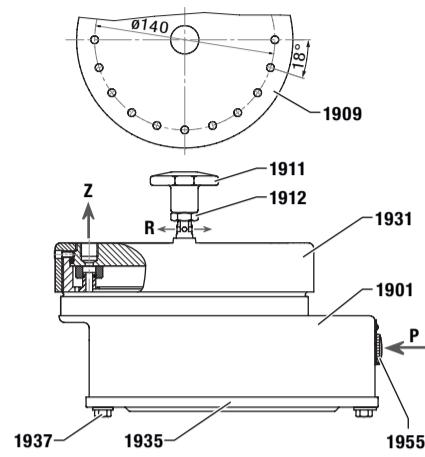


## Operating instructions - Rotary pneumatic controller 8287554

Document-No. EN8287354BA Revision 2

Keep documentation for future use!



1909 Round plate (control disc)

1911 Star knob

1912 Hexagon nut

1931 Screw piece

1901 Body

1955 Plug

1955 Body cover

1937 Tab screw (3x)

Z Valve connections 20 x G 1/4

R Venting port

P Control port G 1/8

Ex II 2 GD c IIB T85°C

TÜV 04 ATEX 2606

### Factory settings

Interval factory setting	adjustable 2 ... 200 seconds ca. 10 seconds
Pulse time factory setting	adjustable 30 ... 1.000 ms ca. 200 ms

### 1 About this documentation

This operation manual guides you to mount the rotary pneumatic controller, to commission, to maintain and to replace parts and assemblies.

#### 1.1 Documentation validity

This operation manual applies to pneumatic controller 8287554.0000.00000 with twenty valve connections.

This operation manual is intended for: distributor/operator, installers and service technicians.

#### 1.2 Structure of safety instructions

Safety instructions warn against dangerous situations and must be observed in particular. Safety instructions are structured as follows:

#### SIGNAL WORD

#### Type of hazard

Consequences of non-observance

→ Precautions necessary to avoid the hazard

#### 1.3 Hazard classes (ANSI Z535.6)

#### △ DANGER

Safety information indicates a hazardous situation with high risk which, if not avoided, will certainly result in death or (serious) injury.

#### △ WARNING

Safety information indicates a hazardous situation with moderate risk which, if not avoided, can cause death or severe injury.

#### △ CAUTION

Safety information indicates a hazardous situation on which, if not avoided, could result in minor or moderate injury.

#### NOTICE

Information indicates a hazardous situation which, if not avoided, could result damage to property.

### 1.4 Styles and symbols

•	list
→	instruction
1.	preset order of instructions
2.	
<b>1911</b>	part number (according to part list)
<b>1</b>	part number (document)

⚠ + DANGER / WARNING / CAUTION;  
NOTICE: embedded safety message

### 1.5 Intended use

The pneumatic controller is solely intended to control up to twenty dust filter cleaning valves. The pneumatic controller must only be operated with fluids that do not damage its constituent materials.

Consult our applications engineers if you have doubts whether the pneumatic controller is suitable for the intended purpose in permanent operation.

The pneumatic controller is suitable for use in these areas:

- areas with potentially explosive mixtures of gases and air (zones 1 and 2), or of dust and air (zones 21 and 22). This includes Equipment Category 2 and 3.
- in underground parts of mines and parts of surface installations of mines.

The Ex marking on the rating plate shows the operating limits.

The pneumatic controller is suitable for Group II gases and corresponds to article 4 (3) of directive 2014/68/EU (pressure equipment device directive).

### 1.6 Improper use

In the following cases it is prohibited to operate the pneumatic controller:

- The pneumatic controller is used outside the permitted operating limits. The permitted temperature and pressure ranges are exceeded.
- Damages to the pneumatic controller – e.g. cracks, deformation – were detected but the pneumatic controller remains in operation.
- Malfunctions were detected but the pneumatic controller remains in operation.
- The pneumatic controller has been modified without authorization of the manufacturer.
- The safety instructions of this documentation are not observed.

### 1.7 Obligations of distributor/operator

→ As distributor you are responsible that the pneumatic controller is mounted according to this operation manual. You are responsible that the operating limits are considered in designing the filter cleaning system.

→ Ensure compliance with applicable laws, directives, regulations.

→ Ensure compliance with the following demands before persons mount, maintain or replace the pneumatic controller:

- This documentation must be fully read and understood.
- This documentation must be available at any time.
- Regulations about occupational safety and safety engineering must be known.

### 2 General safety instructions

These safety instructions are only related to the single pneumatic controller. In combination with other plant components there may be other potential dangers, which must be taken into account by carrying out a risk analysis for the system.

→ Compare the details on the rating plate and the operating limits as shown in the datasheet to the operating data. The limits for the particular application must not be exceeded.

#### △ CAUTION

##### Injuries caused by moving parts

There is a danger of getting injured by moving parts, while the body cover is opened.

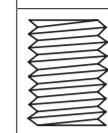
→ Depressurize the plant/system prior to open body cover.

### Residual risks



#### Weight of the pneumatic controller

Phases: transport, storage, assembly, maintenance, disposal  
Risk: falling off, tipping over  
Personal protection equipment (PPE): Protective footwear



Sharp threads and edges  
Phases: transport, assembly, maintenance, disposal  
Risk: Risk of cuts  
PPE: Protective gloves

### 7 Mounting

#### 7.1 Ensure potential equalisation

The ground connection can be realized by mounting the unit directly at **conducting parts of the system** by using the lateral thread holes of the body **1901** of the pneumatic controller.

Also it is possible to connect an earth wire with a minimum wire cross section of 4 mm<sup>2</sup> there. The earth wire must be protected against corrosion, torsion and self-untightening to provide a permanent contact.

Special precautions must be taken if any contacted part is made of light metal. Use for example a steel-spacer.

#### 7.2 Mount pneumatic controller

The pneumatic controller can be mounted in any position.

→ Make sure that there is enough free space for dismantling the pneumatic controller in case of maintenance.

→ NOTICE The step-by-step rotation moving of the star knob **1911** must not be interrupted by the laid pilot lines.

→ NOTICE Take care that the position of the round plate **1909** will not change while mounting fittings at the pilot connectors **Z**.

→ To achieve identical valve switching times, if possible use lines of identical length to connect them to **Z**.

→ Unused valve connections **Z** must be sealed with threaded plugs.

#### 7.3 Adjust switching time and interval

The switching time of the valves connected can be adjusted with the throttle valve fitted in the cylinder (beneath body cover).

- Screwing in throttle valve increases the switching time
- Unscrewing throttle valve screw decreases the switching time

This adjustment can only be carried out after removing the cover **1935**. **⚠ CAUTION** There is a danger of getting injured by moving parts. Depressurize the plant/system prior to open body cover.

The interval can be adjusted on the outside of the timer, using the screw behind the plug **1955** in the name plate.

### 8 Operating conditions

Pressure range	0.5 to 8 bar
Control pressure	2 to 8 bar
Fluid temperature	0°C to +70°C
–25°C bis +70°C for dry air	
Ambient temperature	0°C to +40°C
Control pressure supply (port <b>P</b> ):	Compressed air, filtered with pore size 5 to 10 µ, not lubricated.
Operating fluid (valve connections <b>Z</b> ):	contaminated compressed air

NOTICE Avoid significant pressure fluctuations – the interval of the pneumatic controller depends on the control pressure.

- reduction in pressure = shortening of interval
- increase in pressure = lengthening of interval

### 9 Commissioning

→ **⚠ CAUTION** Ensure before commissioning that initial electrical actuation cannot give rise to danger from fluid escaping from unsecured openings. Prime the valve slowly when commissioning. The control chamber of the controller must reach operating pressure level before availability.

**⚠ CAUTION** Any surge in pressure will cause the opening of all connected valves.

→ **⚠ WARNING** In explosive atmosphere the device must be connected to the system's earth wire.

→ **⚠ WARNING** After adjusting the interval the hole at the rating plate must be closed with the plug to preserve the ex-dust protection.

#### Manual override knob

The star knob **1911** can be used to switch the controller onwards manually during operation or when idle.

The mark on the star knob shows the position of the wiper arm.

