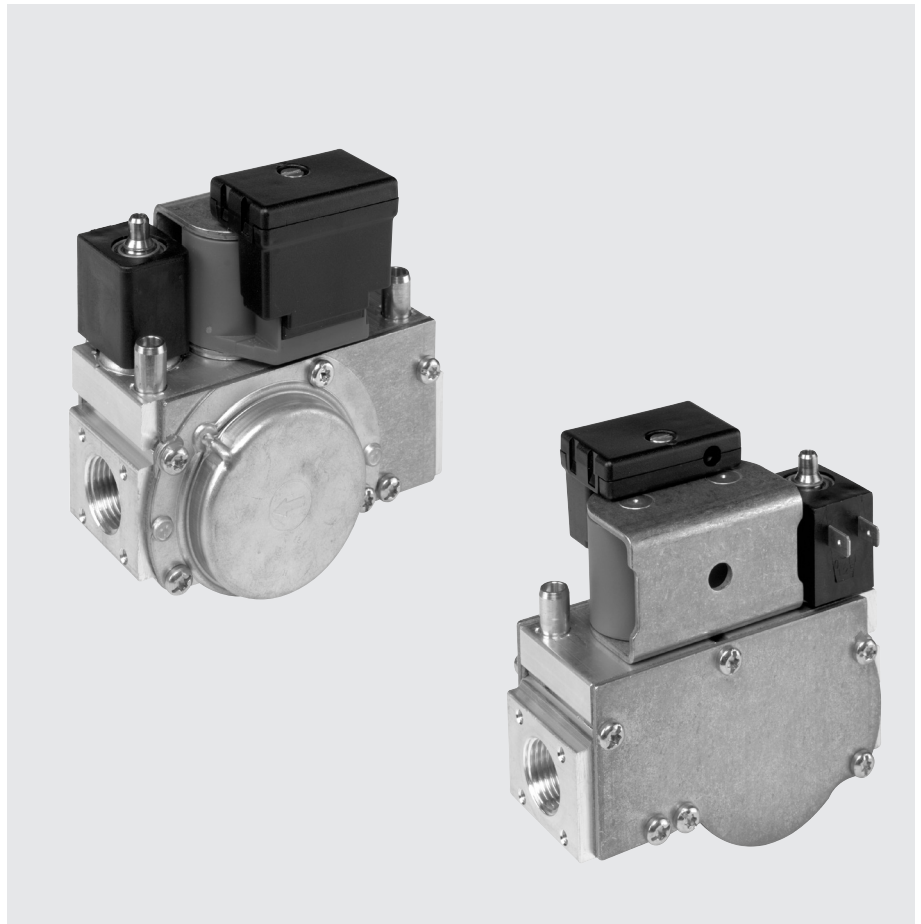


**GasBloc**  
**Multifunctional gas control**  
**Combined regulator and**  
**safety shut-off valves**  
**Electrically modulating**  
**GB-M(P) 055 D01**



**Two stage operating mode**  
**GB-(LEP)Z 055 D01**  
**3.02**



**Technical Description**

Multiple actuator to EN 126 comprising electro-magnetically controlled regulator unit for modulating or two stage mode:

- Modulator with adjustable min. and max. limiter
- Ignition gas, optional
- Constant volume flow using servo pressure regulator with servo regulator
- Max. operating pressure 65 mbar (6,5 kPa)
- Different variants according to application

**Application**

Suitable for gases to EN 437 and other gaseous inert media.

**Approvals**

EU type test approval as per EU Gas Appliance Directive.

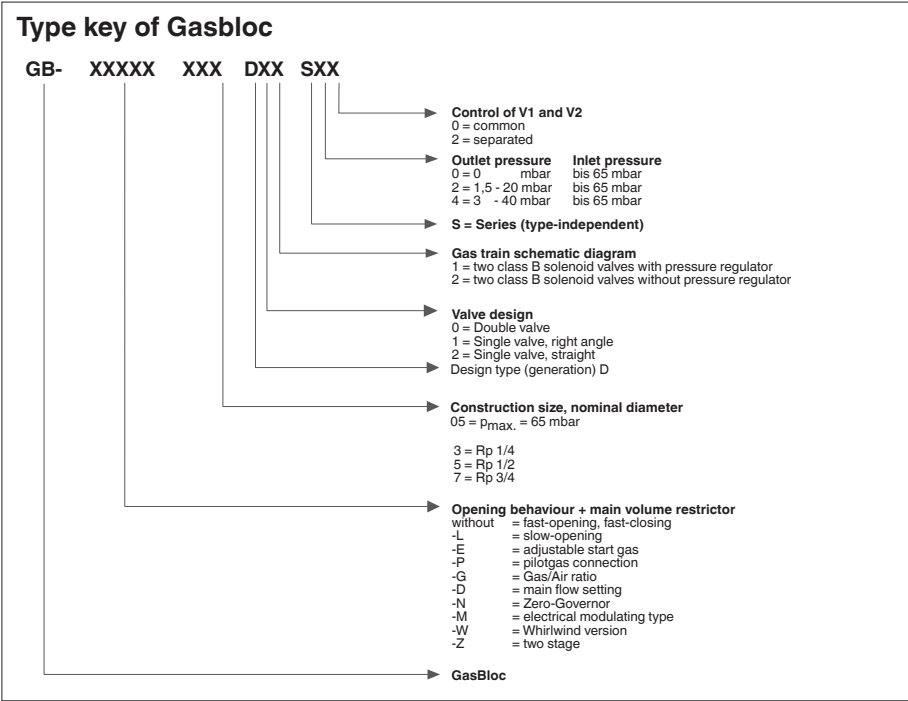
GB-M(P) 055 D01 CE-0085 CM 0036

GB-(LEP)Z 055 D01 CE-0085 CM 0036

Approvals in other important gas-consuming countries.

| Specification<br>Main types | electro-magnetically controlled servo pressure regulator | two stage adjustably servo-pressure regulator | Operating valve Solenoid valve [class] | Safety valve Solenoid valve [class] | minimum modulator current [mA] | maximum modulator current [mA] | two stage operating mode 230 V AC | min. and max. burner pressure adjustable | Dirt trap device | Ignition gas connection | Gas pressure switch | Line socket | MPA 109x |
|-----------------------------|----------------------------------------------------------|-----------------------------------------------|----------------------------------------|-------------------------------------|--------------------------------|--------------------------------|-----------------------------------|------------------------------------------|------------------|-------------------------|---------------------|-------------|----------|
| GB-M 055 D01                | ●                                                        | ---                                           | B                                      | B                                   | 50                             | 165                            | ---                               | ●                                        | ●                | ---                     | ○                   | ○           | ○        |
| GB-MP 055 D01               | ●                                                        | ---                                           | B                                      | B                                   | 50                             | 165                            | ---                               | ●                                        | ●                | ●                       | ○                   | ○           | ○        |
| GB-Z 055 D01                | ---                                                      | ●                                             | B                                      | B                                   | ---                            | ---                            | ●                                 | ---                                      | ---              | ○                       | ○                   | ○           | ○        |

● standard      ○ optional      --- not available



Description of main components

Pressure regulator and modulator

The pressure control unit and servo regulator compensates for pressure fluctuations in the supply network. This ensures a constant volume flow at constant injector pressure. The injector pressure can be regulated by controlling an electrical modulator between adjustable minimum and maximum values.

In the two-stage operating mode, the control toggles between the maximum and minimum values.

Solenoid valves

Solenoid valves as per EN 161, Class B. DC coils are protected against voltage transients.

Filter

Fine-meshed strainer to protect fitting.

Pilot gas

Pilot gas connection between V1 and V2.

Gas pressure switch  
Optional equipment

Monitors gas pressure on the inlet side for gas leakage protection. The pressure switch can be pre-adjusted and sealed to customer specifications.

Pressure instrument glands

On inlet and outlet sides

Solenoid valve modes

Mode 1

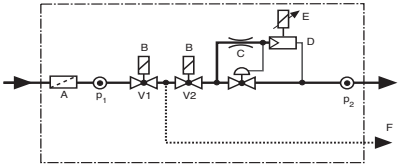
V1 and V2 can be activated and opened either together or separately.

Mode 2

V1 and V2 are opened and activated separately. Pilot gas outlet is released and V1 opens. When the flame has been detected, release is performed and V2 opens.

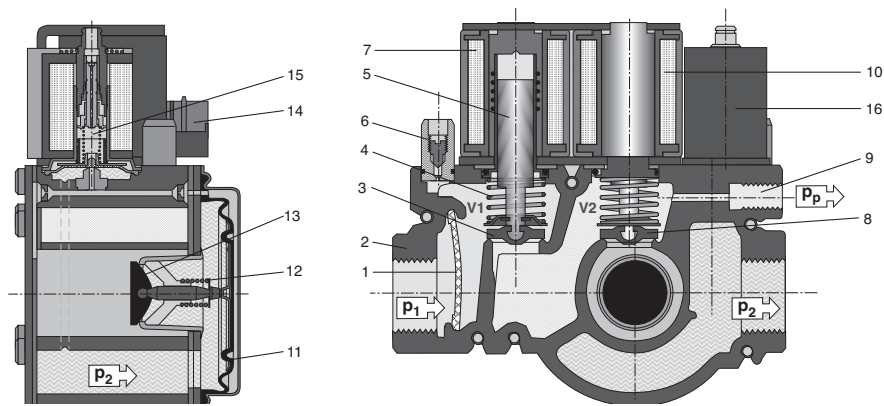
Block diagram

- A Filter
- B Automatic shut-off valves
- C Pressure regulator
- D Servo-pressure regulator
- E Electrical modulator
- F Pilot gas outlet
- p<sub>1</sub> Test nipple, inlet
- p<sub>2</sub> Test nipple, outlet



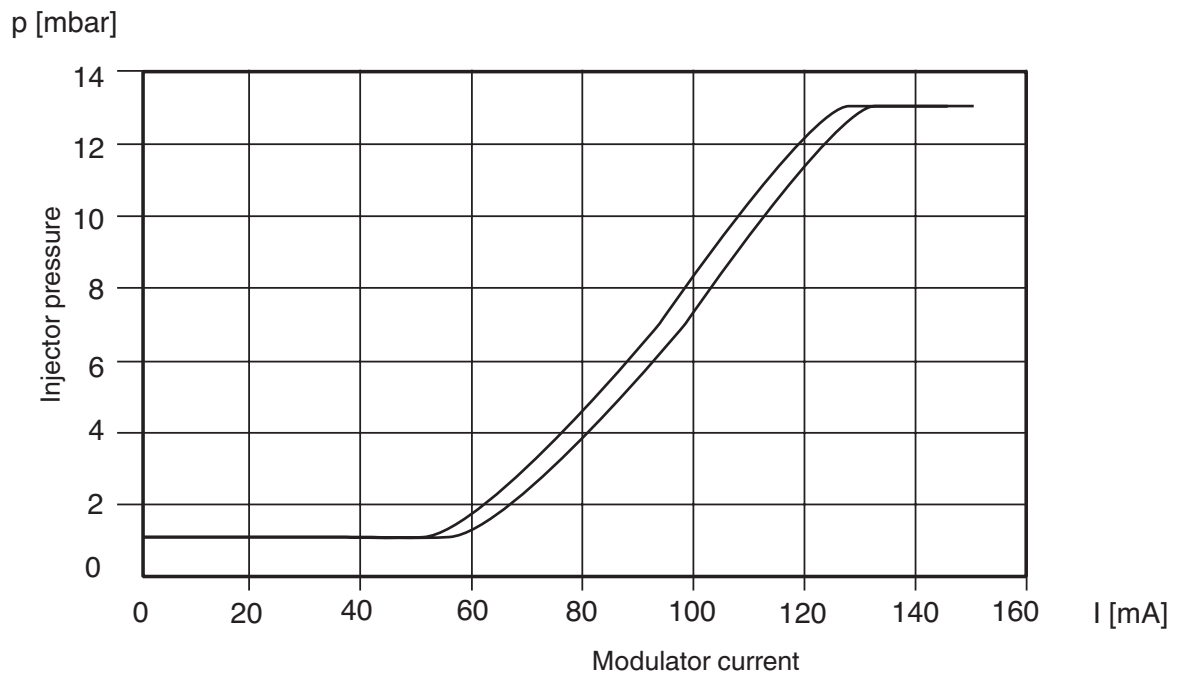
## Functional diagram GB-M(P) 055 D01

## Legend

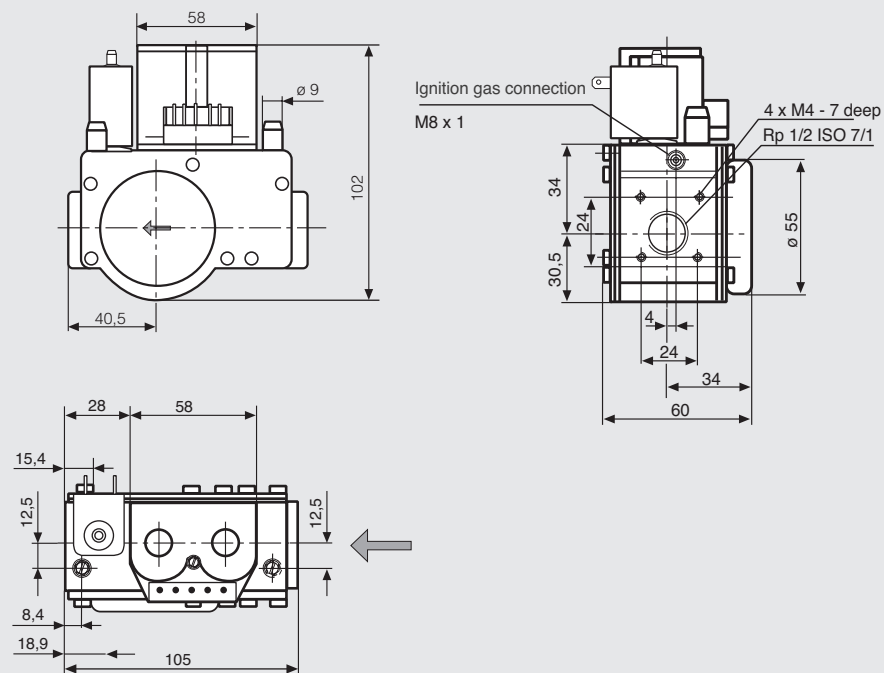


- 1 Fine-meshed strainer
- 2 Housing
- 3 Valve V1
- 4 Closing spring
- 5 Plunger V1
- 6 Test nipple
- 7 Solenoid V1
- 8 Valve V2
- 9 Ignition gas connection
- 10 Solenoid V2
- 11 Working diaphragm
- 12 Return spring
- 13 Operating valve
- 14 Electrical connection
- 15 Servo-pressure regulator
- 16 Modulator coil

## Current-pressure characteristic GB-M(P) 055 D01 for GB-(LEP)Z 055 D01: only on/off

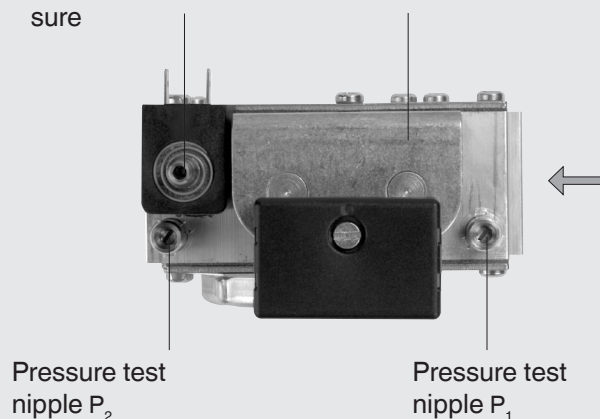


## Dimensions [mm]

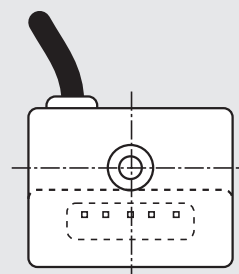


## Adjusting devices

Reference value setting  
min. and max. burner pres- Solenoid coils  
sure

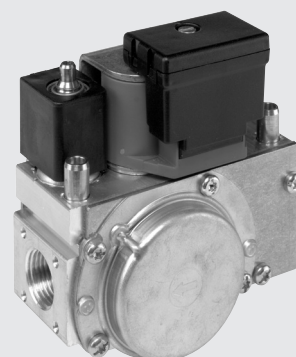


## Electrical connection



### Standard

Box with cable connection IP 40  
Molex Crimp System 3001



## Volume flow pressure difference characteristic GB-M(P) 055 D01 - electrical modulating as per DIN EN 126 GB-(LEP)Z 055 D01 - two stage as per DIN EN 126

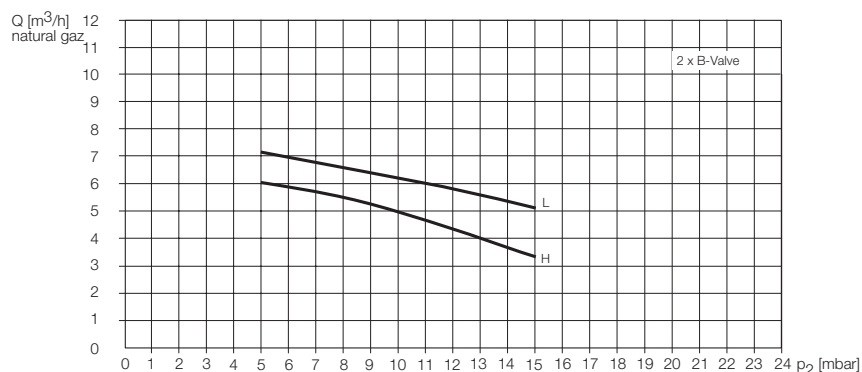
Inlet pressure range (mbar)

| 2nd gas family  | $P_{NOM.}$ | $P_{MAX.}$ | $P_{MIN.}$ |
|-----------------|------------|------------|------------|
| Natural gas-H-E | 20         | 25         | 17         |
| Natural gas-L   | 25         | 30         | 20         |

### Permissible deviation

Pressure regulator class C - 2nd gas family

$p_2 + 10\% - 15\%$  as per EN 126

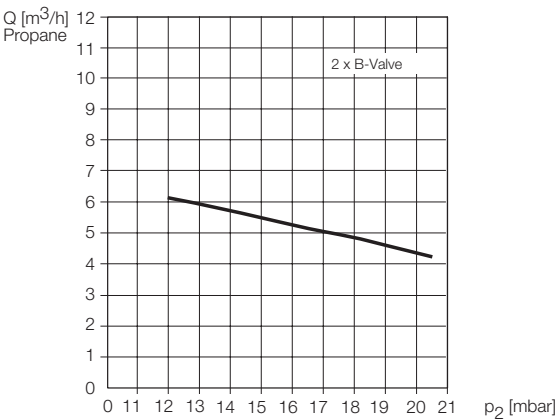


Volume flow pressure difference characteristic  
GB-M(P) 055 D01 - electrical modulating as per DIN EN 126  
GB-(LEP)Z 055 D01 - two stage as per DIN EN 126

Inlet pressure range (mbar)

| 3rd gas family | P <sub>NOM.</sub> | P <sub>MAX.</sub> | P <sub>MIN.</sub> |
|----------------|-------------------|-------------------|-------------------|
| Propane        | 37                | 45                | 25                |

**Permissible deviation**  
Pressure regulator class C - 3rd gas family  
  
p<sub>2</sub> ±10 % as per EN 126

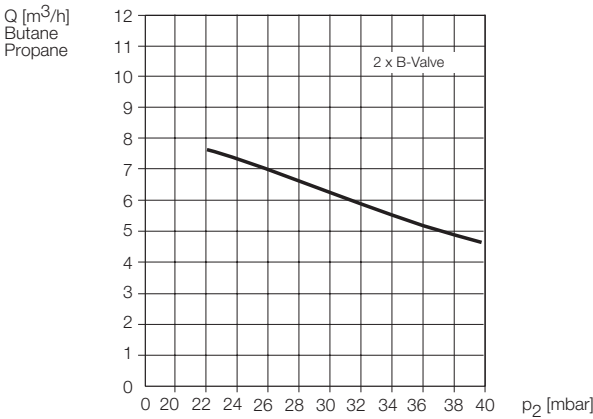


Volume flow pressure difference characteristic  
GB-M(P) 055 D01 - electrical modulating as per DIN EN 126  
GB-(LEP)Z 055 D01 - two stage as per DIN EN 126

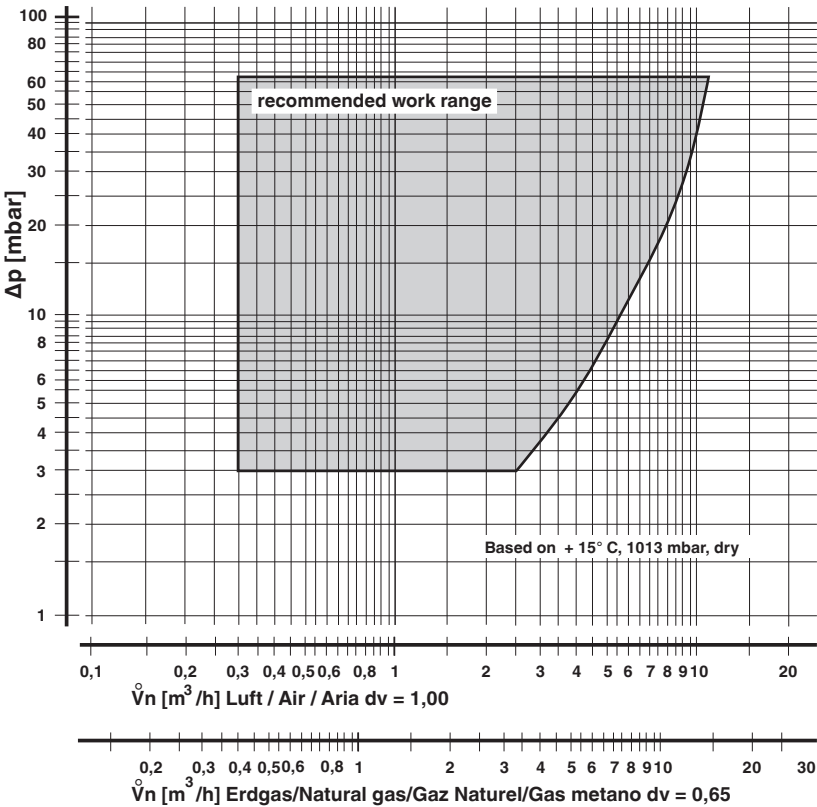
Inlet pressure range (mbar)

| 3rd gas family | P <sub>NOM.</sub> | P <sub>MAX.</sub> | P <sub>MIN.</sub> |
|----------------|-------------------|-------------------|-------------------|
| Butane/Propane | 50                | 57,5              | 42,5              |

**Permissible deviation**  
Pressure regulator class C - 3rd gas family  
  
p<sub>2</sub> ±10 % as per EN 126



Volume flow pressure difference characteristic  
GB-M(P) 055 D01  
GB-(LEP)Z 055 D01



**GasBloc**  
**Multifunctional gas control**  
**Combined regulator and**  
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**Electrically modulating**  
**GB-M(P) 055 D01**  
**Two stage operating mode**  
**GB-(LEP)Z 055 D01**

**DUNGS®**  
**Combustion Controls**

## Specifications

|                                    |                                                                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal diameter                   | DN 15                                                                                                                                        |
| Gas connection                     | Rp 1/2 ISO 7/1<br>G 3/4 DIN ISO 228 OD                                                                                                       |
| Flange with tube thread            | Rp 1/2 ISO 7/1 ID<br>G 3/4 DIN ISO 228 OD                                                                                                    |
| Pilot gas connection               | M8 x 1 ø 4 mm                                                                                                                                |
| Max. inlet pressure                | 65 mbar (6.5 kPa)                                                                                                                            |
| Outlet pressure range of regulator | 1.5 mbar (0.15 kPa) to 20 mbar (0.20 kPa) - neutral gas<br>3.0 mbar (3 kPa) to 37 mbar (3.7 kPa) - liquid gas                                |
| Nominal flow                       | $p_{2max} - p_{2min} \geq 3 \text{ mbar (0.3 kPa)}$<br>3,3 m³/h (Air) at $\Delta p$ 5 mbar (0.5 kPa), governed                               |
| Ambient temperature                | -15 °C to +70 °C<br>0 °C to +70 °C at LPG                                                                                                    |
| Automatic shut-off valves          | Class B as per EN 126                                                                                                                        |
| Group                              | 2                                                                                                                                            |
| Pressure regulator                 | Class C                                                                                                                                      |
| Degree of protection               | IP 40                                                                                                                                        |
| Opening time                       | Fast-opening < 1 s                                                                                                                           |
| Closing time                       | < 1 s                                                                                                                                        |
| Switch on duration                 | 100 % ED                                                                                                                                     |
| Voltage/frequency                  | ~(AC) 50 - 60 Hz 24 V +10 % - 15 %<br>~(AC) 50 - 60 Hz 230 V +10 % - 15 %                                                                    |
| Load of coil (24 V, 230 V)         | 2 x 5,5 VA                                                                                                                                   |
| Electrical Data of Modulator GB-M  | Operating voltage max. (DC) 28 V<br>Operating current max. 165 mA<br>Resistance at +20 °C 125 Ω                                              |
| Electrical Data of Modulator GB-Z  | Operating voltage 230 V AC<br>Operate only with Dungs connecting plug<br>Resistance at +20 °C 9800 Ω                                         |
| Electrical connection              | Molex System connection coil or<br>Option: Connection box with integrated cable<br>Modulator connection 6.3 x 0.8 mm<br>Flat plug-in sleeves |
| Optional equipment                 | Electrical connections in Rast 5<br>Automatic burner control MPA 109x<br>Gas pressure switch GW A5                                           |
| Installation position              | Solenoid at any position between vertical and horizontal axis.                                                                               |

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

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