

µP-controlled automatic burner control MPA51 S02

Automatic burner control for
pneumatically modulating gas
blower burners

DUNGS®
Combustion Controls

1.02



Technical description

Microprocessor-controlled automatic burner control for intermittent operation to control and monitor pneumatic modulating gas blower burners with speed-controlled or controlled blowers and power controller input.

Accessories

Display unit AM01 (231 580)
MPA Vision Service Package
MV2000

Classification as per EN 298

FMCLBN, FMLLBN

The classification is dependent on the set-up for restart.

Approvals

EU type test approval as per EC Gas Appliance Directive:

MPA 51 CE-0085 BL 0048

EU type test approval as per EC Pressure Equipment Directive:

MPA 51 CE0036

- Pneumatic modulating operation via PWM-controlled blower
- Ionisation flame monitor
- Ignition output for external ignition module 230 VAC
- Connectivity with Rast 5 connector and boiler connector
- Gas solenoid valve control Y1/Y2 230 VAC
- Input for temperature controller
- Input for air pressure monitor
- Input for min. gas pressure monitor
- Input for min. gas pressure monitor for valve proving system
- Control for operating hours counter 230 VAC
- Fault output 230 VAC
- Additional input for safety chain
- Burner power controller via power input
- Alternative burner power controller via eBUS
- Restart attempt
- Power-dependent blower speed control or blower control
- Time-dependent restart delay
- Controller stop function
- Factory setting via PC
- Burner settings for operating parameters via display
- eBUS connection
- eBUS interface for intelligent heating components (e.g. heater controller)
- Visualisation of operating parameters by means of MPA Vision

230 VAC, 50 Hz

STB

Displays remote unlock

MPA Vision PC or modem, DDC

eBUS interface

MPA 51

Temperature controller

Power +

Power -

Fault

Operating hours counter

Speed controller

Ignition

Ionisation

LDW

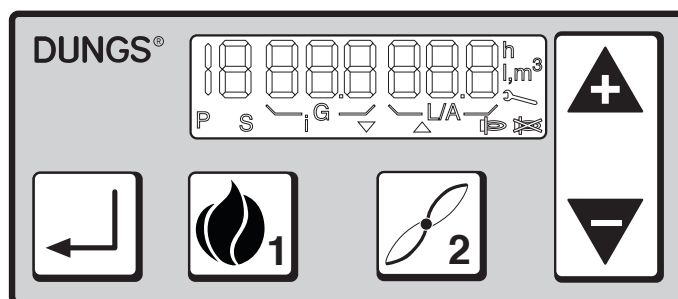
GAS

MB-VEF or GB 055

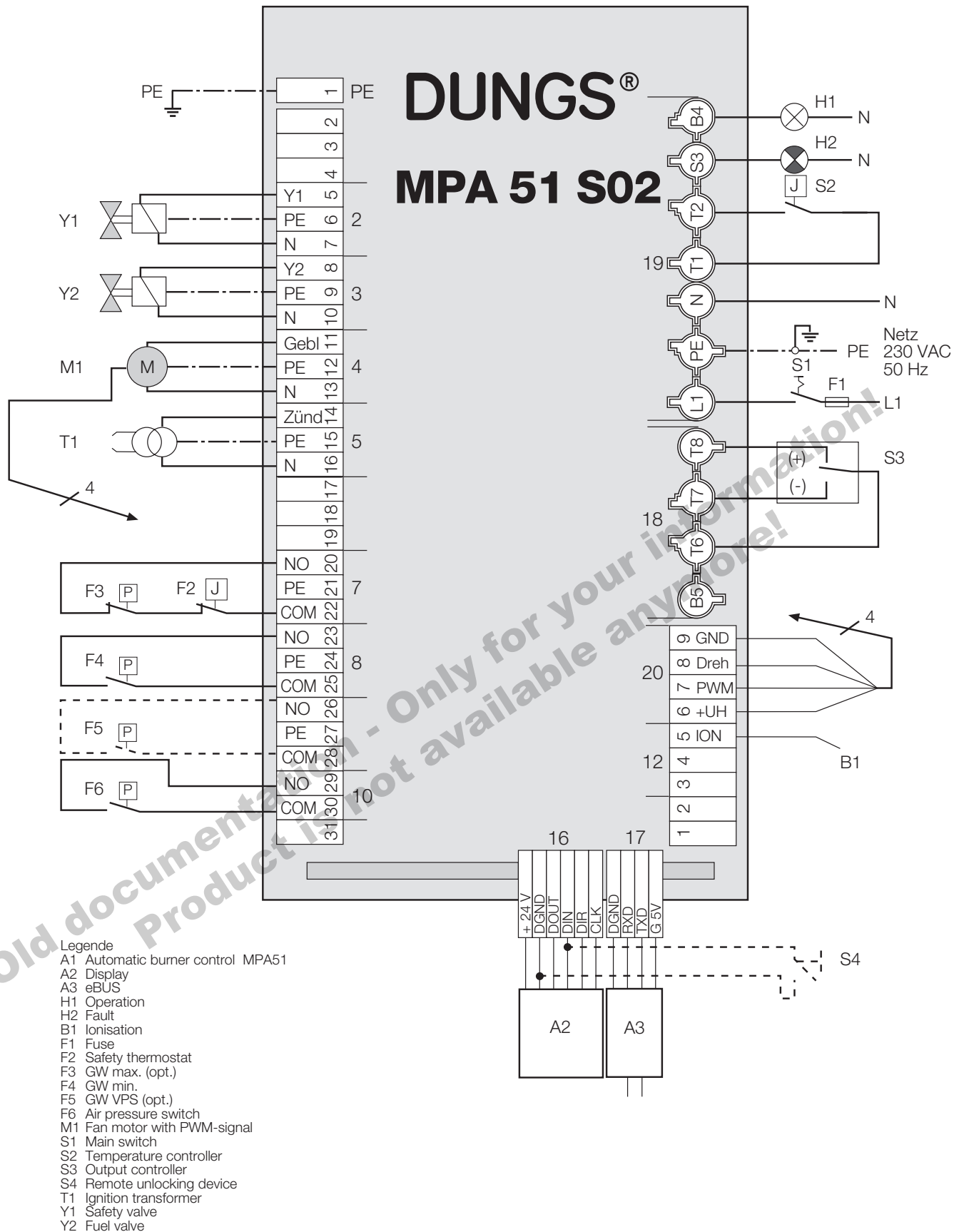
Y1/Y2

Combustion air blower

The operating unit for the MPA51 S02 is connected to the MPA via a 6-core cable. The operating unit displays operating status and it is used for making settings and retrieving user and service parameters. The individual keys can activate Set-up mode, Service mode or Info mode. The operating unit displays faults and can unlock the automatic control when a fault occurs.



Wiring diagram



**µP-controlled automatic burner
control**

MPA51 S02

DUNGS®
Combustion Controls

Switching capacity

Fuel valve Y1	230 VAC, 2 A
Fuel valve Y2	230 VAC, 2 A
Blower	DC, speed-controlled
- Supply from mains	230 VAC, 4 A
- Power of PWM interface	24 VDC to 31 VDC
- Control	PWM 4 kHz
- Speed detection	Hall sensor F/t digital, resolution 32 rec./min.
Temperature controller	230 VAC
Power + input	230 VAC
Power - input	230 VAC
Fault output	230 VAC, 1 A
Operating hours counter	230 VAC, 1 A
Safety chain	230 VAC, max. 8 A The safety chain is connected upstream of the second switch-off path (watchdog).
Air pressure monitor	24 VDC, 10 mA, 2-wire
Gas pressure monitor	24 VDC, 10 mA, 2-wire and PA

Flame monitor

Ionisation	
External light detector	> 0.8 mA
Switch-on sensitivity as per SZA	> 1.2 mA
Switch-off sensitivity in operation	> 1.4 mA

Ignition

Ignition output	230 VAC, 2 A
-----------------	--------------

Fault unlock

Remote unlock with key on separate operating and display module

Communication

	As per eBUS specification Layer 1/2: V1.2 Layer 7: V1.2
Controller communication PC service program	Connection for external eBUS controller CMPA Vision for Windows 95 Connection via eBUS PC interface

Size

Approx. 200 x 105 x 60 mm

Mounting position

Any

Ordering Data

Type MPA 51 S02
231 438 MPA S02 230 V / 50 Hz

Order No.

We reserve the right to make any changes in the interest of technical progress.

Head Offices and Factory
Karl Dungs GmbH & Co. KG
Siemensstraße 6-10
D-73660 Urbach, Germany
Telephone +49 (0)7181-804-0
Fax +49 (0)7181-804-166

Postal address
Karl Dungs GmbH & Co. KG
Postfach 12 29
D-73602 Schorndorf, Germany
e-mail info@dungs.com
Internet www.dungs.com