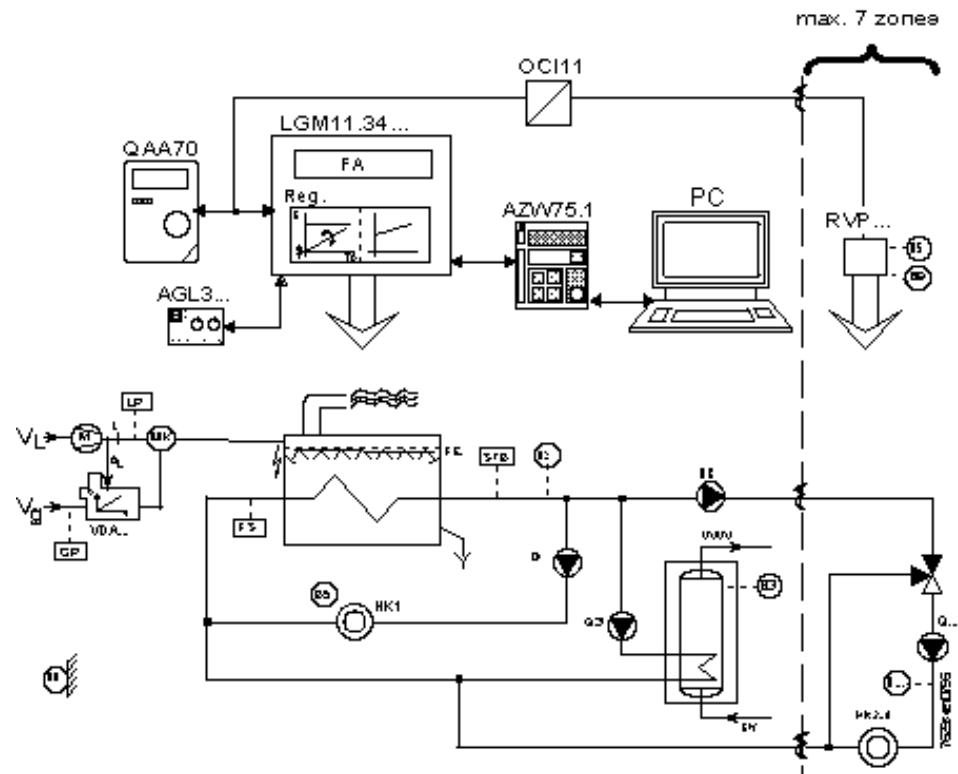
Ecofunctions

Protective functions

Operating functions

- Startup and shutdown program
- Flame supervision (ionization)
- Weather-compensated heating circuit control with room compensation and automatic adaptation of the heating curve (while giving consideration to the building's thermal storage capacity)
- Communication capability with a maximum of seven RVP... zone controllers via gateway in a controller network
- Modulating boiler/domestic hot water (d.h.w.) temperature control via speed controlled fan
- Weekly program with seven individual 24-hour programs each with three heating phases / holiday program
- Boost heating / quick setback
- Room temperature limitation / automatic 24-hour heating limit
- Automatic summer / winter changeover
- Frost protection for the building, the plant, d.h.w., and the boiler
- Pump kick and kick of changeover valve / burner cycling protection
- Legionella function / emergency operation
- Automatic intermittent operation if operation exceeds 24 hours
- Fan speed limitation
- System diagnostics, indication of program position via multifunctional display
- Hours run meter and startup counter
- Operating mode changeover via telephone network with an external switch
- Programmable AC 230 V output for:
status signal, common fault signal, primary pump or fan with a fixed speed
- Suppression of air pressure monitor evaluation possible
- Activation of various selection functions via operating section
- Visualization of all LGM parameters via user-friendly PC software tool

Basic Diagram



Legend

B...	Sensor...	MK	Mixing chamber
B2	Boiler temperature sensor	pl	Air pressure (compensating variable for VDA...)
B3	D.h.w. temperature sensor	Q...	Pump...
B5	Room temperature sensor (integrated in QAA70)	Q1	Heating circulator
B9	Outside sensor	Q3	D.h.w. storage tank charging pump
FA	Burner control	Q8	Primary pump
FE	Ionization current detector electrode	Reg.	Controller
FS	Flow switch	STB	Safety limit thermostat
GP	Gas pressure switch	TA	Outside temperature
HK...	Heating circuit...	TK	Boiler water temperature
KW	Cold water	Vg	Volumetric gas flow
L	Air orifice	VL	Volumetric air flow
LP	Air pressure switch (optionally)	WW	Hot water
M	Fan motor		

Type Summary

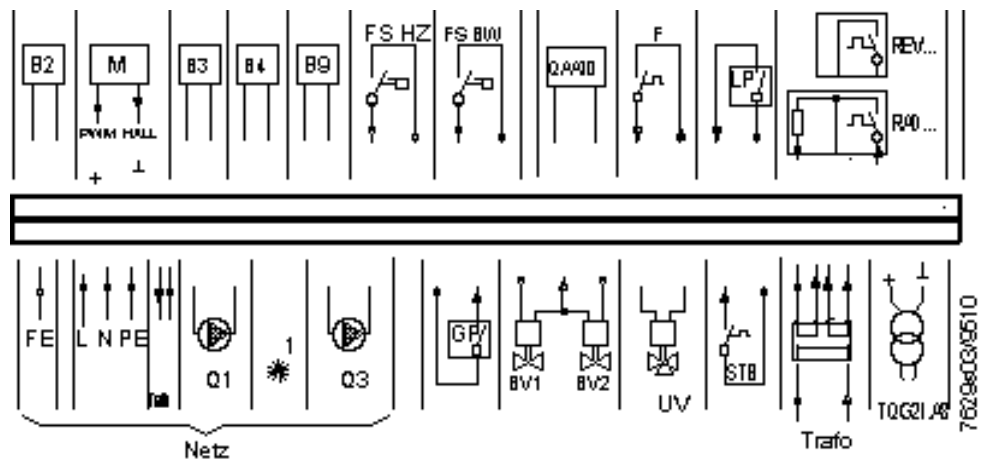
Management unit	– Ni1000 as boiler and d.h.w. temperature sensor – NTC as boiler and d.h.w. temperature sensor	LGM11.34A259.. on request
Accessories	– Ignition module – Safety transformer in accordance with IEC 742 / VDE 0551 with cables and RAST5 connectors – Room unit – Room temperature controller (2-position) – Room temperature controller (2-position) – Boiler and d.h.w. temperature detector Ni1000 (B2...B4) – Boiler and d.h.w. temperature detector Ni1000 (B2...B4) – Outside sensor (B9) – Compact gas control loop with integrated gas pressure switch – Zone controller (from heat. cont. sys. SIGMAGYR® RVP DIGITAL) – Heating controller (from heat. cont. sys. SIGMAGYR® RVP DIGITAL) – Gateway – Ignition cable (by agreement) – Operating unit/display unit (by agreement) – Handheld unit for programming, commissioning and service	TQG21.A8 AGL25.A25 QAA70 RAD5... / RAD 7... REV... QAK21.5405 QAZ21... QAC31 VDA21.A87... RVP45.500 RVP75... OCI11 AGL11.A98 AGL3... AZW75.1

Technical Data

Unit LGM11.34...	Mains voltage AC 230 V +10 %/-15 %	Mounting position optional
	Mains frequency 50 Hz ±5 %	Weight approx. 0.35 kg
	Power consumption (without transformer and loads) 15 VA max.	Identificat. code accord. to EN298 F M C L B N
	Degree of protection (without housing) IP00	Unit protection uses according to IEC127
	– Mandatory value after mounting: IP 40 min.	primary T2.5H250 (F100)
	Permissible ambient temperatures:	secondary T2.5H250 (F101)
	– Operation 0°...+60°C	T6.3H250 (F102)
	– Transport and storage -20°...+70°C	
Program times LGM11.34...	Pre-purge time tv 0...51 s	All times are adjustable with handheld unit AZW75.1!
	Pre-purge time tvz 0...5 s	
	Safety time ts 1.8...9.8 s	
	Post-purge time tn 0...51 s	
Flame supervision	Required ionization current: – Switching threshold 2.8 µA max. – Typical 1.4 µA Reaction time in the event of flame failure < 1 s	Required insulation resistance of the sensor electrode and wire with respect to the earthed burner parts > 50 MΩ Lay sensor cable separately and protect against condensation!
Fan motor	Speed-controlled DC 39 V	e.g. G1G126AB21-... (Fa. ebm) other types on request The Landis & Gyr specifications H 4 741 9500 0 must be complied with and the fan must be approved by Landis & Gyr!
Inputs / outputs	Safety extra low voltage: General – Voltage AC 24 V – Current (typical) 10 mA – N.O. contact 1 – Contact material (recom.) silver or silver-nickel Changeover valve – Voltage AC 24 V ±15 % – Current consumption < 0.33 A, cosφ > 0.8 – Running time 4...15 s	Fuel valve – Voltage AC 24 V ±15 % – Current consumption < 0.375 A, cosφ > 0.8 each Mains Voltage: Heating circulator, d.h.w. charging pump, programmable output – Voltage AC 230 V +10 %/-15 % – Current consumption < 0.45 A, cosφ > 0.8 each
Permissible line lengths / cross sections	Within the boiler casing generally < 3 m / ≥ 0.75 mm ² – Flat cable to the operation unit < 0.6 m – Ignition cable TQG21... to ignit. elect. < 0.6 m	Outside the boiler casing generally < 40 m / ≥ 1.5 mm ²
Connections	RAST5 connector system with coding and latching possibility	

Connection Facilities

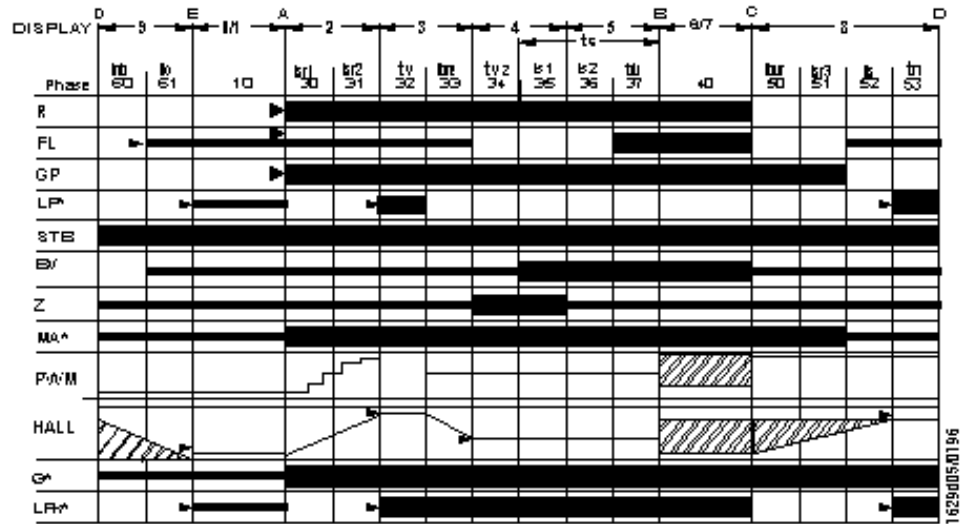
!Observe product information P7629 before putting into operation!



Legend

B2	Boiler temperature sensor	FE	Ionization current detector electrode
M	Fan motor (DC)	L, N, PE	Phase, neutral conductor and protective earth
PWM	Puls with modulation:	Q1	Heating circulator
HALL	Fan motor control signal	*1	Programmable output (optional)
B3/B4	Checkback signal	Q3	D.h.w. storage tank charging pump
B9	D.h.w. temperature sensor	GP	Gas pressure switch
FS HZ	Outside sensor	BV...	Fuel valve
FS BW	Flow switch heating circuit	UV	Changeover valve
F	Flow switch d.h.w. circuit	STB	Safety temperature limiter
LP	Frost protection/remote telephone switch (optional)	Trafo	Mains transformer connections
	Air pressure switch (optional)	Netz	Mains voltage

Sequence Diagram



Legend

0000	Required signals	DISPLAY	7-segm. displ. on the operat. unit of LGM11.34...
0000	Inadmissible signals	Phase	Program phase (display on AZW75.1...)
▶	Transition criterion	R	Heat demand by controller
A	Controller start	FL	Flame signal
B	Operating position of the burner	GP	Gas pressure switch
C	Controller shutdown	LP	Air pressure switch
D	End of shutdown	STB	Safety temperature limiter
E	End of home run	BV	Fuel valve
9	Home run	Z	Ignition
0/1	Standby	PWM	PWM-signal
2...5	Start-up	HALL	Fan motor: Speed checkback signal
6/7	Operation	*	If parameters have been set
8	Shutdown		
tv	Pre-purge time		Programmable output: the parameters of one funct. can be set!
tvz	Pre-ignition time	- G	Fan with a fixed speed
ts	Safety time	LPκ	Air pressure switch when using a fan with a fixed speed
tn	Post-purge time	- MA	Status output

Dimensions

Dimensions in mm

