Installation instructions

Testomat® PRO – SelfClean pump

EN

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Testomat_PRO_Einbau_SelfClean_EN_251204

Original manual

Content

1 General information

1.1 Use and storage of the instruction manual

Read the installation instructions carefully and in full before working with the device.

Keep the installation instructions for the equipment's entire service life.

The device is a system component. Accordingly, you should also observe the Testomat® PRO operating manual and the system documentation of the system manufacturer.

We reserve the right to make structural changes with continual improvement in mind!

Our instructions are updated at regular intervals. If you are in possession of an older version (see version number of the operating instructions), you can find the current installation instructions on our homepage http://www.heylanalysis.de under Download.

1.2 Symbols

1.2.1 Warnings and safety instructions in this manual

These instructions include warnings against specified actions that involve the risk of injury or property damage. Warnings are structured as follows:

Description of the type or source of danger
Description of the consequences of non-compliance

- Hazard prevention indications

The signal words illustrate the severity of potential injuries if the respective hazard is ignored. The following signal words are used in these instructions:

Danger denotes an imminent danger. If not avoided, death or critical injuries are the result.

Warning denotes a possibly imminent danger. If not avoided, death or critical injuries could be the result.

Caution denotes a possibly imminent danger. If not avoided, slight or minimal injuries could be the result.

Note indicates a potentially harmful situation. If not avoided, the equipment itself or something in the vicinity may become damaged.

1.2.2 Pictograms

The following pictograms are used in these operating instructions:

Danger signs for ESD-hazardous components: Electrostatic discharges (ESD) are voltage punctures caused by large potential differences. If this symbol appears in the instructions, ESD protection must be observed.

1.2.3 Typographical highlights

The following typographical highlights are used in these operating instructions:

- Bold text: **Menu** and **Icon** names
- Blue and underlined: Cross reference

1.3 Limitation of liability

1.3.1 Failure to comply with the instructions

The manufacturer accepts no liability for damage resulting from a failure to observe these operating instructions, or from improper use (see the relevant section in the operating instructions).

1.3.2 Qualification of personnel

The repair and service require basic electrical and process engineering expertise as well as knowledge of the applicable specialist terms. The repair and service must therefore be performed only by a specialist, or a properly trained person in-structed and supervised by a specialist.

A specialist is a person who can draw on professional training, knowledge and experience as well as knowledge of applicable provisions to assess work assigned to him/her, detect potential hazards and implement suitable safety measures. A specialist must comply with the applicable professional rules.

1.3.3 Use of non-approved spare parts

The equipment's trouble-free operation is only guaranteed when using original Heyl Testomat® PRO reagents and original Heyl spare parts. The use of other reagents or spare parts will invalidate the equipment's guarantee.

1.3.4 Unauthorised conversions

Do not make any changes (or otherwise manipulate the equipment in any way) that go beyond the handling described in these instructions; otherwise, the warranty will be voided. In the event of any malfunctions, immediately switch off the Testomat® PRO device and inform the service personnel. Never attempt to repair the Testomat® PRO device yourself. Doing so will invalidate the guarantee. Repairs must be performed by authorized service personnel only or a qualified specialist.

2 Your safety

The following safety instructions are intended to help you avoid hazards to yourself and bystanders when handling the equipment. They also serve to prevent material damage to the equipment. The measures to avert any and all dangers always apply, irrespective of specific actions.

Warnings to avoid hazards that occur during a specific activity can be found in the respective chapters.

For notes and information on handling the reagents being used, refer to the safety data sheets supplied with the reagents.

2.1 Personal injury

Danger to life due to electric shock!
The equipment is operated with electric current. The incorrect handling of the equipment, its connections and cables can lead to death or serious injury.

- Replace any damaged cables immediately.
- Do not use extension cables.
- Fix all cables to prevent damage being caused by other equipment.
- Before mounting the equipment or connecting it to a power supply, disconnect the relevant part of the system from the power supply.
- Only connect the device to the mains voltage as specified on the type plate.
- Route the connections for mains voltage and relay outputs separately.
- Only operate the equipment when the partition walls and terminal compartment cover are installed.

Danger to life due to electric shock!
It is possible that high voltages are present at the relay terminals which are fed in from the outside.

- Ensure that these circuits are de-energised before working on the power supply or terminals inside the device.

Risk of (chemical) burns from reagents!
Contact with the reagents used may cause (chemical) burns.

- Ensure to observe the safety data sheets!
- The safety data sheets are available for download on the homepage www.heylanalysis.de/en.

Eye damage due to LED radiation!
If the measuring chamber is removed while the device is running, the eyes may be dazzled by intense LED radiation.

- Always switch off the power supply before working on the device.

⚠ CAUTION

Increased risk of accident due to lack of appropriate employee qualification!
The equipment may only be installed and serviced by adequately qualified employees. Insufficient qualification increases the risk of accidents happening.

- Ensure that all activities are conducted by qualified employees only (see chapter1.3.3 Qualification of personnel on page 2).
- Prevent unauthorised employees from gaining access to the equipment.

2.2 Property damage

NOTE

Avoiding interference voltages!
The Testomat® PRO device requires stable and uninterrupted supply voltage.

- Where applicable, use a mains filter to shield the device from interference voltages.
- Never lay the connecting cables in parallel to mains cables.

NOTE

Handling may cause damage or destruction of electrical components!
If you have to open the equipment's top door, electrical components may be damaged or destroyed by electrostatic discharge.

- Take the necessary safety measures to avoid electrostatic discharge onto the components (ESD safety)
- Make sure you are earthed before opening the casing.

NOTE

Measurement errors when using unapproved reagents!
The use of unapproved reagents can lead to large measurement deviations or measurement errors. Damage due to foreign particles affecting the dosing pumps, measuring chamber or valves is also possible. The use of third-party indicators will invalidate the warranty!

- Only use original Heyl reagents that are specially adapted to the requirements for the measuring equipment, and thus guarantee perfect measuring results.

3 Installation of the Self Clean pump

3.1 Scope of delivery

The set includes:

- 1 x FlowClip pump with 2 pre-assembled hoses (long and short)
- 1 x cable red/blue for power supply to the FlowClip pump

3.2 Required tools

You will need the following tools for installation:

- Phillips screwdriver, size 1
- Screwdriver with approx. 3 mm wide blade
- Side cutters
- Flat-nose pliers

3.3 Assembly

⚠ CAUTION

Risk of injury when inserting plug connectors!
When inserting the plug connector into the socket on the control board, there is a risk of injuring your hand on sharp edges.

- Use flat-nose pliers when connecting the plug connector.

Proceed as follows to install the FlowClip pump. Follow the sequence described!

Refer to Figures 1 to 4:

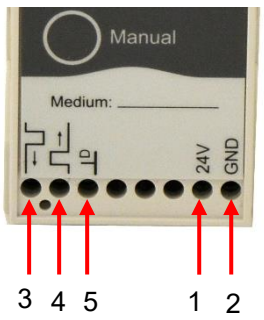


Figure 1

1. Disconnect the device completely from the power supply, including the relay inputs and outputs..
2. Check that there is no voltage.
3. Connect the red cable to the +24V terminal (1) of the FlowClip pump.
4. Connect the blue cable to the GND terminal (2) of the FlowClip pump.
5. Open the lower housing door.
6. First place the pump on the top right of the top-hat rail and press the housing down until the lock engages.

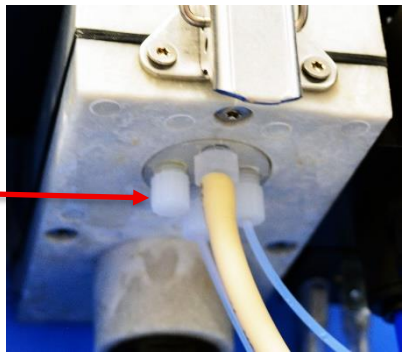


Figure 2

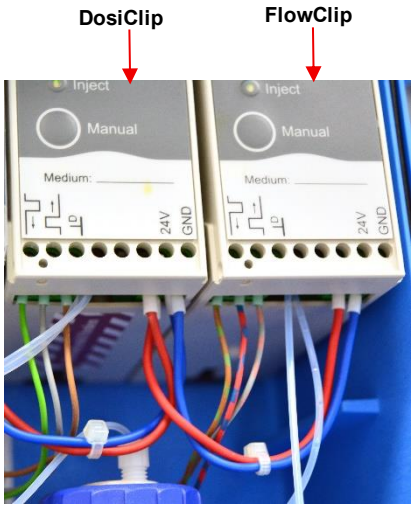


Figure 3

7. Remove the cap from the free hose inlet (3) of the measuring chamber. (Figure 2)
8. Screw the long hose of the FlowClip pump (with hose connector) onto the hose inlet of the measuring chamber.
9. Connect the two red wires to the +24V terminal (1) of the DosiClip as follows. Refer to Figure 3 for guidance.
   a. Loosen the red wire screwed onto the DosiClip.
   b. Insert the end of the red wire from the FlowClip into the screw terminals of the DosiClip.
   c. Tighten both wires.
10. Proceed with the blue wire at the GND terminal (2) of the DosiClip as described in point 9..
11. Open the upper housing door.
12. Insert the freely hanging 3-pin connector with the wire colours **green/brown**, **red/blue**, **grey/orange** into the socket at the top right (slot 4). (Figure 4)
    Note the tab on the connector. When installed correctly, it points downwards.
13. Use side cutters to cut the cable tie next to the measuring chamber..
14. Loosen the clamp to the right of the measuring chamber to expose the three cables.
15. Once the cables are exposed, tighten the clamp again.

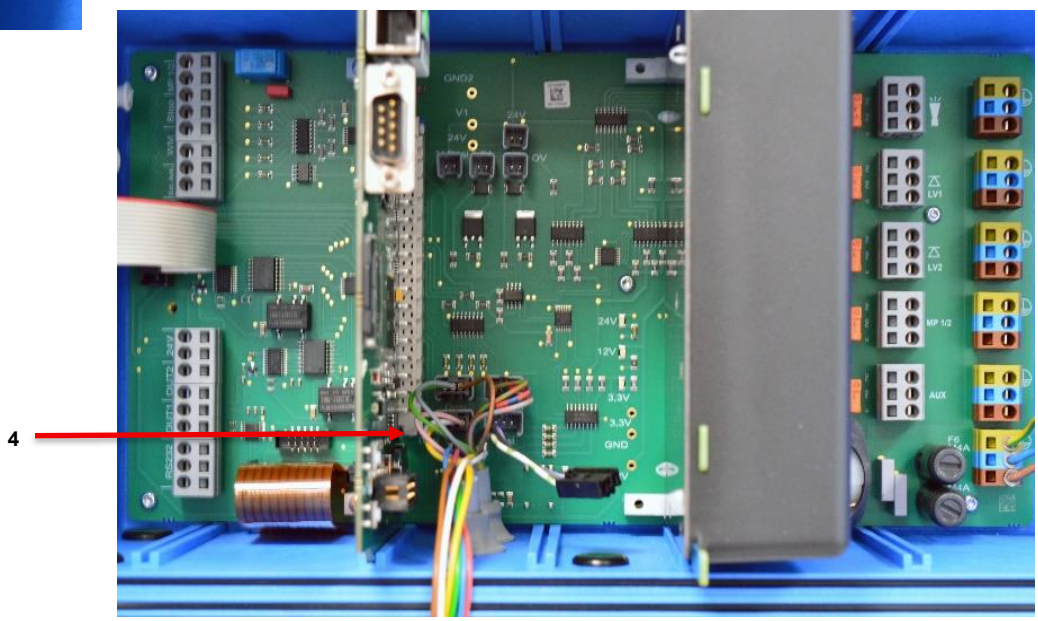


Figure 4

16. Screw each cable to the FlowClip clamp connections. Refer to figure 1.

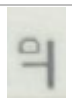
No.	Clamp connection	Color of cable
3		green/brown
4		red/blue
5		grey/orange

Table 1

17. Screw the short pipe of the FlowClip pump into the bottle containing the Self-Clean cleaning solution.
18. Place the cleaning solution under the pump.
19. Close the lower and upper housing doors.

The assembly is complete.