Valve actuator, electromotive AP 562/02 **5WG1 562-7AB02**

Product- and Applications Description

The valve actuator AP 562/02 is suitable for installation on radiator or zone valves. It receives the set commands via the KNX bus line from a room temperature controller.
The valve actuator with integrated bus coupling unit is connected with a bus connecting block to the KNX bus line. The power supply results from the bus voltage.

Constant mode of operating:
The valve adjustment works motor driven proportional. Any valve position between two parametrizable limit values can be reached. The current valve position is displayed by five LEDs at the front side of the device.

The device has two separate binary inputs, which can be used as a window contact or a presence contact. The respective values of the corresponding communication objects can be sent via the KNX bus e. g. for changing the operation modes (forced mode frost protection/comfort mode).

By monitoring the time interval between two set value telegrams sent out by the room temperature controller, whose function can be controlled. If the telegram failures an alarm telegram can be sent via the KNX bus and an emergency mode can be activated.

By using central heating boilers with a demand regulated flow temperature control the device can send a feedback regarding the current energy demand (current max. valve position) via a group address to the central heating boiler.

The valve actuator provides a valve protection mode, which is activated if the set value has not been changed during 7 days. Thereby the valve will be completely opened and closed one time to avoid blocking of the valve if it has not moved over a longer period of time.

The valve actuator can be used directly after connecting to the bus voltage. If there is still no application loaded, the valve will be opened - after an automatic adjustment - 25 % automatically.

Application program

12 A1 Valve Actuator 510E01, version 01 and higher

- Automatic adjustment, 3 diffenent modes selectable
- Valve protection mode
- Forced mode
- Maximum actuating value limitation (min/max)
- Adaption to valve characteristics
- Monitoring of actuating value
- Determination of the maximum actuat-
- ing value Binary input for window contact
- Binary input for presence contact
- Summer mode
- Transmit the current valve value

GAMMA *instabus*

Technical Product-Information

October 2012

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Installation notes

- This device can be unsed for fixed installation in dry indoor rooms.

WARNING

- The device may only be installed and commissioned by an authorised electrician.
- The device may only be used in connection with the named accessories, in particular the flush-type box.
- The prevailing safety and accident regulations should be observed.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Technical data

Power supply
- power supply: via the bus line
- Current drain max. 15 mA

Operating Elements
- Learning button for switching between normal operating mode and addressing mode for receiving the physical address
- Dismantling lever
- Locking mechanism of the cover as anti-theft protection with special key

Display Elements
- LED display for valve position with 5 red LED´s
- Red LED for indicating normal operating mode (LED off) and addressing mode (LED on); upon receiving the physical address it turns off automatically.

Connections
- KNX bus line: bus terminal block (red +/black -)
- E1 is used for window contacts (Yellow/Green). The window contacts can be connected directly and without additional supply voltage.
- E2 (White/Brown) is used for binary input for presence indicator or presence key. A presence indicator or key can be directly connected.

Mechanical Data
- Housing: plastic
- Outer dimensions (W x H x D): 82 x 50 x 65 mm
- Weight: approx. 260 g
- Length of connection cable: 0,80 m
- Run time: < 20 s/mm
- Set force: max. 120 N
- Max. stroke: 7,5 mm (linear movement)
- Included adapter rings is fitting for valves from:
  - Siemens
  - Danfoss RA
  - Heimeier
  - MNG
  - Schlösser ab 3/93
  - Honeywell
  - Braukmann
  - Dumser (Verteiler)
  - Reich (Verteiler)
  - Oventrop (M30 x 1,5)
  - Herb
  - Onda
- Detecting of the valve end positions: automatically
- Linearization of the characteristic of the valve: possible with software

Electrical safety
- protection (according to EN 60529): IP 21
- Overvoltage category (according to IEC 61140): III
- Bus: safety extra-low voltage SELV DC 24 V
- Device complies with: EN 50090-2-2

EMC requirements
Complies with EN 50090-2-2

Ambient conditions
- Climatic withstand capability: EN 50090-2-2
- Ambient operating conditions: 0 °C to + 50 °C
- Operating temperature, flow temperature max. 80°C
- Storage temperature: - 25 ... + 70 °C
- Relative humidity (not condensing): 5 % to 93 %
- protection class: III

Markings
KNX, *EIB*, CE

CE mark
- In accordance with the EMC guideline (residential and functional buildings), low voltage guideline

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Location of the Display and Operating Elements

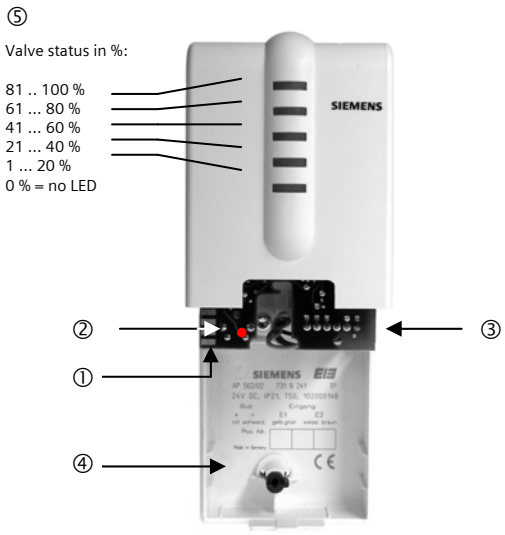

figure 1: Location of the Display and Operating Elements

1 Learning button for switching between normal operating mode and addressing mode for receiving the physical address
2 LED for indicating normal operating mode (LED off) and addressing mode (LED on); upon receiving the physical address it turns off automatically.
3 Dismantling lever
4 Locking mechanism of the cover as anti-theft protection with special key
5 LED display for valve position with 5 red LED´s

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Mounting and Wiring

The learning button (1), the learning LED (2) and the red dismantling lever (3) are accessible after opening the cover of the housing.
The locking mechanism (4) of the cover can be locked and unlocked with the enclosed special key by turning it by 90° (see figure 2).

The valve actuator AP 562/02 is suitable for installation on radiator or zone valves.

Mounting:
- Choose a suitable enclosed adapter ring
- Tighten the adapter ring (figure 3.1) (hand-tight is sufficient)
- Bring the device in the upright mounting position see figure 3.2)
- Shift the device on the adapter ring until it snaps in hearably.

Dismantling:
- Open the cover of the housing
- Press the red lever towards left-hand (see figure 3.3)
- Pull off the valve actuator

The valve position is displayed by the 5 LEDs at the front side of the device. Depending on which LED is on, the valve is opened like shown at figure 1.

Address assignment

- Press the learning button (1, figure 1) on the device to initiate the assignment of the physical address to the device.
- The programming LED (2, figure 1) turns on to indicate the programming mode. Upon receiving the physical address the device automatically returns to normal operating mode and the LED turns off.

Dimension drawing

Dimensions in mm

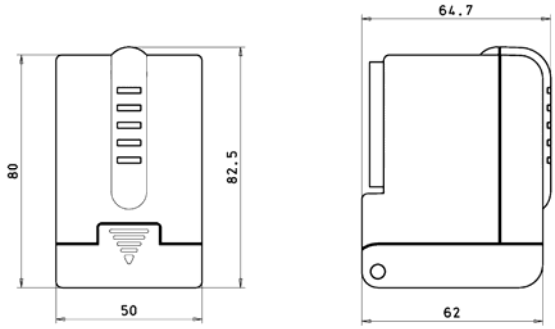


figure 2


figure 3.1


figure 3.2


figure 3.3

General Notes

- The operating instructions must be handed over to the client.
- Any faulty device is to be sent together with a return delivery note of the local Siemens office.
- For any technical questions, please consult:

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