

Wash-Gun & SVM-Gun

Assembling and Maintenance

Version 1.00

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FCC compliance statement

The used BLE module complies with part 15 of the FCC rule FCC ID: TFB-1002

Warning



This manual, the software applications and the pH-Gun, Volt-Gun and Wash-Gun must only be used by professionals and trained personnel. Everything is used in a high risk environment, that can damage yours and others life and health. No untrained person is allowed to get in contact to this product or a part of that product.

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Assembling of the taskit Wash-Gun and SVM-Gun

General notes:

1. All fittings have to be as tight as they are clear safe for gaseous ingress. Chloride gas will destroy the electronic parts, if its inner the housing. But it should be avoided to tighten the screw connections excessively. The threads and sealings on each connection will go broke, if you tighten it to hard. If you overtighten the connections the battery replacement would also be unnecessarily affected.
2. With the "Wash-Gun", the pH electrode must be calibrated after the initial assembly and after each replacement using the iOS app.
3. With the "SVM-Gun" no additional or special procedures are necessary. It is immediately ready to use.

Scope of Delivery



1. Wash-Gun hand part
2. PVDF collecting cup with glass thread
3. Wash-Gun extension tube
4. Si-Analytics pH electrode (BlueLine 23pH), original packaging
5. SVM-Gun (Single Voltage Measurement) hand part
6. 2 x measuring lines with safety clamps for the SVM-Gun

Assembling



Unpack the pH electrode and remove the KCL protective cage.
Then pull the connection of the electrode through the extension tube so that the connector and electrode appear at the ends of the tube as shown.



Connect the plug to the hand part, ensuring that it is firmly seated



Screw the extension tube to the hand part



Screw the collecting cup to the pipe so that the sealing ring is in firm contact with the pipe. The opening of the cup and the cable slot must point in the same direction as shown. The screw connection must be leakproof and secure against twisting, but not necessarily firm, in the sense of "taut".



After installing the pH electrode, the cable slot must be sealed with silicone so that neither chlorine nor sodium hydroxide solution can penetrate.

The assembly of the Wash-Gun is now complete and the pH electrode can be calibrated. If the Wash-Gun is not used, it should be stored in horizontal position with KCL solution in the cup to protect the electrode.

Putting into operation of the SVM-Gun



For safety reasons, the measuring cables should first be connected to the SVM-Gun and only then should the safety terminals be connected to the cell to be measured. There is nothing else to consider.

Battery replacement for the Wash-Gun and the SVM-Gun (2019 Models only)

Basically, the mechanism of changing the battery is similar to that of the pH-Gun, which is why details are not discussed here. However, in contrast to the pH-Gun, the red handles have to be unscrewed in order to access the electronics. This is done in the following steps as shown in the pictures:

Wash-Gun



SVM-Gun



1: Unscrew the handle and disconnect the cable



2: Grasp the circuit board with your fingers and pull it out until...



3: ...the batteries can be replaced

The need for changing the batteries depends on the intensity of use and the ambient temperatures both during storage and during use. This mainly affects the Li-SOCl₂ (3.6V, 1 / 2AA) main battery. Based on experience, this is the case for the wash gun after 5 ... 7 years. On the SVM-Gun, the battery is expected to last up to the self-discharge limit, i.e. at least 10 years. Just like for the pH-Gun, the iOS app (V1.14 or newer) monitors the condition of the main battery is monitored. A warning is issued by the iOS app in the case of a critical charging level (< 10% capacity left). The battery can therefore be replaced in time before it fails.

The starter battery (button cell CR2016, 3V) should also be replaced at the latest after 10 years. After changing the battery, the hand parts are simply reassembled in reverse order. It should be ensured that the foam pads are not damaged or torn off and that the connecting cable from the start button is not excessively twisted when the handle is screwed on.

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