

# Chemical dosing and dispensing

## Precise control and validation of dosing

Chemical dispensing applications such as car wash systems or soap dispensing are processes requiring precise dosing of chemicals to ensure the best process performance. This is especially important when using expensive chemicals. The procedure requires choosing the proper controls that are compatible with the chemistry while providing the accuracy and repeatability necessary for the process. There are many challenges associated with the chemicals being dosed, such as potential air bubbles and viscosity.

### Target customers:

- Car wash equipment
- Soap dispensing device manufacturers



### Application challenges

- 1 Dosing the right amount of chemical in solutions/ mixtures
- 2 Handling of highly concentrated chemicals
- 3 Detecting bubbles and empty bottles/bags (reduced maintenance)



### Sensirion's solutions

- 1 Precise flow measurement
- 2 Compatible with highly viscous liquids
- 3 Air in line and bubble detection flag

# Sensirion sensor solution:



**SLF3S-4000B:**  
Flow rates up to 600 ml/min  
Size (LxWxH): 48 x 15.5 x 8.6 mm<sup>3</sup>

## Additional sensor features

- Liquid temperature sensing and temperature compensation
- Calibrated digital output
- Chemically robust material

## Other applications

- Liquid flow applications
- Analytical instruments
- Coolant monitoring in CNC machines
- Commercial cleaning and laundry systems
- Carwashes

## FAQs

- **Which fittings are available?**  
Barbed connectors for 6mm tubing (inner diameter).
- **Which communication interfaces are available?**  
I<sup>2</sup>C protocol or RS485 with proprietary SHDLC protocol.
- **Do I need to periodically calibrate the liquid flow sensor?**  
A correction factor for the different chemicals must be obtained.
- **At which pressure range can the SLF4000b operate?**  
Up to 3bar.
- **Which are the wetted materials?**  
PPS, stainless steel, epoxy.
- **Is the SLF3x compliant with high (or low) pH liquids?**  
Yes.

## Getting started



More information about our  
EK-SLF3S-4000B

## Useful documents



Datasheets, application notes, handling instructions, sample codes, step files, certificates

## Related sensors

➤ [SLF3x liquid flow sensors](#)

For media recognition (at stop flow conditions):

➤ [SLF3C liquid flow sensors](#)