µP Automatic Burner Control
MPA 5111

Automatic burner control for pneumatically modulating fan-assisted gas burner

DUNGS®
Combustion Controls

Old documentation - Only for your information!
Product is not available anymore!



Description

Microprocessor-controlled burner control system for intermittent operation of continuous operation for controlling and monitoring pneumatically modulating fan-assisted gas burners with speed-regulated or controlled fan and power controller input.

Extension modules for:
- analog inputs/outputs
- Stepped motor
- Continuous operation

Accessories

Display unit AM09
MPA Service Pack "VisionBox"

Classification according to EN 298

- FBLLBB
- FBCLBB
- FMCLBB
- FMLCBB

The classification depends on the parameterization and the selected extension module

Approvals

EC type-examination certificate according to the EC gas appliance directive:

MPA 5111 CE-0085BT 0056

EC type-examination certificate according to the EC pressure equipment directive:

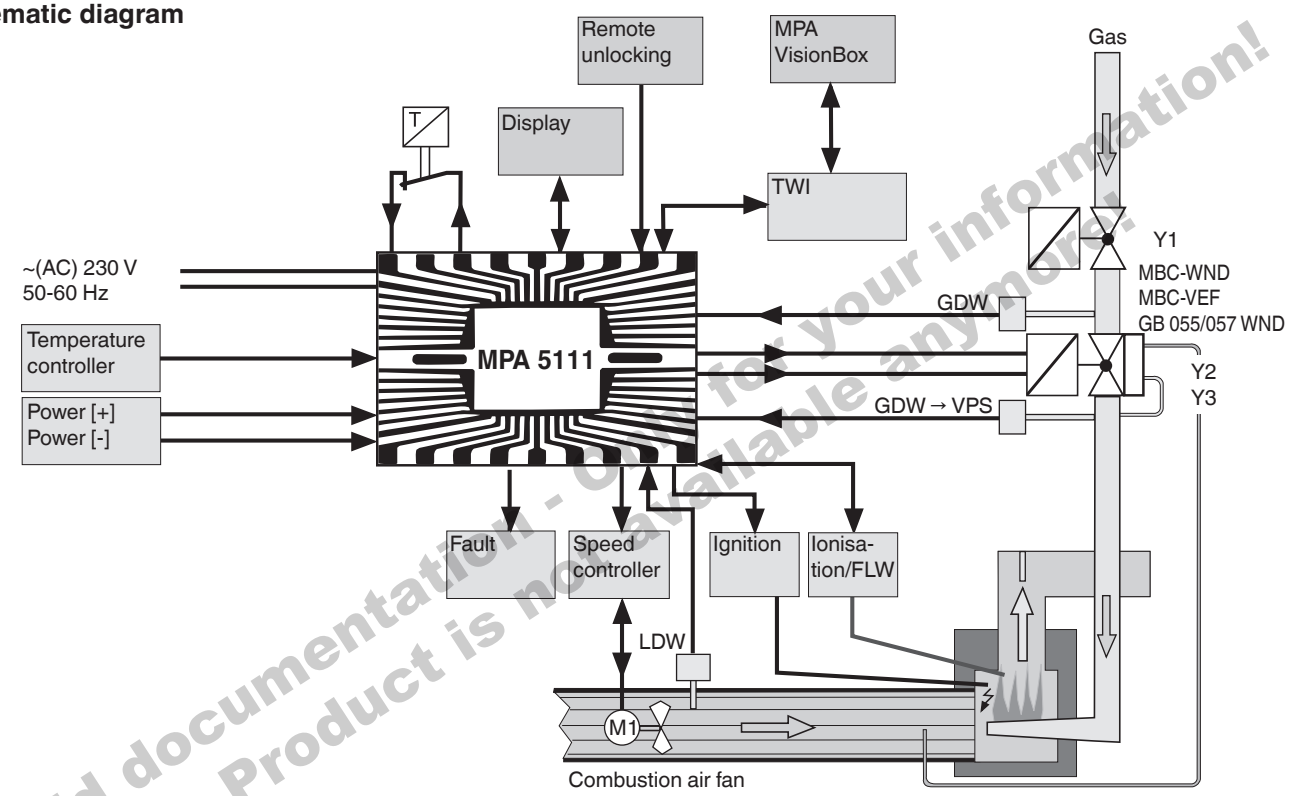
MPA 5111 CE0036

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MPA 5111 Control, regulating and monitoring unit for gas-fired boilers and gas water heater in power-dependent pneumatically modulating operating mode

- Operating mode: pneumatically modulating via PWM-controlled fan
- Ionisation flame monitoring
- Connection for external flame detector with ionisation output
- Ignition output for external ignition element ~(AC) 230 V
- Connection technology includes a snap-on 5-pin connector and a boiler connecting plug
- Gas solenoid valve activation Y1/Y2/Y3 ~(AC) 230 V
- Input for temperature controller
- Input for air pressure switch
- Input for min. gas pressure detector
- Input for min. gas pressure detector for valve check system
- Fault output ~(AC) 230 V
- Input for safety chain
- Burner power control via Power input
- Alternatively, burner power control via extension module/analog
- Restart attempt
- Power-dependent fan speed regulation or fan control
- Restart delay, time-dependent
- Controller stop function
- Set via PC
- Visualisation of the operating parameters via MPA VisionBox

Schematic diagram

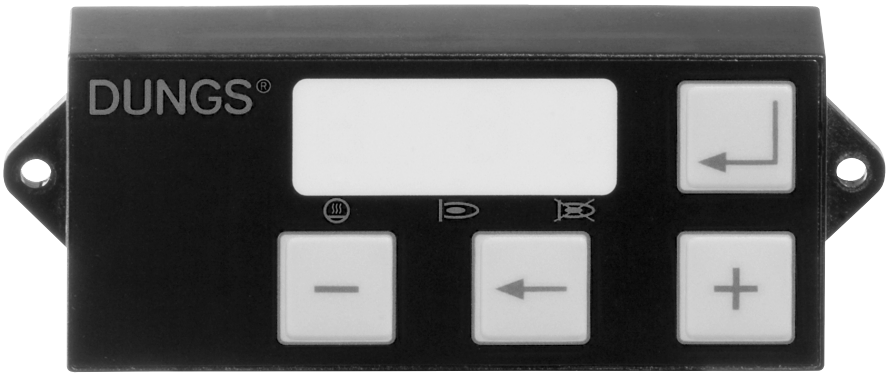


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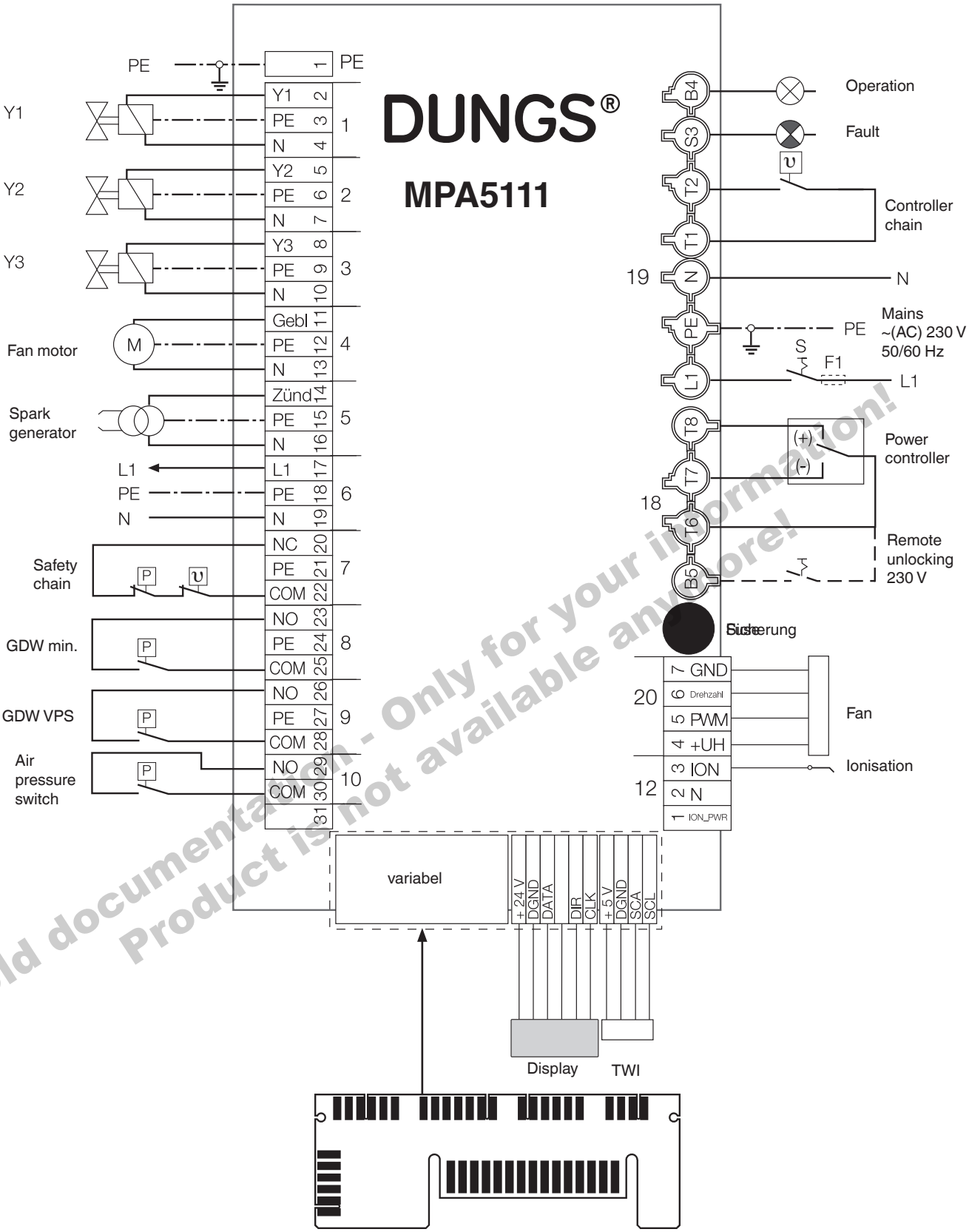
Operating and display unit

The operating unit of the MPA5111 is connected via a 6-pin cable.
The operating status and error messages are displayed. Settings and inquiries of user and service parameters can be made directly:

- Parameterization mode
- Service mode
- Info mode
- Fault display and unlocking



Wiring diagram



Extension module EM1/x

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Technical Data of the MPA 5111		
Switching power	Fuel valve Y1 (additional valve)	~(AC) 230 V, 2 A / ∑ ≤ 5 A
	Fuel valve Y2 (V1)	
	Fuel valve Y3 (V2)	
	Fan	Direct current, speed-regulated ~(AC) 230 V, max. 4 A
	Mains-side supply	~(AC) 230 V, 4 A
	PWM interface supply	=(DC) 24 V - =(DC) 31 V
	Activation	PWM 4 kHz
	Speed detection	Hall sensor F/t digital Resolution rpm
	Temperature controller	~(AC) 230 V
	Input power +	
	Input power -	
	Fault output	~(AC) 230 V, 1 A
	Operational status indicator (via Y3)	
	Safety chain	~(AC) 230 V, 10 A Safety chain is connected upstream of second switch-off distance (watchdog).
	Air pressure switch	=(DC) 24 V, 10 mA, 2-wire
	Gas pressure detector	=(DC) 24 V, 10 mA, 2-wire and PE
	Gas pressure detector, VPS	
Internal flame detector Continuous operation	Ionisation (threshold value)	1.2 µA
External flame detector intermittent operation only	FLW 10	
	FLW 20	
	others upon request	
Ignition	Ignition output	~(AC) 230 V, 2 A
Unlocking due to fault	Remote unlocking	~(AC) 230 V, 1 A
Communication	upon request: MPA via Modbus, Profibus	
PC service program	MPA VisionBox	
Dimensions	approx. 200 x 105 x 60 mm	
Type of protection	IP 20	
Mounting position	as desired	
Ordering data	MPA 5111	
Order No.	251 446	

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Subject to technical modification in the interest of technical progress.

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