

# MOUNTING AND OPERATING INSTRUCTIONS



**EB 5757 EN**

Translation of original instructions



**TROVIS 5757-3 Electric Actuator with Process Controller**  
for domestic hot water heating

Firmware version 2.20



Edition January 2023

## Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in these instructions are for illustration purposes only. The actual product may vary.

- ➔ For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- ➔ If you have any questions about these instructions, contact SAMSON's After-sales Service (aftersalesservice@samsongroup.com).



Documents relating to the device, such as the mounting and operating instructions, are available on our website at [www.samsongroup.com](http://www.samsongroup.com) > **Service & Support > Downloads > Documentation.**

## Definition of signal words

### **DANGER**

*Hazardous situations which, if not avoided, will result in death or serious injury*

### **WARNING**

*Hazardous situations which, if not avoided, could result in death or serious injury*

### **NOTICE**

*Property damage message or malfunction*

### **Note**

*Additional information*

### **Tip**

*Recommended action*

|          |                                                      |            |
|----------|------------------------------------------------------|------------|
| <b>1</b> | <b>Safety instructions and measures .....</b>        | <b>1-1</b> |
| 1.1      | Notes on possible severe personal injury .....       | 1-5        |
| 1.2      | Notes on possible personal injury .....              | 1-5        |
| 1.3      | Notes on possible property damage .....              | 1-6        |
| <b>2</b> | <b>Markings on the device .....</b>                  | <b>2-1</b> |
| 2.1      | Nameplate .....                                      | 2-1        |
| 2.2      | Firmware versions .....                              | 2-2        |
| <b>3</b> | <b>Design and principle of operation .....</b>       | <b>3-1</b> |
| 3.1      | Communication .....                                  | 3-3        |
| 3.2      | Technical data .....                                 | 3-4        |
| 3.3      | Dimensions .....                                     | 3-5        |
| <b>4</b> | <b>Shipment and on-site transport .....</b>          | <b>4-1</b> |
| 4.1      | Accepting the delivered goods .....                  | 4-1        |
| 4.2      | Removing the packaging from the actuator .....       | 4-1        |
| 4.3      | Transporting the actuator .....                      | 4-1        |
| 4.4      | Lifting the actuator .....                           | 4-1        |
| 4.5      | Storing the actuator .....                           | 4-1        |
| <b>5</b> | <b>Installation .....</b>                            | <b>5-1</b> |
| 5.1      | Installation conditions .....                        | 5-1        |
| 5.2      | Preparation for installation .....                   | 5-1        |
| 5.3      | Mounting the actuator .....                          | 5-1        |
| 5.4      | Installing the control valve into the pipeline ..... | 5-2        |
| 5.5      | Installing the accessories .....                     | 5-2        |
| 5.6      | Electrical connection .....                          | 5-3        |
| <b>6</b> | <b>Operation .....</b>                               | <b>6-1</b> |
| 6.1      | Device overview and operating controls .....         | 6-1        |
| 6.2      | Indication with LEDs .....                           | 6-1        |
| 6.3      | Serial interface .....                               | 6-1        |
| <b>7</b> | <b>Start-up and configuration .....</b>              | <b>7-1</b> |
| 7.1      | Initializing the actuator .....                      | 7-1        |
| 7.2      | Configuring the actuator .....                       | 7-1        |
| <b>8</b> | <b>Operation .....</b>                               | <b>8-1</b> |
| 8.1      | Closed-loop control .....                            | 8-1        |
| 8.2      | LED blinking pattern .....                           | 8-1        |
| 8.3      | Manual mode .....                                    | 8-3        |
| 8.4      | Operation using memory pen .....                     | 8-4        |

## Contents

|           |                                        |             |
|-----------|----------------------------------------|-------------|
| 8.4.1     | Copying function .....                 | 8-5         |
| 8.4.2     | Command mode .....                     | 8-5         |
| 8.5       | Readings in TROVIS-VIEW .....          | 8-6         |
| 8.5.1     | Operating values .....                 | 8-6         |
| 8.5.2     | Operating states .....                 | 8-6         |
| 8.5.3     | Functions .....                        | 8-7         |
| 8.5.4     | Status messages .....                  | 8-7         |
| 8.5.5     | Statistics .....                       | 8-8         |
| <b>9</b>  | <b>Malfunctions .....</b>              | <b>9-1</b>  |
| 9.1       | Troubleshooting .....                  | 9-1         |
| 9.2       | Error indication by LEDs .....         | 9-2         |
| 9.3       | Emergency action .....                 | 9-3         |
| <b>10</b> | <b>Servicing.....</b>                  | <b>10-1</b> |
| <b>11</b> | <b>Decommissioning .....</b>           | <b>11-1</b> |
| <b>12</b> | <b>Removal .....</b>                   | <b>12-1</b> |
| <b>13</b> | <b>Repairs .....</b>                   | <b>13-1</b> |
| 13.1      | Returning the actuator to SAMSON ..... | 13-1        |
| <b>14</b> | <b>Disposal.....</b>                   | <b>14-1</b> |
| <b>15</b> | <b>Certificates .....</b>              | <b>15-1</b> |
| <b>16</b> | <b>Annex.....</b>                      | <b>16-1</b> |
| 16.1      | Accessories .....                      | 16-1        |
| 16.2      | After-sales service .....              | 16-2        |
| 16.3      | Configuration list.....                | 16-3        |
| 16.4      | Customer-specific data .....           | 16-5        |

# 1 Safety instructions and measures

## Intended use

The TROVIS 5757-3 Electric Actuator with Process Controller is an electric actuator with an integrated digital controller. It is designed for operating a mounted globe valve. In combination with the valve, the actuator is used to control the temperature of liquids or vapors in the pipeline. The electric actuator with process controller is suitable for throttling service in DHW applications.

The actuator is designed to operate under exactly defined conditions (e.g. thrust, travel). Therefore, operators must ensure that the actuator is only used in operating conditions that meet the specifications used for sizing the actuator at the ordering stage. In case operators intend to use the actuator in applications or conditions other than those specified, contact SAMSON.

SAMSON does not assume any liability for damage resulting from the failure to use the device for its intended purpose or for damage caused by external forces or any other external factors.

➔ Refer to the technical data for limits and fields of application as well as possible uses. See the 'Design and principle of operation' section.

## Reasonably foreseeable misuse

The actuator is not suitable for the following applications:

- Use outside the limits defined during sizing and by the technical data

Furthermore, the following activities do not comply with the intended use:

- Use of non-original spare parts
- Performing service and repair work not described

## Qualifications of operating personnel

The actuator must be mounted, started up, serviced and repaired by fully trained and qualified personnel only; the accepted industry codes and practices must be observed. According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

## **Safety instructions and measures**

### **Personal protective equipment**

No personal protective equipment is required for the direct handling of the electric actuator with process controller. Work on the control valve may be necessary when mounting or removing the device.

- ➔ Observe the requirements for personal protective equipment specified in the valve documentation.
- ➔ Check with the plant operator for details on further protective equipment.

### **Revisions and other modifications**

Revisions, conversions or other modifications of the product are not authorized by SAMSON. They are performed at the user's own risk and may lead to safety hazards, for example. Furthermore, the product may no longer meet the requirements for its intended use.

### **Safety features**

The limit switches switch off the motor in the end positions.

### **Warning against residual hazards**

The electric actuator with process controller has a direct influence on the valve when it is mounted on the valve. To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the control valve by the process medium, the operating pressure, the signal pressure or by moving parts by taking appropriate precautions. Plant operators and operating personnel must observe all hazard statements, warnings and caution notes in these mounting and operating instructions, especially for installation, start-up and service work.

### **Responsibilities of the operator**

Operators are responsible for proper use and compliance with the safety regulations. Operators are obliged to provide these mounting and operating instructions as well as the referenced documents to the operating personnel and to instruct them in proper operation. Furthermore, operators must ensure that operating personnel or third parties are not exposed to any danger.

### **Responsibilities of operating personnel**

Operating personnel must read and understand these mounting and operating instructions as well as the referenced documents and observe the specified hazard statements, warnings and caution notes. Furthermore, operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

### **Referenced standards, directives and regulations**

Devices with a CE marking fulfill the requirements of the following Directives:

- 2014/30/EU
- 2014/35/EU
- 2011/65/EU

Devices with a UKCA marking fulfill the requirements of the following Regulations:

- SI 2016 No. 1091 (The Electromagnetic Compatibility Regulations 2016)
- SI 2016 No. 1101 (The Electrical Equipment (Safety) Regulations 2016)
- SI 2012 No. 3032 (The Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment Regulations 2012)

The 'Certificates' section contains these declarations of conformity. The electric actuator with process controller is designed for use in low-voltage installations.

➔ For wiring, maintenance and repair, observe the relevant safety regulations.

### Referenced documentation

The documentation for the TROVIS 5757-3 Electric Actuator with Process Controller consists of the Mounting and Operating Instructions EB 5757 and the Configuration Manual

► KH 5757.

The following documents also apply in addition to these mounting and operating instructions:

- EB 3135-1 for Type 2488 Pressure-independent Control Valve (PICV)
- EB 3136 for Type 2488 N Pressure-independent Control Valve (PICV)
- EB 5861 for Type 3260 Three-way Valve
- EB 5863 for Type 3226 Three-way Valve
- EB 5866 for Type 3222 Globe Valve
- EB 5867 for Type 3222 N Globe Valve
- EB 5868 for Type 3213 Globe Valve

## 1.1 Notes on possible severe personal injury

### DANGER

#### **Risk of fatal injury due to electric shock.**

- ➔ Before connecting wiring and performing any work on the device, disconnect the supply voltage and protect it against unintentional reconnection.
- ➔ Only use power interruption devices that can be protected against unintentional reconnection of the power supply.
- ➔ Do not open the actuator housing.

The electric actuator with process controller is protected against dripping water falling at an angle (IP 42).

- ➔ Avoid sprays and jets of water.

The wires of the switching output L' may be live after the supply voltage has been connected.

- ➔ Do not touch the wires of the switching output L'.
- ➔ When the switching output is not used, deactivate it in function F16 ('Not active' setting ► KH 5757). Insulate the wire ends.

## 1.2 Notes on possible personal injury

No personal injury can be caused by moving parts.

### WARNING

#### **Risk of personal injury through incorrect operation, use or installation as a result of information on the actuator being illegible.**

Over time, markings, labels and nameplates on the actuator may become covered with dirt or become illegible in some other way. As a result, hazards may go unnoticed and the necessary instructions not followed. There is a risk of personal injury.

- ➔ Keep all relevant markings and inscriptions on the device in a constantly legible state.
- ➔ Immediately renew damaged, missing or incorrect nameplates or labels.

## 1.3 Notes on possible property damage

### NOTICE

**Risk of actuator damage due to the supply voltage exceeding the permissible tolerances.**

The TROVIS 5757-3 Electric Actuator with Process Controller is designed for use according to regulations for low-voltage installations.

→ Observe the permissible tolerances of the supply voltage.

**Risk of actuator damage due to excessively high tightening torques.**

The connection of the TROVIS 5757-3 Electric Actuator with Process Controller must be tightened with certain torques. Excessive tightening torques lead to parts wearing out more quickly.

→ Observe the specified tightening torques.

**Risk of damage to the actuator by moving the actuator stem too far.**

The actuator stem of the electric actuators can be adjusted manually.

→ Move the actuator stem only as far as the bottom or top end position.

**Malfunction due to a configuration that does not meet the requirements of the application.**

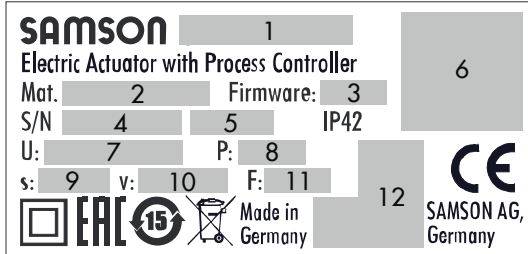
The electric actuator with process controller is configured for the specific application by setting configuration items and parameters.

→ Perform the configuration for the specific application during start-up and after a reset to default settings.

## 2 Markings on the device

### 2.1 Nameplate

The nameplate shown was up to date at the time of publication of this document. The nameplate on the device may differ from the one shown.



- 1 Type designation
- 2 Material number
- 3 Firmware version
- 4 Serial number
- 5 Date of manufacture
- 6 Data Matrix code
- 7 Supply voltage; power line frequency
- 8 Power consumption
- 9 Rated travel
- 10 Stroking speed
- 11 Thrust
- 12 Other mark of conformity

2.2 Firmware versions

| Firmware revisions |                                                                                                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Old                | New                                                                                                                                                                                                                                     |
| 1.0x               | 2.0x/2.1x                                                                                                                                                                                                                               |
|                    | Additional features: <ul style="list-style-type: none"><li>– Switching output (see Annex).</li><li>– Data logging function (see Configuration Manual ► KH 5757).</li><li>– Command mode (see Configuration Manual ► KH 5757).</li></ul> |
| 2.0x/2.1x          | 2.20                                                                                                                                                                                                                                    |
|                    | Extension of function of switching output (F16) to additional setting option "Circulation pump (heating) reversed" (see Annex and Configuration Manual ► KH 5757).                                                                      |
|                    | New pump protection function (F17) (see Annex and Configuration Manual ► KH 5757).                                                                                                                                                      |

### 3 Design and principle of operation

The TROVIS 5757-3 Electric Actuator with Process Controller is an electric actuator with an integrated digital controller. It can be mounted on SAMSON Types 3213, 3222, 3222 N, 2488 and 3267 Valves (DN 15 to 25) as well as special versions of Type 3260 and Type 3226 Valves.

## Design

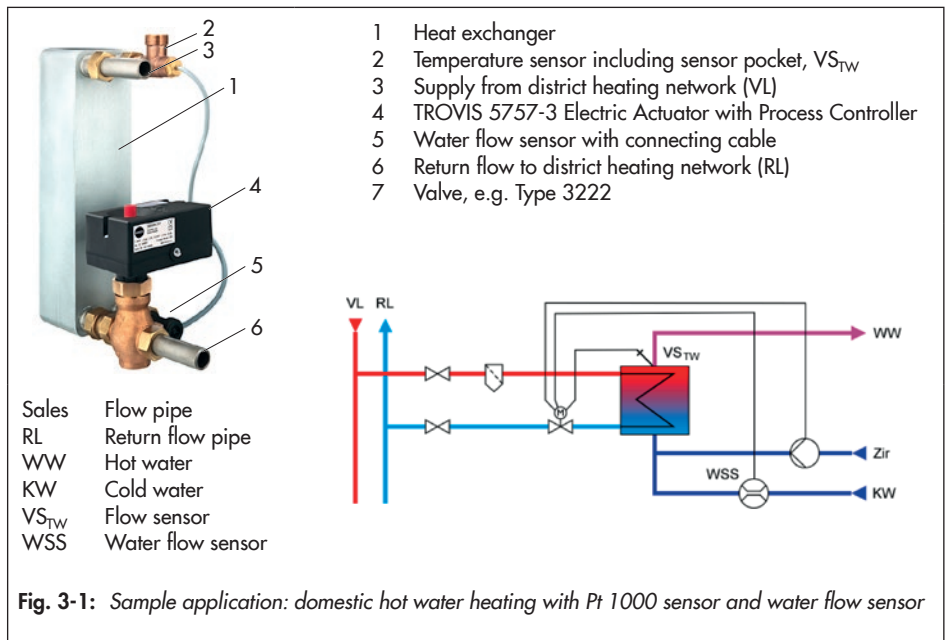
➔ See Fig. 3-1 and Fig. 3-2.

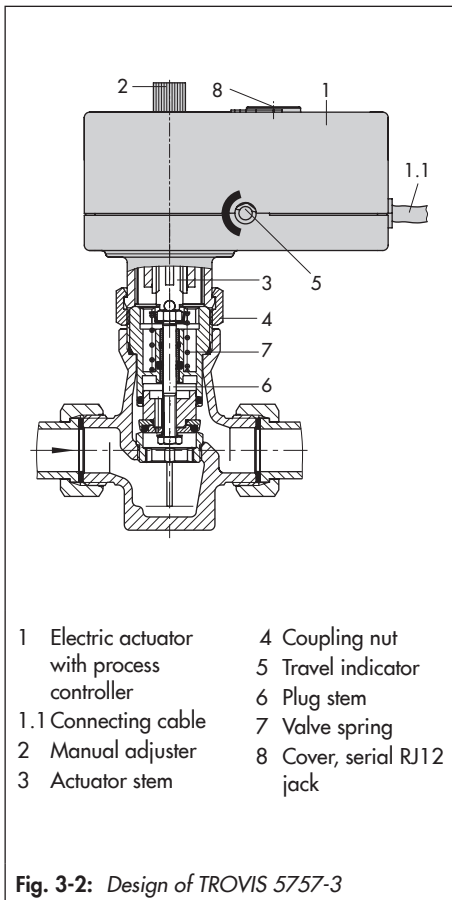
The actuator is mounted onto the valve using a coupling nut (4). When the actuator stem extends, the globe valve is closed, opposing

the force of the valve spring (7). When the actuator stem retracts, the valve is opened as the plug stem (6) follows the motion of the return spring.

When connected to a three-way mixing valve, the extending actuator stem causes the valve (**A** → **AB**) to open.

The output signal of the controller functions as a three-step signal on the motor of the actuator and is transferred over the connected gear to the actuator stem (3) and used as the stroke. The motor is switched off by torque-dependent switches when an end position is reached or in case the motor is overloaded.





- |                                             |                           |
|---------------------------------------------|---------------------------|
| 1 Electric actuator with process controller | 4 Coupling nut            |
| 1.1 Connecting cable                        | 5 Travel indicator        |
| 2 Manual adjuster                           | 6 Plug stem               |
| 3 Actuator stem                             | 7 Valve spring            |
|                                             | 8 Cover, serial RJ12 jack |

### Manual adjuster

The travel can be adjusted using the manual adjuster when the actuator is in the de-energized state (see the 'Operation' section).

### Inputs

The electric actuator with process controller has an input for a fast-response Pt 1000 temperature sensor. It can function as a fixed

set point controller with this input. Alternatively, the electric actuator can be used for domestic hot water in instantaneous heating system. In this case, either a water flow sensor or a flow switch must be used for fast detection. The flow switch recognizes when the hot water is being tapped. The water flow sensor can additionally record the quantity of hot water being tapped. An optimization function adapts the control to the changing network conditions.

In addition to the temperature sensor input, the actuator has a 0/4 to 20 mA current input. This can be used either instead of the temperature sensor (measured value) or to connect an external set point.

The binary input can be used to change between the set points W1 and W2.

### Output

The switching output can be configured as either a pump output (circulation pump for the DHW circuit or heating circuit), a fault alarm output or an output to report when hot water is tapped.

### Setting

The set point of the digital controller is set to 60 °C and can be changed in TROVIS-VIEW using a connecting cable connected to the RS-232 interface (serial interface) on the actuator or using a memory pen (see section 3.1). The controlled variable, control behavior and the actuator's direction of action can also be changed in TROVIS-VIEW.

All the functions and parameters are listed in the Annex.

## 3.1 Communication

### Serial interface

The actuator is fitted with an RS-232 serial interface. This allows communication with TROVIS-VIEW using SSP protocol.

### Configuration

The actuator is configured using the TROVIS-VIEW software that enables the user to easily configure the controller as well as view process parameters online.

---

**i Note**

*TROVIS-VIEW can be downloaded free of charge from our website at*

► [www.samsongroup.com](http://www.samsongroup.com) > Service & Support > Downloads > TROVIS-VIEW. Further information on TROVIS-VIEW (e.g. system requirements) is available on our website and in the Data Sheet ► T 6661 as well as the Operating Instructions ► EB 6661.

---

## 3.2 Technical data

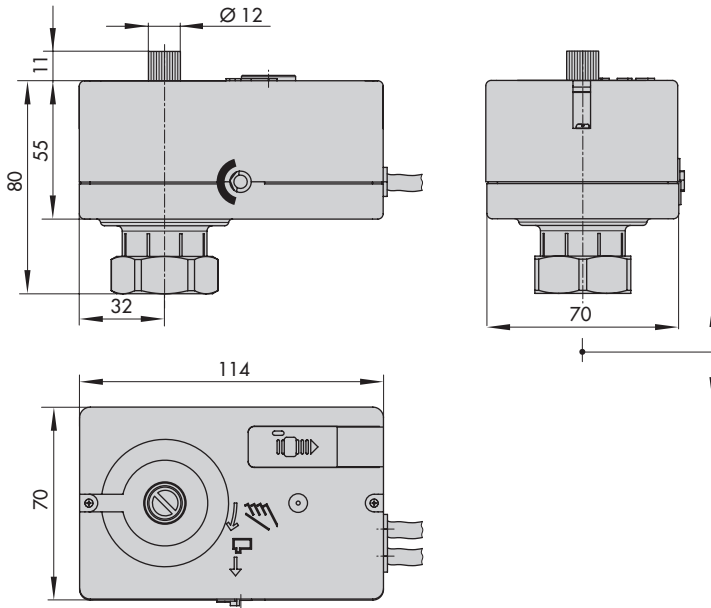
**Table 3-1:** *Technical data · TROVIS 5757-3*

| TROVIS 5757-3                                |                                              |
|----------------------------------------------|----------------------------------------------|
| Connection to valve                          | Force-locking                                |
| Rated travel                                 | 6 mm                                         |
| Manual override                              | Yes                                          |
| Transit time for rated travel                | 20 s                                         |
| Thrust                                       | 300 N                                        |
| Supply voltage                               | 230 V (±10 %), 50 Hz                         |
| Power consumption                            | Approx. 4 VA                                 |
| Sensor input                                 | Pt 1000                                      |
| Current input                                | 0/4 to 20 mA                                 |
| Binary input BI1 <sup>1)</sup>               | Set point switchover (W1 and W2)             |
| Binary input BI2 <sup>1)</sup>               | Flow switch                                  |
| Input for water flow sensor                  | 530 pulses/l, measuring range 1 to 30 l/min  |
| Switching output                             | 230 V, 50 Hz, max. 1 A                       |
| Permissible temperature ranges <sup>1)</sup> |                                              |
| Ambient                                      | 0 to 50 °C                                   |
| Storage                                      | -20 to +70 °C                                |
| Degree of protection                         | IP 42 according to EN 60529                  |
| Class of protection                          | II according to EN 61140                     |
| Device safety                                | According to EN 61010-1                      |
| Noise immunity                               | According to EN 61000-6-2 and EN 61326-1     |
| Noise emission                               | According to EN 61000-6-3 and EN 61326-1     |
| Conformity                                   | <b>CE · EAC</b>                              |
| Materials                                    |                                              |
| Housing                                      | Plastic (PPO with glass fiber reinforcement) |
| Coupling nut M32x1.5                         | Brass                                        |
| Weight                                       | Approx. 0.7 kg                               |

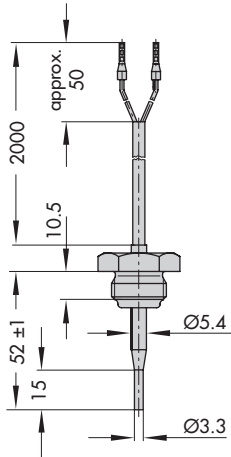
<sup>1)</sup> Recommendation: use devices with gold contacts when using relays.

<sup>2)</sup> The permissible medium temperature depends on the valve on which the electric actuator with process controller is mounted. The limits in the valve documentation apply.

### 3.3 Dimensions

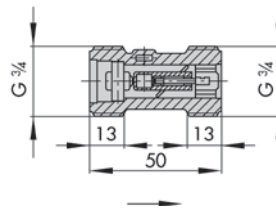


**Fig. 3-3:** Dimensions in mm · Electric actuator with process controller



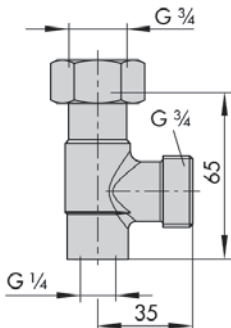
**Type 5207-0060 Pt 1000 Sensor**

Time response:  $t_{0.5} < 1$  s,  
 $t_{0.9} < 3$  s; in water 0.4 m/s  
 PN 16  
 Max. medium temperature: 90 °C



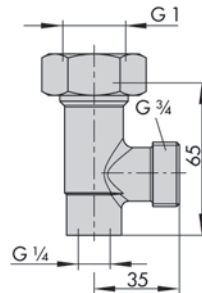
**Water flow sensor with extension cable**

Order no. 1400-9246  
 Measuring range 1 to 30 l/min,  
 DN 10, PN 10, IP 54  
 Max. medium temperature 70 °C  
 Extension cable length: 2 m



**Sensor pocket (including gasket) for heat exchanger with G 3/4**

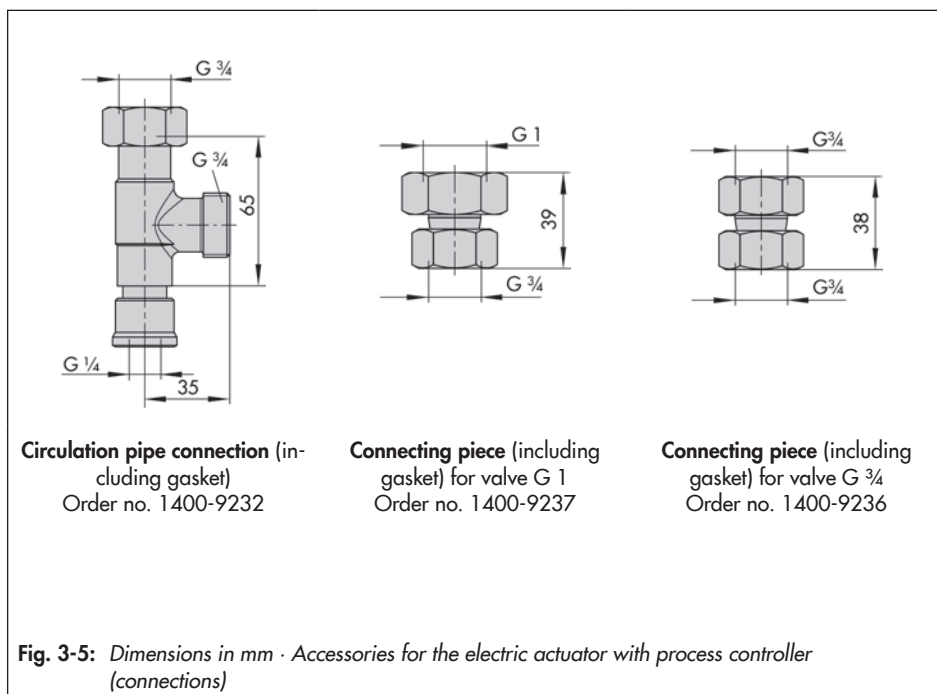
Order no. 1400-9249



**Sensor pocket (including gasket) for heat exchanger with G 1**

Order no. 1400-9252

**Fig. 3-4:** Dimensions in mm · Accessories for the electric actuator with process controller (sensors)





## 4 Shipment and on-site transport

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### 4.1 Accepting the delivered goods

After receiving the shipment, proceed as follows:

1. Compare the shipment received with the delivery note.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).

### 4.2 Removing the packaging from the actuator

#### **i Note**

*Do not remove the packaging until immediately before mounting and start-up.*

1. Remove the packaging from the electric actuator.
2. Check scope of delivery (see Fig. 4-1).
3. Dispose of the packaging in accordance with the valid regulations.

- |    |                                                         |
|----|---------------------------------------------------------|
| 1x | TROVIS 5757-3 Electric Actuator with Process Controller |
| 1x | Document IP 5757 (Important Product Information)        |

**Fig. 4-1:** Scope of delivery

### 4.3 Transporting the actuator

- Protect the electric actuator against external influences (e.g. impact).
- Protect the electric actuator against moisture and dirt.
- Observe the permissible transportation temperature of  $-20$  to  $+70$  °C.

### 4.4 Lifting the actuator

Due to the low service weight, lifting equipment is not required to lift the electric actuator.

### 4.5 Storing the actuator

#### **! NOTICE**

***Risk of electric actuator damage due to improper storage.***

- ➔ *Observe the storage instructions.*
- ➔ *Avoid long storage times.*
- ➔ *Contact SAMSON in case of different storage conditions or longer storage times.*

#### **i Note**

*We recommend regularly checking the electric actuator and the prevailing storage conditions during long storage periods.*

## Shipment and on-site transport

### Storage instructions

- Protect the electric actuator against external influences (e.g. impact).
- Protect the electric actuator against moisture and dirt.
- Make sure that the ambient air is free of acids or other corrosive media.
- Observe the permissible storage temperature from  $-20$  to  $+70$  °C.
- Do not place any objects on the electric actuator.

## 5 Installation

### 5.1 Installation conditions

#### Work position

If not described otherwise in the valve documentation, the work position for the control valve is the front view looking onto the operating controls.

#### Mounting orientation

The control valve can be installed in the pipeline in any desired position. However, a suspended mounting position of the actuator is not permissible (see Fig. 5-1).

The cable gland must not face upward after installation.

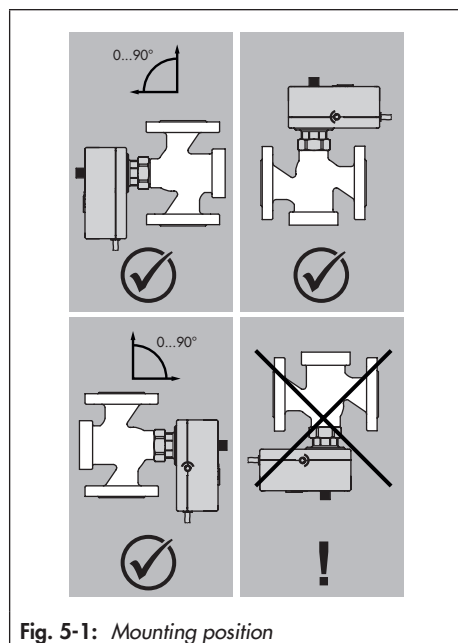


Fig. 5-1: Mounting position

### 5.2 Preparation for installation

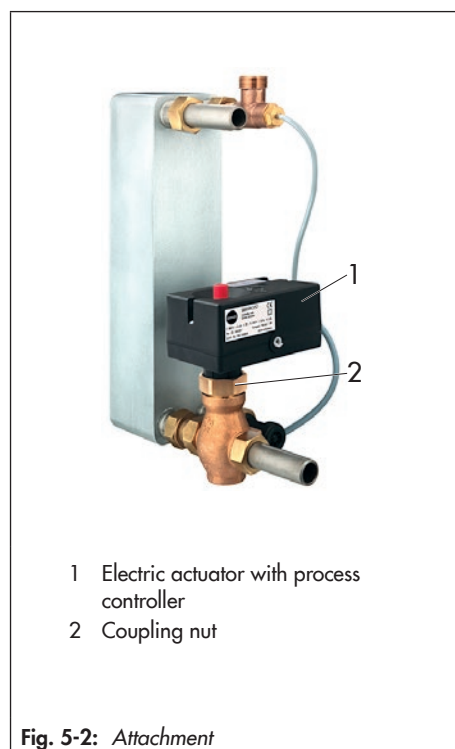
Before mounting, make sure the following conditions are met:

- The actuator is not damaged.

Proceed as follows:

Lay out the necessary material and tools to have them ready during mounting.

### 5.3 Mounting the actuator



- 1 Electric actuator with process controller
- 2 Coupling nut

Fig. 5-2: Attachment

The actuator is mounted directly onto the valve (see Fig. 5-2).

### ! NOTICE

**Risk of actuator damage due to excessively high tightening torques.**

→ Observe the tightening torque.

1. Turn the handwheel counterclockwise and move the actuator stem to the top end position.

### ! NOTICE

**Risk of damage to the actuator by moving the actuator stem too far.**

→ Move the actuator stem only as far as the top end position.

2. Place the actuator on the valve connection and tighten the coupling nut.

|                   |       |
|-------------------|-------|
| Tightening torque | 20 Nm |
|-------------------|-------|

## 5.4 Installing the control valve into the pipeline

→ Install the valve into the pipeline according to the specifications in the mounting and operating instructions of the valve.

### ! NOTICE

**Risk of actuator damage or malfunction due to adverse weather conditions.**

→ Do not install the actuator outdoors.

### ! NOTICE

**Degree of protection not achieved due to incorrect mounting position.**

→ Do not install the valve with the actuator suspended downwards (see section 5.1).

### ! NOTICE

**Risk of actuator damage due to direct contact with steam.**

→ During mounting, make sure that the actuator cannot come into contact with a jet of steam during operation.

## 5.5 Installing the accessories

### DHW tapping recognition

→ Install the water flow sensor or flow switch into the pipeline (see associated documentation).

### Temperature sensor

→ Install the sensor pocket into the pipeline (see associated documentation).



### Tip

The sensor must be mounted directly at the heat exchanger.

## 5.6 Electrical connection

### ! NOTICE

**Risk of actuator damage through opening the actuator housing.**

→ Do not open the actuator housing.

### ! DANGER

**Risk of fatal injury due to electric shock.**

→ Upon installation of the electric cables, you are required to observe the regulations concerning low-voltage installations according to DIN VDE 0100 as well as the regulations of your local power supplier.

→ Use a suitable voltage supply which guarantees that no dangerous voltages reach the device in normal operation or in the event of a fault in the system or any other system parts.

→ Only perform the electrical connection after switching off the supply voltage. Make sure the supply voltage cannot be switched on again unintentionally.

The switching output (black wire) is live.

→ Do not touch the wire ends of the switching output.

→ Insulate the wire ends when the switching output is not used.

### ! NOTICE

**Risk of actuator damage due to incorrect wiring of the inputs.**

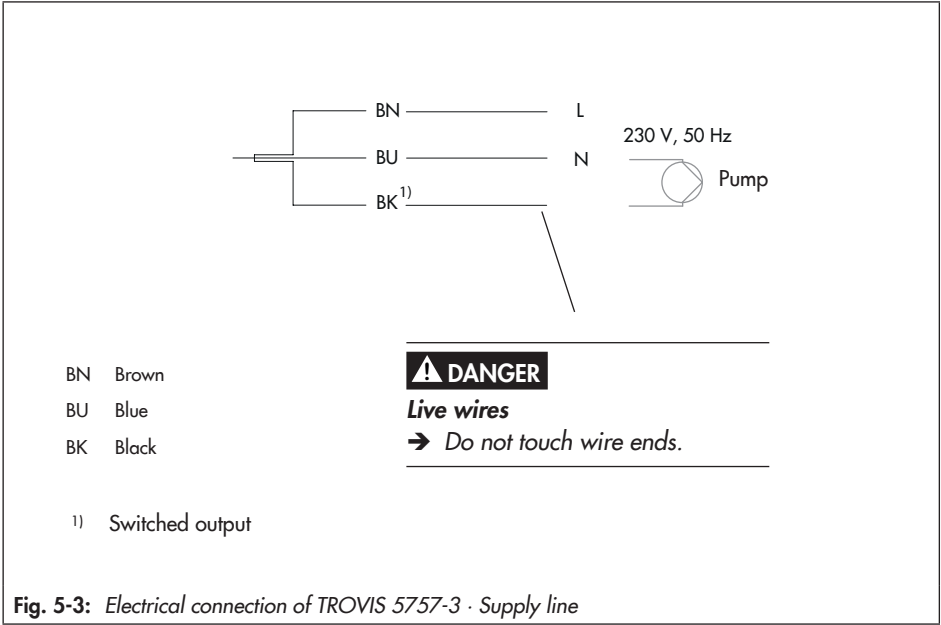
→ Wire the inputs range according to the technical data (see the 'Design and principle of operation' section).

### Wiring

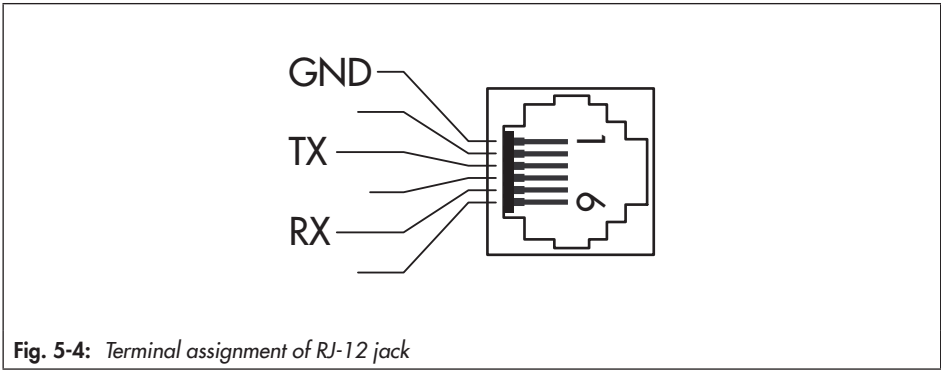
→ Connect the wiring as shown in Fig. 5-3 and Fig. 5-5.

→ Insulate any wires that are not used.

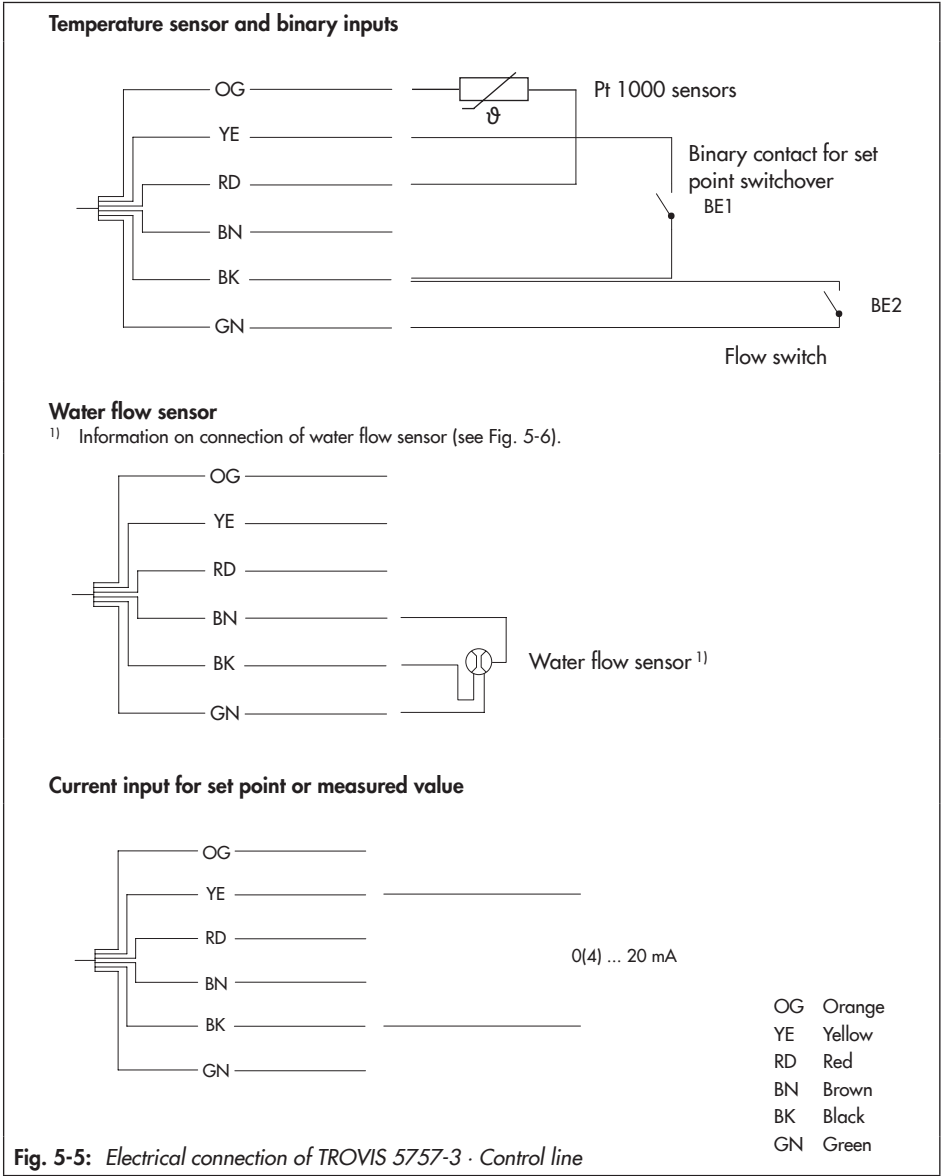
Supply line



**i Note**  
The switching output only exists in electric actuators with firmware version 2.0x/2.1x.

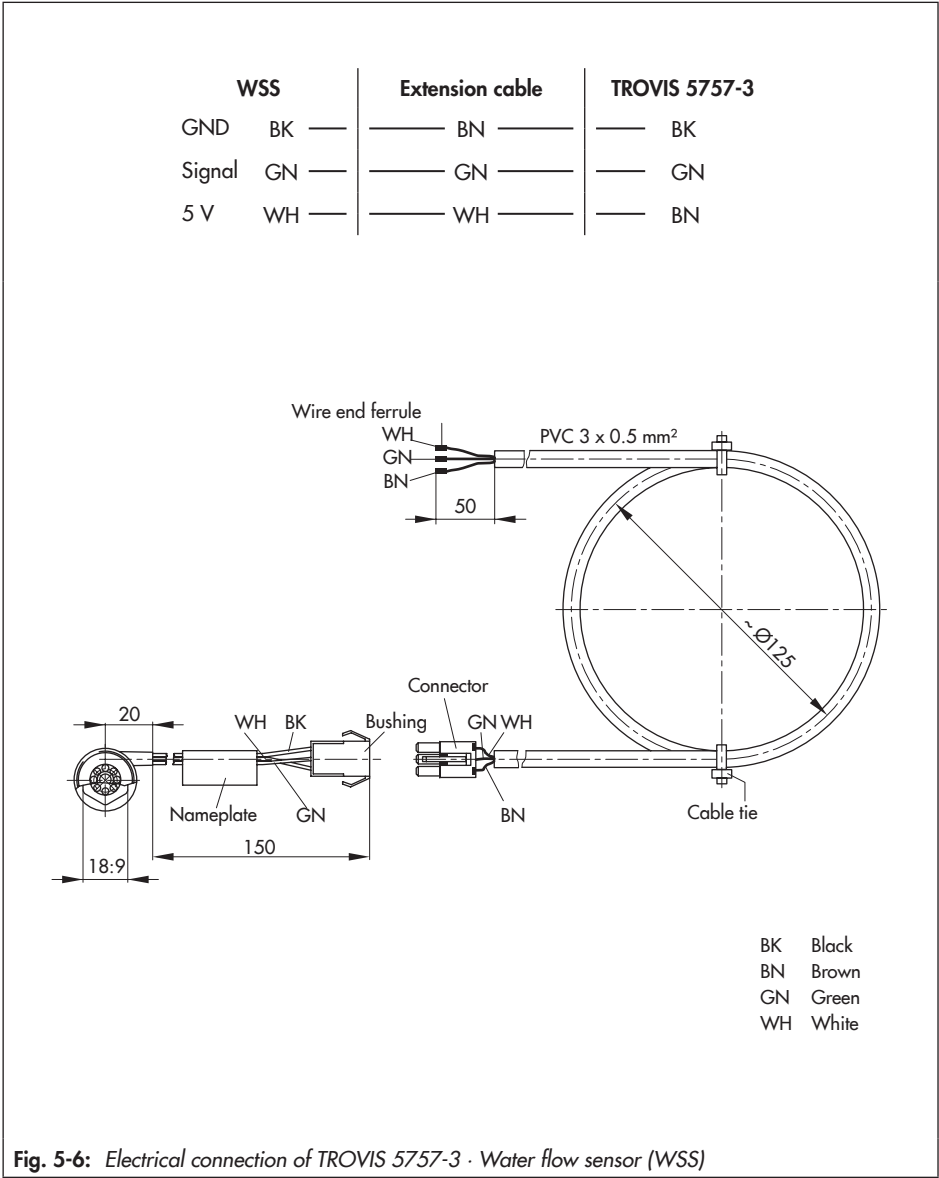


# Control line



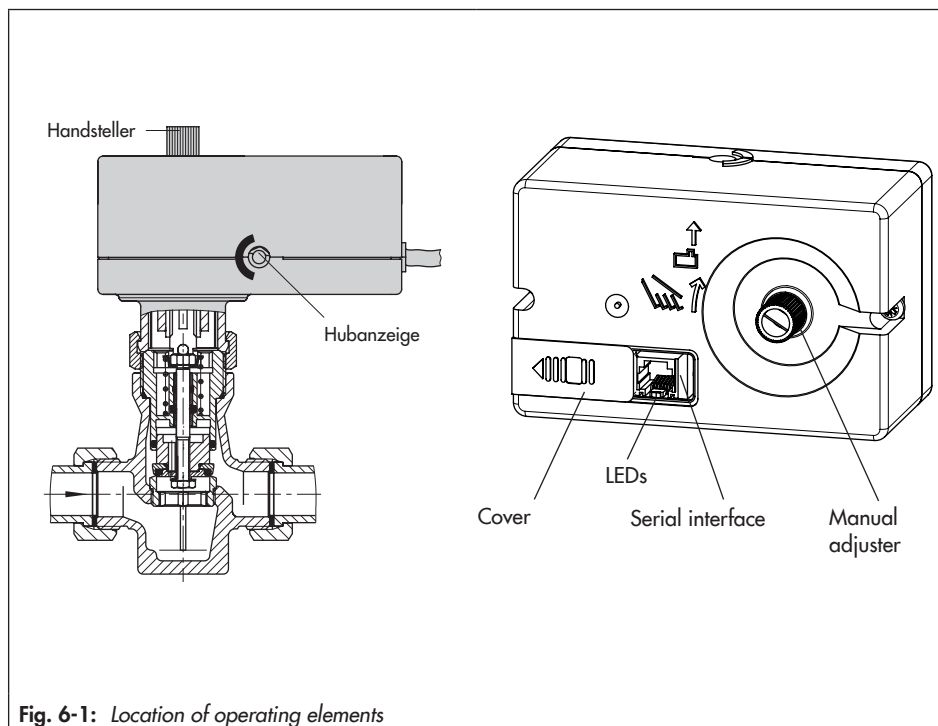
**Fig. 5-5:** Electrical connection of TROVIS 5757-3 · Control line

Water flow sensor (WSS)



## 6 Operation

### 6.1 Device overview and operating controls



#### 6.2 Indication with LEDs

The electric actuator with process controller has a red and a yellow LED which indicate the operating state of the actuator. The LEDs are located underneath the transparent cover on top of the actuator (see Fig. 6-1).

➔ See the 'Operation' section for the blinking pattern.

#### 6.3 Serial interface

The serial interface (RJ12 jack) is used for communication with the actuator. Push the cover to access it (see Fig. 6-1).



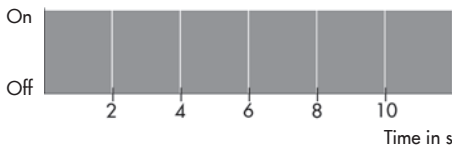
## 7 Start-up and configuration

### 7.1 Initializing the actuator

The initialization process starts automatically after the actuator has been connected to the supply voltage. The actuator stem extends (when the direction of action increasing/increasing has been set) and the red and yellow LEDs underneath the cover on top of the actuator are illuminated. As soon as the actuator stem has reached the final position, the red LED is turned off. The yellow LED remains illuminated and indicates that the actuator is ready for use.

#### Blinking pattern of the red LED:

Zero calibration in progress



#### Blinking pattern of the yellow LED (after initialization):

Device ON



### 7.2 Configuring the actuator

The actuator is configured with the TROVIS-VIEW software. In this case, the serial interface on the actuator is used to connect the actuator to the computer (see the 'Design and principle of operation' section).

→ Refer to ► EB 6661 and ► KH 5757 for more details on configuration and operation using TROVIS-VIEW.

#### **i** Note

The Configuration Manual ► KH 5757 can be found in the Help menu of the TROVIS-VIEW software. The manual contains a detailed description of each function and parameter.



## 8 Operation

The valve with electric actuator is ready for use when mounting and start-up have been completed.

### 8.1 Closed-loop control

The electric actuator with process controller normally operates in closed-loop operation. In this case, the control behavior and movement of the actuator stem depend on the parameter settings (see Configuration Manual ► KH 5757).

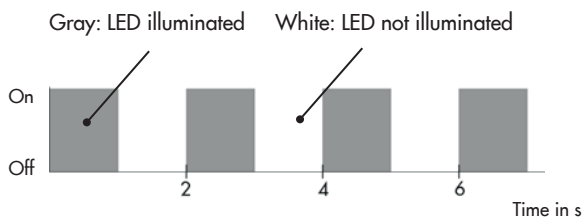
#### Applications

- Pt 1000 sensors
- Pt 1000 sensor with binary contact BI1 to switch between set points
- Pt 1000 sensor with flow switch (BI2)
- Pt 1000 sensor with water flow sensor
- Pt 1000 sensor with set point guided by current input
- Current signal (actual value)
- Pump control using switching output

### 8.2 LED blinking pattern

Explanations to the blinking pattern of the LEDs

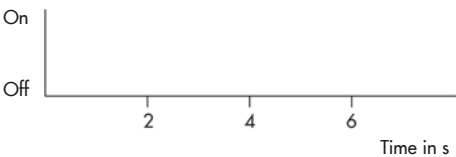
The state of the corresponding LED (on/off) is shown over time.



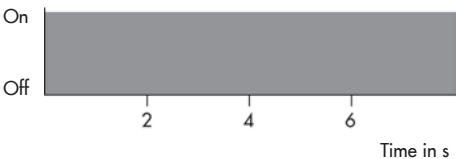
Operation

Blinking pattern of the yellow LED

- Device OFF

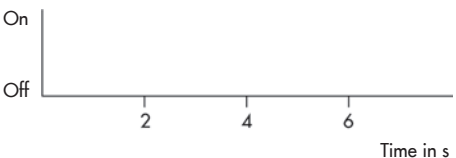


- Device ON

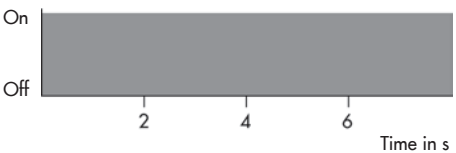


Blinking pattern of the red LED

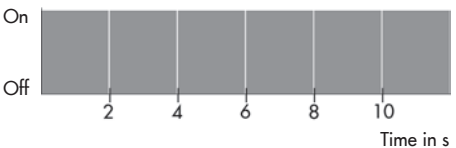
- Normal mode



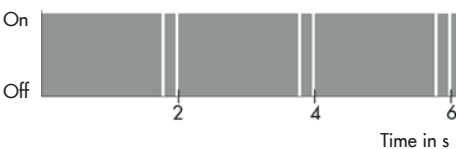
- Device restarts after reset



- Zero calibration in progress



- Transit time measurement in progress



## 8.3 Manual mode

### Manually changing the stem position

The manual adjuster can be used to move the actuator stem to the required position when the actuator is in the de-energized state. A manual adjustment of the stem position only makes sense when the power supply is switched off as the stem position is determined by the actuator in closed-loop operation, meaning any manual adjustment would be automatically corrected by the actuator.

The stem position is changed at the manual adjuster (see Fig. 8-1):

- Switch off the supply voltage.
- Turn clockwise

The actuator stem extends (approx. four turns for 1 mm travel).

- Turn counterclockwise

The actuator stem retracts (approx. four turns for 1 mm travel).

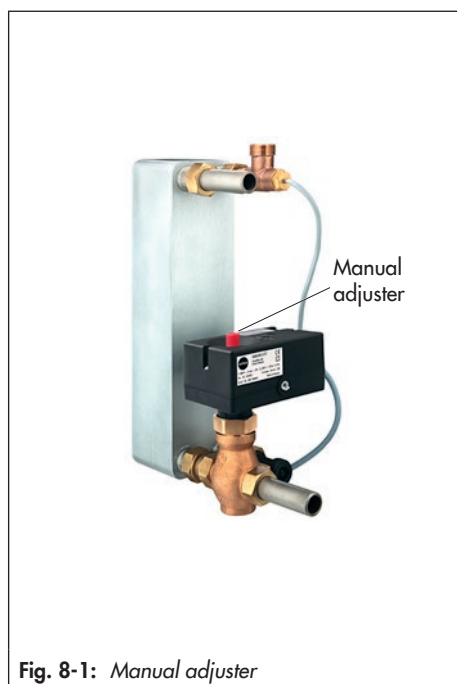


Fig. 8-1: Manual adjuster

### Travel indicator

Travel and direction of action can be read off the travel indicator on the side of the actuator housing (see Fig. 8-2).



Fig. 8-2: Travel indicator

## 8.4 Operation using memory pen

► EB 6661.

The memory pen can be loaded with data configured in TROVIS-VIEW and the configuration data transferred to one or several devices of the same type and version.

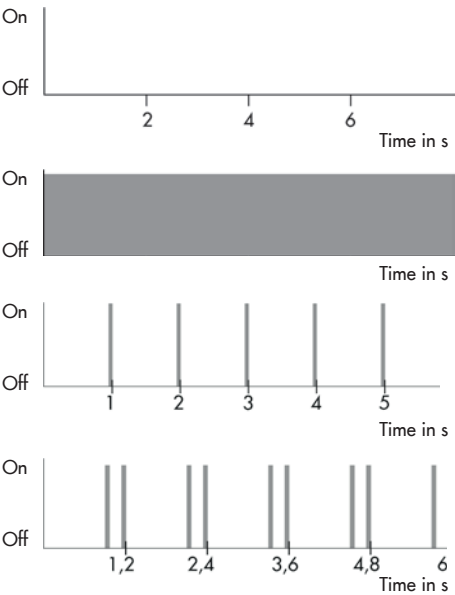
Additionally, the data from the device can be written to the memory pen. This allows the configuration data to be simply copied from one device and loaded onto other devices of the same type and version.

**i Note**

On inserting a memory pen that is empty or that contains data from another type of device or another version of the same device into the serial interface port of the actuator, the data from the actuator are uploaded to the memory pen regardless of the status of the memory pen and any other data on the memory pen will be overwritten.

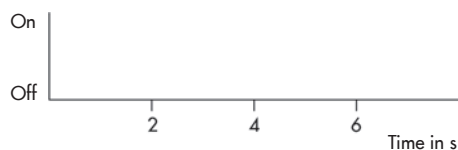
### Blinking pattern of the yellow LED for the memory pen

- Command pen inserted
- Memory pen action completed
- Preparing to read data from memory pen
- Preparing to write data to memory pen



## Blinking pattern of the red LED for the memory pen

- Memory pen inserted



## Data transmission between the actuator and memory pen

The memory pen is connected to the actuator as shown in Fig. 8-3. Refer to the TROVIS-VIEW Operating Instructions ► EB 6661 on how to transfer data.

The yellow LED on the actuator indicates that the data logging is being prepared. Data transmission is completed when the yellow LED is illuminated continuously.

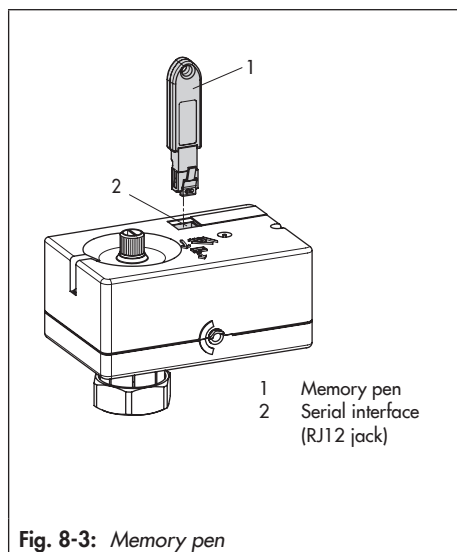


Fig. 8-3: Memory pen

## 8.4.1 Copying function

The memory pen can be used to copy setting data to other TROVIS 5757-3 Actuators after the data from the actuator have been transferred to the memory pen.

### **i Note**

*“Automatically write to memory pen” is automatically reset to the read status after data are transferred from the actuator for the first time.*

## 8.4.2 Command mode

In closed-loop operation, the actuator stem can be moved to the top or bottom end position using the command pen regardless of the control conditions.

Possible settings:

- No command
- Retract actuator stem
- Extend the actuator stem

## 8.5 Readings in TROVIS-VIEW

### 8.5.1 Operating values

---

#### **i Note**

*The values in the 'Operating values' folder cannot be changed.*

---

In **online mode**, the current operating values are listed in the 'Operating values' folder. Depending on the basic setting, a graph is shown under the 'Operating values' window.

### 8.5.2 Operating states

Error messages can be read in the 'Service' folder ('Operating states').

---

#### **i Note**

*Operating states and errors are also indicated by the LEDs (see section 8.2).*

---

### 8.5.3 Functions

In the 'Service' folder ('Functions'), the following functions are shown:

|                     |                                     |
|---------------------|-------------------------------------|
| <b>Manual level</b> | → Manual level                      |
| <b>Functions</b>    | → Perform reset                     |
|                     | → Load default settings in actuator |
|                     | → Start zero calibration            |
|                     | → Start transit time measurement    |

The functions can be executed when communication between the actuator and computer is established.

### 8.5.4 Status messages

In the 'Service' folder ('Status messages'), device and operation parameters are shown:

|                         |                                       |       |
|-------------------------|---------------------------------------|-------|
| <b>Actuator</b>         | Firmware version                      |       |
|                         | Serial number                         |       |
|                         | Device information                    |       |
|                         | Manufacturing parameters              |       |
| <b>Operation</b>        | Operating hours                       | in h  |
|                         | Operating hours at excess temperature | in h  |
|                         | Temperature inside device             | in °C |
|                         | Highest temperature inside device     | in °C |
|                         | Lowest temperature inside device      | in °C |
| <b>Actuator strokes</b> | Motor running time                    | in h  |
|                         | Attempts                              |       |
|                         | Changes in direction                  |       |
| <b>Valve strokes</b>    | Travel cycles                         |       |
| <b>LEDs</b>             | Yellow                                |       |
|                         | Red                                   |       |

### 8.5.5 Statistics

In the 'Service folder' ('Statistics'), various readings of counters are shown:

|                          |                                         |
|--------------------------|-----------------------------------------|
| Device failures counters | Supply voltage activated                |
|                          | Program interruptions                   |
|                          | Limit contact error                     |
|                          | EPROM error                             |
| Alarms counters          | Signal failure at the temperature input |
|                          | Signal failure at the current input     |
|                          | Flow rate exceeds measuring range       |
|                          | Upper limit GWH exceeded                |
| Binary signals counters  | Binary input activated                  |
|                          | Switching output activated              |
|                          | Tapping                                 |
| Memory pen counters      | Command retract stem                    |
|                          | Command extend stem                     |
|                          | Data read                               |
|                          | Data written                            |
|                          | Data logged                             |
| Functions counter        | Settings changed                        |
|                          | Manual level activated                  |
|                          | Zero calibration started                |
|                          | Reset triggered                         |
|                          | Default settings loaded                 |
|                          | Transit time measurement started        |

## 9 Malfunctions

### 9.1 Troubleshooting

→ Troubleshooting (see Table 9-1).

#### **i** Note

Contact SAMSON's After-sales Service for malfunctions not listed in the table.

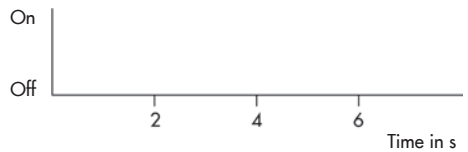
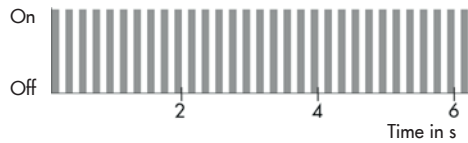
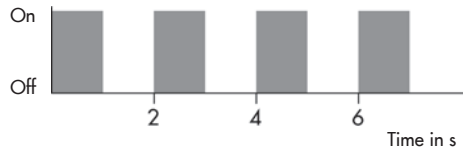
**Table 9-1:** *Troubleshooting*

| Error                                                                                     | Possible reasons                                                                                                          | Recommended action                                                                        |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Actuator or plug stem does not move on demand.                                            | Actuator is blocked.                                                                                                      | → Check attachment.<br>→ Remove the blockage.                                             |
|                                                                                           | No or incorrect supply voltage connected.                                                                                 | → Check the supply voltage and connections.                                               |
| Actuator or plug stem does not move through the whole range.                              | No or incorrect supply voltage connected.                                                                                 | → Check the supply voltage and connections.                                               |
| The electric actuator with process controller does not perform the functions as required. | The configuration of the electric actuator does not meet the application requirements.                                    | → Check configuration.<br>→ If necessary, refer to the Configuration Manual<br>▶ KH 5757. |
|                                                                                           | The electric actuator was reset to its default settings without adapting the configuration to the application afterwards. |                                                                                           |

## 9.2 Error indication by LEDs

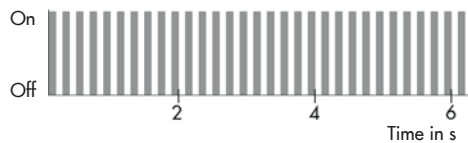
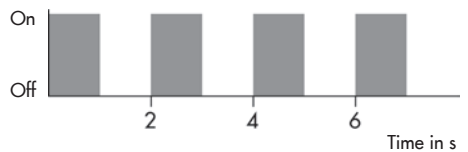
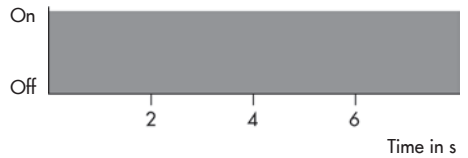
### Blinking pattern of yellow LED

- Plausibility error in memory pen
- EEPROM error in memory pen
- No communication with memory pen

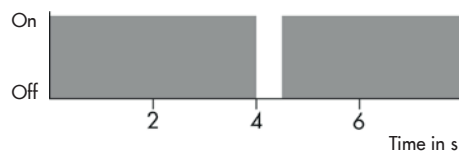


### Blinking pattern of red LED

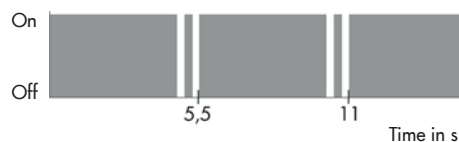
- Limit contact error
- Temperature too high (upper limit (GWH) exceeded)
- EEPROM error in device



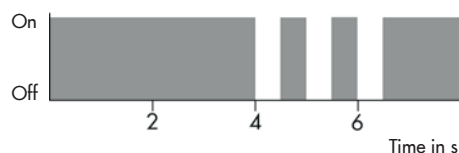
- Wire breakage at temperature input



- Wire breakage at current input



- Flow rate at water flow sensor exceeds measuring range



## 9.3 Emergency action

Plant operators are responsible for emergency action to be taken in the plant.



*Emergency action in the event of valve failure is described in the associated valve documentation.*



## 10 Servicing

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### **i** Note

*The electric actuator with process controller was checked by SAMSON before it left the factory.*

*– The product warranty becomes void if service or repair work not described in these instructions is performed without prior agreement by SAMSON's After-sales Service.*

The actuator requires no maintenance.

We recommend inspection and testing according to Table 10-1.

**Table 10-1:** *Recommended inspection and testing*

| Inspection and testing                                                                                     | Action to be taken in the event of a negative result                    |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Check the markings, labels and nameplates on the electric actuator for their readability and completeness. | ➔ Immediately renew damaged, missing or incorrect nameplates or labels. |
|                                                                                                            | ➔ Clean any inscriptions that are covered with dirt and are illegible.  |
| Check the electric wiring.                                                                                 | ➔ Tighten any loose terminal screws (see the 'Installation' section).   |
|                                                                                                            | ➔ Replace the actuator.                                                 |



## 11 Decommissioning

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### DANGER

***Risk of fatal injury due to electric shock.***

- ➔ *Before disconnecting the wires at the actuator, switch off the supply voltage and protect it against unintentional reconnection.*

### WARNING

***Risk of personal injury due to residual process medium in the valve.***

*While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.*

- ➔ *Wear protective clothing, safety gloves and eye protection.*

### WARNING

***Risk of burn injuries due to hot or cold components and pipeline.***

*Valve components and the pipeline may become very hot or cold. Risk of burn injuries.*

- ➔ *Allow components and pipelines to cool down or warm up to the ambient temperature.*
- ➔ *Wear protective clothing and safety gloves.*

To decommission the electric actuator for maintenance work or disassembly, proceed as follows:

- ➔ Put the control valve out of operation.  
See associated valve documentation.
- ➔ Disconnect the supply voltage and protect it against unintentional reconnection.



## 12 Removal

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

### **⚠ DANGER**

**Risk of fatal injury due to electric shock.**

→ Before disconnecting the wires at the actuator, switch off the supply voltage and protect it against unintentional reconnection.

### **⚠ WARNING**

**Risk of personal injury due to hot components.**

→ If necessary, allow the pipeline and valve components to cool down.

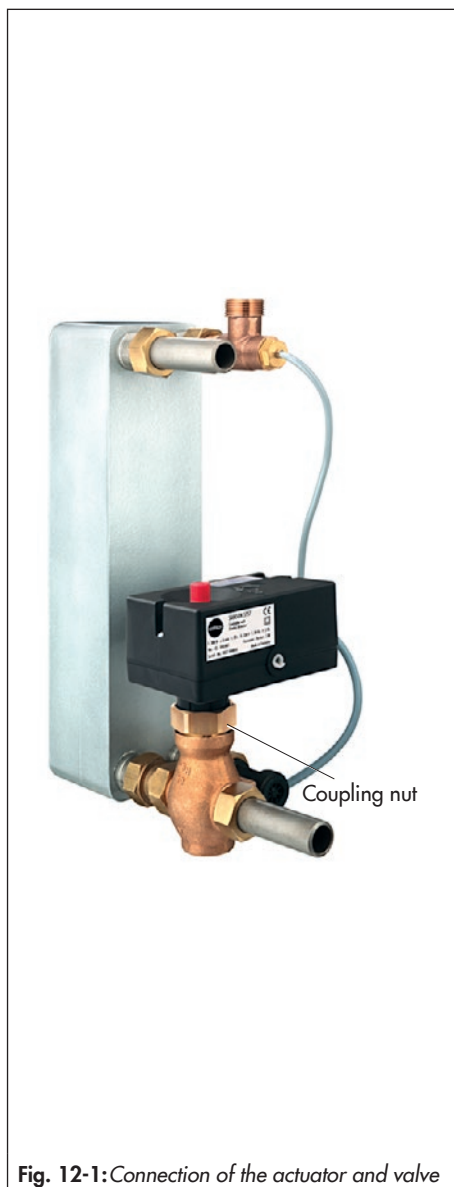
### **⚠ WARNING**

**Risk of personal injury due to residual process medium.**

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

→ Wear protective clothing, safety gloves and eye protection.

1. Disconnect the connecting lines.
2. Undo the coupling nut and remove the actuator from the valve connection (see Fig. 12-1).



**Fig. 12-1:** Connection of the actuator and valve



## 13 Repairs

If the actuator does not function properly according to how it was originally configured or does not function at all, it is defective and must be exchanged.

---

### NOTICE

***Risk of actuator damage due to incorrect service or repair work.***

- Do not perform any repair work on your own.
  - Contact SAMSON's After-sales Service.
- 

### 13.1 Returning the actuator to SAMSON

Defective actuators can be returned to SAMSON for examination.

Proceed as follows to return devices:

1. Remove the electric actuator from the valve (see the 'Removal' section).
2. Continue as described on our website at  
▶ [www.samsongroup.com](http://www.samsongroup.com) > Service & Support > After-sales Service > Returning goods .



## 14 Disposal



SAMSON is a producer registered at the following European institution  
► <https://www.ewrn.org/national-registers/national-registers>.  
WEEE reg. no.:  
DE 62194439/FR 025665

- ➔ Observe local, national and international refuse regulations.
- ➔ Do not dispose of components, lubricants and hazardous substances together with your other household waste.

---

### **i** Note

*We can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at [aftersalesservice@samsongroup.com](mailto:aftersalesservice@samsongroup.com) giving details of your company address.*

---

---

### Tip

*On request, we can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.*

---



## 15 Certificates

The following certificates are included on the next pages:

- EU declaration of conformity
- UKCA declaration of conformity
- TR CU certificate
- Declaration of incorporation

The certificates shown were up to date at the time of publishing. The latest certificates can be found on our website:

► [www.samsongroup.com](http://www.samsongroup.com) > Products & Applications > Product selector > Actuators > 5757-3

### 15.1 Information on the UK sales region

The following information corresponds to the Pressure Equipment (Safety) Regulations 2016, STATUTORY INSTRUMENTS, 2016 No. 1105 (UKCA marking). It does not apply to Northern Ireland.

#### Importer

SAMSON Controls Ltd  
Perrywood Business Park  
Honeycrook Lane  
Redhill, Surrey RH1 5JQ  
Phone: +44 1737 766391  
E-mail: ► [sales-uk@samsongroup.com](mailto:sales-uk@samsongroup.com)  
Website: ► [uk.samsongroup.com](http://uk.samsongroup.com)

EU declaration of conformity

SMART IN FLOW CONTROL



**EU Konformitätserklärung / EU Declaration of Conformity /  
Déclaration UE de conformité**

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller/  
This declaration of conformity is issued under the sole responsibility of the manufacturer/  
La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.  
Für das folgende Produkt / For the following product / Nous certifions que le produit

**Kombinierter Regler mit Hubantrieb / Controller with Electric Actuator /  
Régulateur avec servomoteur électrique  
Typ/Type/Type 5757**

wird die Konformität mit den einschlägigen Harmonisierungsrechtsvorschriften der Union bestätigt /  
the conformity with the relevant Union harmonisation legislation is declared with /  
est conforme à la législation d'harmonisation de l'Union applicable selon les normes:

EMC 2014/30/EU

EN 61000-6-2:2005, EN 61000-6-3:2010  
+A1:2011

LVD 2014/35/EU

EN 60730-1:2016, EN 61010-1:2010

RoHS 2011/65/EU

EN 50581:2012

Hersteller / Manufacturer / Fabricant:

**SAMSON AKTIENGESELLSCHAFT**  
Weismüllerstraße 3  
D-60314 Frankfurt am Main  
Deutschland/Germany/Allemagne

Frankfurt / Francfort, 2017-07-29

Im Namen des Herstellers/ On behalf of the Manufacturer/ Au nom du fabricant.

*i.V. Gert Nahler*

Gert Nahler  
Zentralabteilungsleiter/Head of Department/Chef du département  
Entwicklung Automation und Integrationstechnologien/  
Development Automation and Integration Technologies

*i.V. H. Zager*

Hanno Zager  
Leiter Qualitätssicherung/Head of Quality Managment/  
Responsable de l'assurance de la qualité

SAMSON AKTIENGESELLSCHAFT  
Weismüllerstraße 3 60314 Frankfurt am Main

Telefon: 069 4009-0 · Telefax: 069 4009-1507  
E-Mail: samson@samson.de

Revision 07

cs\_5757\_06\_en\_bro\_m07.pdf

UKCA declaration of conformity

**UK  
CA** UK DECLARATION OF CONFORMITY  
ORIGINAL



This declaration of conformity is issued under the sole responsibility of the manufacturer.  
For the following product:

**Controller with Electric Actuator**  
**Type 5757**

the conformity with the following relevant UK regulatory requirements is declared with:

**UK Regulation / Statutory Instrument**

SI 2016 No. 1091  
The Electromagnetic Compatibility Regulations 2016

SI 2016 No. 1101  
The Electrical Equipment (Safety) Regulations 2016

SI 2012 No. 3032  
The Restriction of the Use of Certain Hazardous Substances  
in Electrical and Electronic Equipment Regulations 2012

**Designated Standard**

EN 61000-6-2:2005  
EN 61000-6-3:2007+A1:2011

EN 60730-1:2011  
EN 61010-1:2010/A1:2019

EN IEC 63000:2018

Manufacturer:

SAMSON AKTIENGESELLSCHAFT  
Weismuellerstrasse 3  
60314 Frankfurt am Main  
Germany

Frankfurt am Main, 2022-12-14

Signed for and behalf of the manufacturer:

  
Fabio Roma  
Vice President Smart Products & Components

  
Sebastian Krause  
Director Development Valves & Actuators

Revision 00

Classification: Public · SAMSON AKTIENGESELLSCHAFT · Weismuellerstrasse 3 · 60314 Frankfurt am Main, Germany

Page 1 of 1

TR CU certificate

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                           |
| <b>СЕРТИФИКАТ СООТВЕТСТВИЯ</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                           |
| <b>ЕАЭС</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | № ЕАЭС RU C-DE.3A11.B.00049/19<br>Серия <b>RU</b> № <b>0197358</b>                        |
| <p><b>ОРГАН ПО СЕРТИФИКАЦИИ</b> Общества с ограниченной ответственностью «ТМС РУС».</p> <p>Место нахождения (адрес юридического лица): Российская Федерация, 127083, город Москва, улица Верхняя Масловка, дом 20, строение 2; адрес места осуществления деятельности: Российская Федерация, 127083, город Москва, улица Верхняя Масловка, дом 20, строение 2, помещения № 18, 28. Аттестат аккредитации № РОСС RU.0001.113A11 от 02.07.2015. Номер телефона: +7 (495) 221-18-04; адрес электронной почты: info@tms-rs.ru</p>                                                                                                                                                                                                                                                                                                |                                                                                           |
| <p><b>ЗАЯВИТЕЛЬ</b> Общество с ограниченной ответственностью «Самсон Контролс».</p> <p>Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: Российская Федерация, 109544, город Москва, бульвар Энтузиастов, дом 2, этаж 5, комната 11. ОГРН 1037700041026. Номер телефона: +7 (495) 777-45-45; адрес электронной почты: samson@samson.ru.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                           |
| <p><b>ИЗГОТОВИТЕЛЬ</b> «SAMSON AG Mess- und Regeltechnik».</p> <p>Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Weismüllerstrasse 3, D-60314 Frankfurt am Main, Германия.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                           |
| <p><b>ПРОДУКЦИЯ</b> Приводы электрические типы 3274, 3374, 3375, 5724, 5725, 5757, 5824, 5825, 5857.</p> <p>Изготовление в соответствии со стандартами, указанными в приложении к сертификату соответствия на бланке № 0676634.</p> <p>Серийный выпуск</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                           |
| <p><b>КОД ТН ВЭД ЕАЭС</b> 8501 10 930 0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                           |
| <p><b>СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ</b> технических регламентов Таможенного союза «О безопасности низковольтного оборудования» (ТР ТС 004/2011); «Электромагнитная совместимость технических средств» (ТР ТС 020/2011)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                           |
| <p><b>СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ</b> протоколов сертификационных испытаний № Г506-5418, Г506-5419, Г506-5420 от 18.09.2019, выданных Испытательной лабораторией Ассоциации экспертов по сертификации и испытаниям продукции «Сертификационный центр НАСТХОЛ», аттестат аккредитации РОСС RU.0001.21Г506; № 190919-004-006-02/ИР от 24.10.2019, выданных испытательной лабораторией Общества с ограниченной ответственностью «Инновационные решения», аттестат аккредитации РОСС RU.0001.21AB90; акта о результатах анализа состояния производства № 00062-A от 04.07.2019 органа по сертификации Общества с ограниченной ответственностью «ТМС РУС»; руководств по эксплуатации 3428-ЭП-2019.РЭ, 3428-5720-5750-2018.РЭ. Схема сертификации – 1с.</p>                                                        |                                                                                           |
| <p><b>ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ</b> Стандарты, в результате применения которых на добровольной основе обеспечивается соблюдение требований технических регламентов: ГОСТ 12.2.007.0-75 «Система стандартов безопасности труда. Издания электротехнических. Общие требования безопасности, раздел 8 ГОСТ 30804.6.2-2013 «Совместимость технических средств электромагнитная. Устойчивость к электромагнитным помехам технических средств, применяемых в промышленных зонах», раздел 7 ГОСТ 30804.6.4-2013 «Совместимость технических средств электромагнитная. Электромагнитные помехи от технических средств, применяемых в промышленных зонах. Напряженный срок службы – 12 лет. Наименьший срок хранения – &gt;2 года. Условия хранения указаны в руководстве по эксплуатации 3428-ЭП-2019.РЭ, 3428-5720-5750-2018.РЭ.</p> |                                                                                           |
| <p><b>СРОК ДЕЙСТВИЯ С</b> 05.12.2019 <b>ПО</b> 04.12.2024</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                           |
| <p><b>ВКЛЮЧИТЕЛЬНО</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                           |
| <p>Руководитель (уполномоченное лицо) органа по сертификации</p> <p>Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>Ванькович Евгения Владимировна (И.О.)</p> <p>М.П. Ходоров Владимир Игоревич (И.О.)</p> |

## ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

## ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE 9A11.B.00049/19

Серия **RU** № **0676634** Лист 1 из 1

Стандарты, в соответствии с которыми изготавливается продукция

| Обозначение стандарта          | Наименование стандарта                                                                                                                            |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC 60730-1:2013 / Cor. 1:2014 | Automatic electrical controls for household and similar use. Part 1. General requirements. Corrigendum 1                                          |
| EN 61000-6-1:2007              | Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments        |
| EN 61000-6-2:2016              | Electromagnetic compatibility (EMC). Part 6-2: Generic standards. Immunity for industrial environments                                            |
| EN 61000-6-3:2007 + A1:2011    | Electromagnetic compatibility (EMC). Part 6-3: Generic standards. Emission standard for residential, commercial and light-industrial environments |
| IEC 61010-1:2010               | Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements                           |
| EN 61326-1:2013                | Electrical equipment for measurement, control and laboratory use. EMC requirements. Part 1: General requirements                                  |

Руководитель (уполномоченное  
лицо) органа по сертификацииЭксперт (эксперт-аудитор)  
(эксперты (эксперты-аудиторы))

Ванькович Евгения Владимировна  
(И.О.)Ходоров Владимир Игоревич  
(И.О.)

### Declaration of incorporation

#### DECLARATION OF INCORPORATION TRANSLATION



#### Declaration of Incorporation in Compliance with Machinery Directive 2006/42/EC

For the following product:

##### Type 5757-3 Actuator

We certify that the Type 5757-3 Electric Actuator is partly completed machinery as defined in the Machinery Directive 2006/42/EC and that the safety requirements stipulated in Annex I, 1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.5, 1.2.6, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.3.8.2, 1.3.9, 1.4.1, 1.5.1, 1.5.3, 1.5.4 and 1.5.8 are observed. The relevant technical documentation described in Annex VII, part B has been compiled.

Products we supply must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC.

Operators are obliged to install the products observing the accepted industry codes and practices (good engineering practice) as well as the mounting and operating instructions. Operators must take appropriate precautions to prevent hazards that could be caused by the process medium and operating pressure in the valve as well as by the signal pressure and moving parts.

The permissible limits of application and mounting instructions for the products are specified in the associated mounting and operating instructions; the documents are available in electronic form on the Internet at [www.samsongroup.com](http://www.samsongroup.com).

For product descriptions refer to:

- Type 5757-3 Electric Actuator: Mounting and Operating Instructions EB 5757

Referenced technical standards and/or specifications:

- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen, Mai 2018" [German only]
- VCI, VDMA, VGB: "Zusatzdokument zum Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen vom Mai 2018" [German only], based on DIN EN ISO 12100:2011-03

Comments:

- See mounting and operating instructions for residual hazards.
- Also observe the referenced documents listed in the mounting and operating instructions.

Persons authorized to compile the technical file:

SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany  
Frankfurt am Main, 10 February 2022

  
\_\_\_\_\_  
Stephan Giesen  
Director  
Product Management

  
\_\_\_\_\_  
Sebastian Krause  
Director  
Strategic R&D, Valves and Actuators

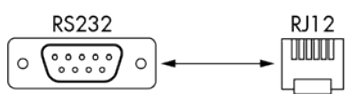
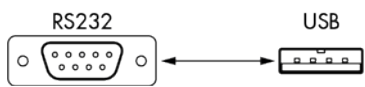
Revision no. 01

Classification: Public · SAMSON AKTIENGESELLSCHAFT · Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany

Page 1 of 1

## 16 Annex

### 16.1 Accessories

| Accessories                                                                                                                                              |                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Pt 1000 temperature sensor, fast response                                                                                                                | Type 5207-0060                                                                                                  |
| Sensor pocket                                                                                                                                            | Order no. 1400-9249                                                                                             |
| Water flow sensor                                                                                                                                        | Order no. 1400-9246                                                                                             |
| Hardware package consisting of: <ul style="list-style-type: none"> <li>– Memory pen-64</li> <li>– Connecting cable</li> <li>– Modular adapter</li> </ul> | Order no. 1400-9998                                                                                             |
| Memory pen-64                                                                                                                                            | Order no. 1400-9753<br>        |
| Connecting cable                                                                                                                                         | Order no. 1400-7699<br>        |
| Modular adapter                                                                                                                                          | Order no. 1400-7698<br>       |
| USB to RS232 adapter                                                                                                                                     | Order no. 8812-2001<br>     |
| Software                                                                                                                                                 |                                                                                                                 |
| TROVIS-VIEW (free of charge)                                                                                                                             | ► <a href="http://www.samsongroup.com">www.samsongroup.com</a> > Service & Support<br>> Downloads > TROVIS-VIEW |

## 16.2 After-sales service

Contact our after-sales service for support concerning service or repair work or when malfunctions or defects arise.

### E-mail contact

You can reach our after-sales service at

► [aftersalesservice@samsongroup.com](mailto:aftersalesservice@samsongroup.com).

### Addresses of SAMSON AG and its subsidiaries

The addresses of SAMSON, its subsidiaries, representatives and service facilities worldwide can be found on our website

(► [www.samsongroup.com](http://www.samsongroup.com)) or in all SAMSON product catalogs.

### Required specifications

Please submit the following details:

- Type designation
- Material number
- Serial number
- Firmware version

## 16.3 Configuration list

### Function block list

The function blocks have the following listed functions.

F = Function block

| F  | Function                                        | Default | Meaning                                                                                                                                               |
|----|-------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01 | DHW tapping recognition                         | 1       | 0: Continuous control<br>1: Flow rate sensor active                                                                                                   |
| 02 | Flow rate sensor                                | 1       | 0: Flow switch<br>1: Water flow sensor                                                                                                                |
| 03 | Adaptation                                      | 1       | 0: Not active<br>1: Active (with water flow sensor)                                                                                                   |
| 04 | Direction of action                             | 0       | 0: >> (increasing/increasing)<br>1: <> (increasing/decreasing)                                                                                        |
| 05 | Current input                                   | 0       | 0: Not active (binary input)<br>1: Active                                                                                                             |
| 06 | Function of current input                       | 0       | 0: Actual value<br>1: Set point                                                                                                                       |
| 07 | Measuring range of current input                | 0       | 0: 0 to 20 mA<br>1: 4 to 20 mA                                                                                                                        |
| 08 | Function of binary input                        | 0       | 0: Termination of maintaining heat exchanger at constant temperature<br>1: Switchover between internal set points                                     |
| 09 | Maintain heat exchanger at constant temperature | 0       | 0: Time adjustable<br>1: Continuous                                                                                                                   |
| 10 | Upper limit (GWH)                               | 0       | 0: No limitation<br>1: Exceeding GWH causes switch-off                                                                                                |
| 11 | Lower limit (GWL)                               | 0       | 0: No frost protection<br>1: Violation of GWL causes frost protection to start                                                                        |
| 16 | Function of switching output                    | 3       | 1: Not active<br>2: Fault alarm<br>3: Circulation pump (DHW)<br>4: Circulation pump (heating)<br>5: Tapping<br>6: Circulation pump (heating) reversed |
| 17 | Pump protection                                 | 1       | 0: No<br>1: Yes                                                                                                                                       |

### Parameter list

The parameters have the setting ranges as listed below.

| P  | Parameter                                                                       | Default | Adjustment range |
|----|---------------------------------------------------------------------------------|---------|------------------|
| 01 | Set point W1                                                                    | 60 °C   | 0 to 100 °C      |
| 02 | Set point W2                                                                    | 70 °C   | 0 to 100 °C      |
| 03 | Lower measuring range value Xmin                                                | 0 °C    | –50 to 90 °C     |
| 04 | Upper measuring range value Xmax                                                | 100 °C  | 10 to 150 °C     |
| 05 | Upper limit (GWH)                                                               | 95 °C   | 0 to 100 °C      |
| 06 | Lower limit (GWL)                                                               | 5 °C    | 0 to 20 °C       |
| 07 | Proportional-action coefficient KP                                              | 0.8     | 0.1 to 50        |
| 08 | Reset time Tn                                                                   | 15 s    | 0 to 999 s       |
| 09 | Derivative-action time Tv                                                       | 0 s     | 0 to 999 s       |
| 10 | Actuator transit time Ty                                                        | 25 s    | 0 to 240 s       |
| 11 | Set-back difference                                                             | 8 K     | 0 to 30 K        |
| 12 | Heating period to maintain heat exchanger at constant temperature <sup>1)</sup> | 24.0 h  | 0 to 25.5 h      |

<sup>1)</sup> Firmware version 2.20 and higher

## 16.4 Customer-specific data

|                      |  |
|----------------------|--|
| <b>Station</b>       |  |
| <b>Operator</b>      |  |
| <b>SAMSON office</b> |  |

| Function blocks |         |         |
|-----------------|---------|---------|
| F               | Default | Setting |
| 01              | 1       |         |
| 02              | 1       |         |
| 03              | 1       |         |
| 04              | 0       |         |
| 05              | 0       |         |
| 06              | 0       |         |
| 07              | 0       |         |
| 08              | 0       |         |
| 09              | 0       |         |
| 10              | 0       |         |
| 11              | 0       |         |
| 16              | 1       |         |
| 17              | 1       |         |

| Parameters |         |         |                  |
|------------|---------|---------|------------------|
| P          | Default | Setting | Adjustment range |
| 01         | 60 °C   |         | 0 to 100 °C      |
| 02         | 70 °C   |         | 0 to 100 °C      |
| 03         | 0 °C    |         | -50 to +90 °C    |
| 04         | 100 °C  |         | 10 to 150 °C     |
| 05         | 95 °C   |         | 0 to 100 °C      |
| 06         | 5 °C    |         | 0 to 20 °C       |
| 07         | 0.6     |         | 0.1 to 50        |
| 08         | 25 s    |         | 0 to 999 s       |
| 09         | 0 s     |         | 0 to 999 s       |
| 10         | 35 s    |         | 0 to 240 s       |
| 11         | 8 K     |         | 0 to 30 K        |
| 12         | 24.0 h  |         | 0 to 25.5 h      |











SAMSON AKTIENGESELLSCHAFT  
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany  
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507  
samson@samsongroup.com · [www.samsongroup.com](http://www.samsongroup.com)