

Sensor communication module v8 encapsulation

This document provides the procedure for encapsulation sensor communication module chamber to enhance the IP68 properties of flowmeter's sensor.

1. Encapsulation compound

A Sylgard 517, two component encapsulation dielectric gel, is used for extra protection.

Technical data-sheet available on DOW's webpage:
<https://www.dow.com/en-us/pdp.sylgard-517-dielectric-gel-kit.02630117h.html>

MSDS is available upon request.

Each delivery of encapsulation kit consist of:

- Sylgard 517 A-part
- Sylgard 517 B-part
- Mixing cup with straw
- Large syringe for application

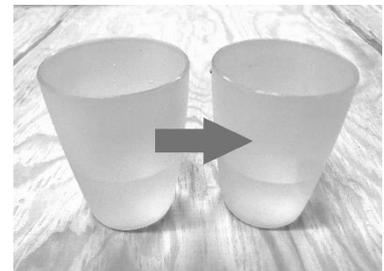


2. Mixing

The Sylgard 517 dielectric gel is mixed by volume or by weight in ratio 1:1 – part A = part B. Use pre-measured flasks and pour both of them into mixing cup.

Thoroughly mix for at least 2 minutes with straw from the kit.

Average usage for sensor communication module is 100ml. The working time with the mixed compound is below 1 hour.



3. Pour

Pour can be divided into two parts – pouring electronics inside the sensor neck and pouring the connection box.

Stage 1 - Pouring the electronics

After good mix of the two compounds take the mix into the syringe from the mixing cup.

Start injecting the mix into the center of sensor communication module. Work slowly, the mix has to have a chance to leak inside the compartment.

Inject first about 40ml, wait for 1min, inject another 20ml, wait for 1min and slowly add until you can see level of the liquid on top of the sensor communication module.



Stage 2 - Pouring the connection box

Install connection box on top of the sensor communication module neck. Use 4x M4x30 bolts. Leave the top blind stop open. Hold the outgoing cable upwards so the encapsulation liquid cannot penetrate the cable.

Fill in the inside of the connection box until full. Wait for 15 minutes, bubbles will raise to top, complete the pour by toping the inside up to the bottom of the blind stop thread.

Close the blind stop.



4. Repairs

In case the sensor communication module needs any future work the dielectric gel is removable and the encapsulation process can be repeated.