

# Energy monitoring

## Digitalization simplifies the collection and monitoring of energy data



As a state-owned brewery, the Hofbräuhaus in Munich believes it has a special obligation to the environment and its customers to assume responsibility for better protection of the climate and to serve as a role model for other companies.

"With the FieldXpert I have simple and fast mobile access to the current energy utilization data from anywhere, plus I can analyze trends and configure the instruments. Combined with the Memograph, we can exploit the advantages of digitalization down to the field instrument level."

Silvio Di Tano  
Head of Electronics,  
Staatliches Hofbräuhaus München



**In order to uncover and realize the savings potential available in the utilization of steam, water and air pressure in line with the brewery's environmental goals, Hofbräuhaus installed an energy monitoring system, which relies on digitalization, with the support of Endress+Hauser.**

**Customer challenge** The state-owned brewery wants to sink the specific heat consumption by 4 percent and production-generated CO<sub>2</sub> emissions as much as 30 percent. Hofbräuhaus is the first German brewery to analyze its own climate emissions. All of the individual measures will be bundled into an environmental management system. An automation concept for the integration of the data had to be developed. This concept is designed to ensure the seamless collection of energy utilization data and provide mobile access to the data.

**Our solution** The heart of the solution is the Memograph M, a data manager that serves as an interface between the field instruments and the process control level and supports all common field buses. The Memograph M forwards

the actual sensor measurement values to the control system via PROFINET. Thanks to its mathematical functions, Memograph M can directly calculate the amount of heat, which it then sends to the software platform via Ethernet TC/IP. The integrated web server gives operators remote access at the field instrument level and provides a convenient way to configure parameters or store data. Memograph M is the simplest, most cost-effective solution for data integration and energy metering.

Mobile access to the energy data monitoring system is fulfilled by the FieldXpert. This robust industry-scale tablet PC features a preinstalled device driver library for all important protocols and automatically detects instruments with a click and connects to all Endress+Hauser instruments via WLAN or Bluetooth. That means it can be used to track energy utilization from anywhere on the grounds of the plant, display trends or launch error analyses.

## The result



With the FieldXpert, operators can track energy utilization or launch error analyses from anywhere.



Industry 4.0 built into the switch cabinet: the Memograph M, with integrated web server, provides operators remote access for calling up stored data or configuring instrument parameters.



Every energy user is equipped with energy meters: Promag H electromagnetic flowmeters and temperature sensors monitor the mixer taps for the water that is used for the malt grinders.

**Summary** Regardless of the product, continuous monitoring ensures fully transparent energy utilization, from brewing to filling. Thanks to digitization, monitoring was simply integrated into the existing infrastructure. State-owned Hofbräuhaus is thus in a good position to stake its claim as a role model when it comes to both climate protection and digitalization.

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