

**ATTENTION**

For safe operation of the positioner it is absolutely necessary to observe the operation instructions

The device may only be assembled and commissioned by specialist employees who are familiar with the assembly, commissioning and operation of this product. "Specialist employees" in terms of the installation and operation instructions are persons who, based on their professional training, knowledge, experience as well as their knowledge of the relevant standards, are able to evaluate the work assigned to them and recognise potential dangers.

**WARNING**

Risk of severe damage to property and personal injury as a result of improper installation.

- ▶ Observe the national safety regulations (e.g. VDE 0100) during assembly, commissioning and operation
- ▶ Disconnect the supply before connecting or disconnecting the device

**WARNING**

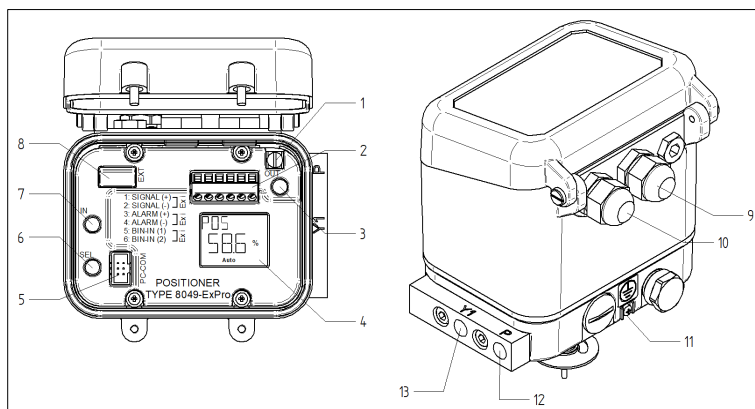
Risk of explosion as a result of improper installation.

- ▶ Observe the electrotechnical directives and the accident prevention directives

In Germany: VDE regulations and accident prevention regulations of the employer's liability insurance associations

For assembly and installation in explosive areas: EN 60079-14:3; VDE 0165 Part 1/8.98

- ▶ Observe the maximum permitted levels of the EU type-examination certificate
- ▶ Ensure that the positioner is only connected to suitable intrinsically safe sources.



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|---|--|
| 1. Ground terminal | 1. Connector for additional module connection Cable screw connection/ alternatively, Connector 2 |
| 2. Terminal block | 2. Cable screw connection/ alternatively, Connector 1 |
| 3. "OUT" button | 3. Ground terminal |
| 4. Display | 4. Supply air "P" connection |
| 5. Connector for PC connection (for SSCS USB connector \geq V3.0) | 5. Actuator "Y1" connection |
| 6. "SEL" button | |
| 7. "IN" button | |

Assembly on linear and part-turn actuators

- Apply the positioner incl. feedback pin and return spring on the adjustment kit
- For part-turn actuators turn the coupling until the rotation angle indicator points to 0° (for NO to 90°).
- Tighten the 3 threaded pins on the side of the fastening ring.
- Connect the "Y1" output with the valve actuator.

**ATTENTION**

Ensure that the compressed air connection is leak-tight as this will otherwise lead to the piezo valves in the positioner constantly operating.

- Open the positioner cover and establish the electrical connections.

**WARNING**

Risk of explosion caused by electrostatics.

- ▶ When operating in Zone 0, the cover may only be opened when the device is in a deenergised state.

- Connect the supply air (connection "P").
- Perform a self-adjustment on the positioner
- Close the cover of the positioner.

Manual adjustment

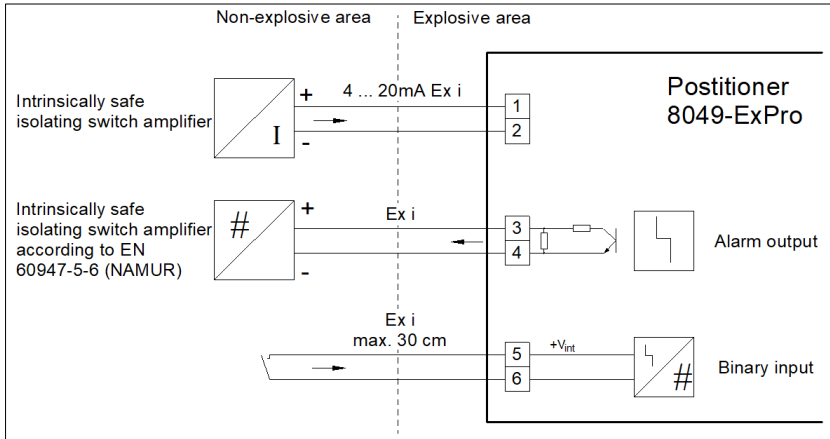
Switching to "Manual adjustment" mode is done by pressing the "OUT" button on the connection board for approx. three seconds.

The valve is opened or closed by pressing the "IN" (supply air to the actuator) or "OUT" (actuator is vented) buttons.

The manual override is switched off by briefly pressing the "IN" and "OUT" buttons. The valve returns to the starting position according to the control signal applied.

**NOTE**

If both buttons are pressed for too long (more than approx. 2 - 3 seconds), the positioner goes into the adjustment range.

Electrical connection

The positioner can also be configured to other control signals in the range of 4-20 mA.
 The load rating is approximately 8 V.
 The alarm output is designed in a two-wire method according to EN 60947-5-6 (NAMUR) for downstream switching amplifiers (e.g. steel 9170/20-12-11)
 Depending on the version of the positioner other connections may be used (e.g. plug connection). Observe the connection diagram inside of the cover.

Self-adaption mode**NOTE**

The self-adjustment of the mounted positioner has been performed in the factory. It is normally only required following a replacement or, potentially, after a valve repair.

After a new or replaced positioner has been mounted to the valve, it must be adjusted as follows.

- Press both "IN" and "OUT" buttons until "ADA" appears on the display.
- The valve opens and closes several times, and starts pulsing in different positions. Thereby the needed control parameters are determined.
- After completing the adjustment free from errors the positioner returns to control mode automatically.
- If an error occurs during the self adaption, the corresponding errorcode is shown on the display.

Operating states / Error messages

Display	Operating state	Anzeige	Betriebszustand		
	Automatic mode Display of the valve position in %		Self-adaption The positioner performs a self-adaption.		
Display	Error	Meaning	Display	Error	Meaning
	Controller not adapted	Perform self adaption.		Control error	The valve does not reach its target position
	Target value signal error	The control signal is outside the valid range		Other error	EEPROM error, valve path, switch figures, etc. exceeded

By using the "DeviceConfig" software, the user can determine which operating states and error notifications should be issued via the alarm output. Only the "control error" is issued as standard.

Technical data (excerpt)

Version	8049-ExPro-1	8049-ExPro-0
Allgemeine Ex-relevante Angaben		
Type examination certificate (ATEX)	BVS 17 ATEX E088	
Type examination certificate (IEC)	IECEX BVS 17.0080	
ATEX label	II 2G Ex ia IIC T4 Gb	II 2G Ex ia IIC T4 Ga
IEC label	Ex ia IIC T4 Gb	Ex ia IIC T4 Ga
Temperature ranges	Tamb = -10 ... +75°C	
Explosion-relevant information for control signal input		
Max. input voltage	Ui = DC 30V	Ui = DC 30V
Max. input current	Ii = 120 mA	Ii = 120 mA
Max. input power	Pi = 1000 mW	Pi = 1000 mW
Max. interior capacity	Ci = negligible	Ci = negligible
Max. interior inductivity	Li = negligible	Li = negligible

Version	8049-ExPro-1	8049-ExPro-0
Explosion-relevant information for alarm output (NAMUR EN 60947-5-6)		
Max. input voltage	Ui = DC 16V	Ui = DC 16V
Max. input current	Ii = 25 mA	Ii = 25 mA
Max. input power	Pi = 64 mW	Pi = 64 mW
Max. interior capacity	Ci = 11 nF	Ci = 11 nF
Max. interior inductivity	Li = negligible	Li = negligible
Explosion-relevant information for binary input		
Max. output voltage	Uo = DC 5,4V	Uo = DC 5,4V
Max. output current	Io = 1 mA	Io = 1 mA
Max. output power	Po = 2 mW	Po = 2 mW
Max. external capacity	Ce = 11 nF	Ce = 11 nF
Max. external inductivity	Le = negligible	Le = negligible