

# Teqwave H

## In-Line Concentration Measurement in Real Time for Highest Quality

The reliable smart sensor in hygienic design for permanent process control in the food and beverage industry

Teqwave H enables users to analyze and monitor fluids in the food and beverage industry reliably. Applications include monitoring sugar content in fruit juices and distilled beverages or the concentration of cleaning agents. The hygienic design of Teqwave H fulfills the highest quality standards. State-of-the-art algorithms and a flexible application concept guarantee optimal process control even for changing batches.

A liquid analysis directly in the process with Teqwave H offers users many advantages. The device enables reducing costs because it measures different concentrations at the same time using only one sensor. Concentration data sets that are preinstalled for the most common beverages and cleaning agents make it possible to use the same sensor with no reprogramming and without any

problems, even for batch changes. It is also possible to read in additional parameters, such as the acid content. Teqwave H uses these to calculate the concentration with even greater accuracy thanks to state-of-the-art algorithms. Thus, it ensures reliable processes and transparency of product quality in real time. The continuous in-line measurement means that no sampling is required. The easy-to-clean full-bore design of Teqwave H guarantees that the highest hygienic standards are fulfilled.

The dispersion measurement is another advantage. The common appearance of disturbance variables such as particles and gas bubbles are no longer a problem, since Teqwave H measures, displays and compensates for these disturbances and their severity directly.

### Concentration crucial for product quality

Teqwave H is capable of measuring a wide range of measured variables that enable it to be used flexibly in various applications. In soft drink and fruit juice production, the measuring device assures product quality through its reliable determination of sugar content and invert sugar content. For production of distilled beverages, it ensures that the alcohol content remains consistent. In addition, it simultaneously measures the sugar content. When cleaning plants, bottles and kegs, Teqwave H also monitors different concentrations and it supports precise dosing of cleaning agents. If the cleaning agent needs to be changed, this can be done easily without recalibration.

### Hygienic design for highest quality standards

Teqwave H is especially developed for hygienic applications in the food

Teqwave H with tri-clamp process connections and transmitter with protective housing in stainless steel



and beverage industry. Its outstanding feature, in addition to the stainless-steel measuring tube, is its full-bore design. Thanks to the design without protruding parts, there are no places inside the measuring tube where material can accumulate. Another benefit is that there is no pressure loss, making it possible to save on energy costs.

### Plug-and-play thanks to preinstalled data sets

Teqwave H offers a wide variety of preinstalled product-specific data sets for concentration measurement, which allow the calibration usually repeated after batch change to be omitted. The users can adapt these data sets to their product as needed to further increase the accuracy of concentration measurements. This means that users with a wide product range need just one measuring device for a broad range of applications. This is particularly helpful when one production line is being used to manufacture the entire product range in various batches.

### Unique function for gas bubble and particle detection

In many processes, dispersion typically occurs in the form of gas bubbles or particles that can interfere with the



measuring signals. To support stable process control, Teqwave enables users to detect such disturbance variables, evaluate their severity and compensate for them to achieve continuous accurate measurement. The device warns the user when the disturbance variables affect measuring accuracy.

This guarantees maximum reliability and provides users with even greater transparency in their processes.

- Continuous monitoring of disturbance variables directly in the process
- Immediate notice message if the disturbance variables affect measuring accuracy
- Reliable dispersion measurement; reacts exclusively to gas bubbles, particles, or two-phase mixtures (e.g. with emulsion formation)
- Targeted reaction to error signals in the production process, such as for contamination or leaks

### Transmitter for seamless system integration

Teqwave H is available with a transmitter in a remote version that can be optionally ordered with a stainless-steel protective housing. Teqwave leaves nothing to be desired in terms of performance and accuracy. Teqwave simultaneously records multiple measured values that are essential for process control, such as concentrations, speed of sound, acoustic density, and temperature in many different fluids, and then forwards them to the process control systems. Complete access to all measurement data is possible at any time – by using conventional 4–20 mA or thanks to digital

data transmission via Modbus TCP. 

