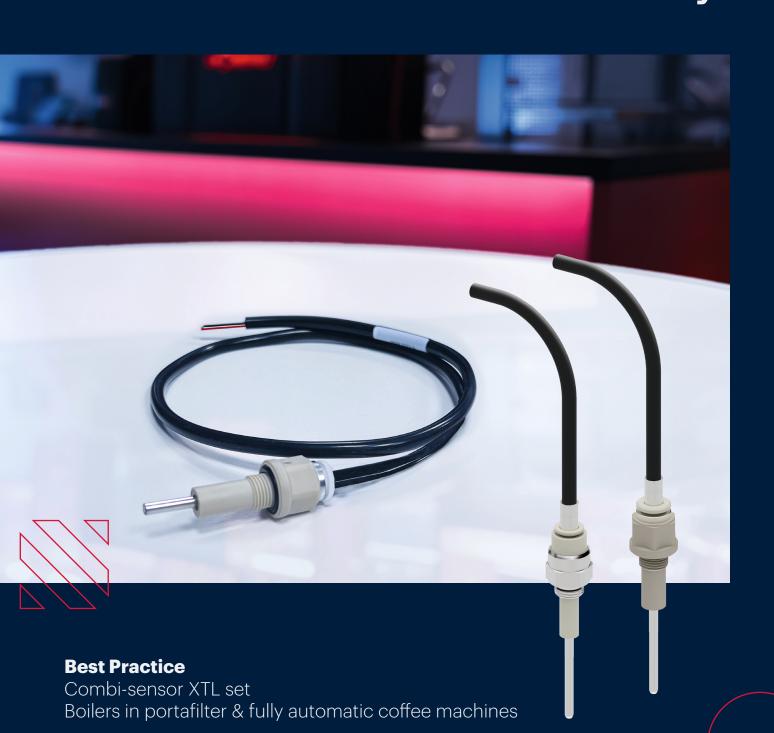


# Measure temperatures accurately and detect fill levels simultaneously.





## Optimal brewing temperature and feed rate for the perfect coffee experience

The coffee industry is constantly evolving, with manufacturers of fully automatic and portafilter machines facing an increasing number of challenges. In order to meet the requirements of modern kitchens and catering establishments, machines need to become more compact. At the same time, expectations regarding efficiency and reliability are rising. Boiler control and monitoring play a particularly important role, as they are responsible for both the brewing process and steam generation.

#### More functionality in less space

These challenges require innovative, space-saving solutions that can be seamlessly integrated to meet industry- and customer-specific requirements. The goal is to optimise the installation space while ensuring maximum process safety.



#### At a glance

In both portafilter and fully automatic coffee machines, the integrated boiler provides the machine with water for the brewing process and steam for frothing milk.

#### This poses the following challenges:

- Minimising the installation space required by increasingly more compact portafilter and fully automatic coffee machines
- Optimisation of the integrated boiler function to improve process reliability
- Cost savings

### The clever 2-in-1-solution for precise temperature measurement and detection of defined fill levels

The combi-sensor XTL set, which includes a temperature sensor and level detection, is ideal for continuously measuring the temperature of the water or steam in the boiler. The level detection feature also ensures that there is always sufficient water available for the brewing process.

Effectively, the combination sensor reduces the number of sensors required, saving on costs and installation space.







#### Combi-sensor XTL set in action: Temperature and fill level monitoring

The combination sensor measures the temperature of the water or steam while also detecting the boiler's fill level. This ensures that there is always sufficient water for the brewing process while also monitoring the optimum temperature. If the fill level falls below the defined level, automatic refilling can be initiated. Monitoring the temperature enables corrective action to be taken if necessary.

#### **Highlights**

The combination sensor offers an efficient solution for monitoring two measured variables, saving both installation space and overall costs.

Due to its flexible configuration options, the sensor element in the combination sensor can be positioned centrally within the sensor tube. This is a crucial factor for boiler applications.

Rather than using individual sensors for different measurement tasks, the combination sensor provides a space-saving, cost-effective solution that can be easily integrated into existing systems.

