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## **PRESS-RELEASE**

# **Cutting edge German technology for the energy business**

**EMH metering GmbH from Gallin, Germany, is one of the world's leading technology companies for digital meter technology in the energy industry. Many developments by this German "hidden champion" are now recognised as milestones in digital metering technology and have decisively advanced the digitisation of the energy industry. With its "Made in Germany" meters and gateways, the company is now equipped to serve the important future markets of "Smart Metering" and "E-Mobility".**

Wherever electricity is used, the quantity consumed must be measured for billing purposes. This applies to both private households and large consumers in industry and commerce – or even when an electric car is recharged. Utilities, grid operators, and businesses need different meters for these applications: From a load profile meter, which measures reactive power and voltage quality, to electronic household meters and meters, which make it possible to precisely measure the consumption of individual machines. The energy industry also requires communication devices that can transmit important information such as energy data and rates. These offer energy suppliers decisive competitive advantages and the opportunity to more closely align energy consumption and the amount of energy generated, in other words to create a smart grid.

### **Portfolio of devices for all applications**

EMH metering GmbH & Co KG can cover the entire meter and communication portfolio required by the energy industry – from the basic meter to e-mobility solutions. The company's industrial and special meters are among the most used meters in the industry worldwide. With the CASA smart meter gateway and the FNN basic meter sophisticated solutions for smart meter rollout in Germany are available. "Our portfolio includes more than ten thousand individual device versions. For almost every application in energy measurement and measurement data transmission, we have the right solution," explains Dr. Peter Heuell, who along with Norbert Malek, runs the company. This range is based on years of experience in the production of special electronic meters and our unconditional desire to fulfil customer requirements.

The products of the company, founded in 1991, are provided by four business units: Special meters, which include high-precision meters and billing meters for industrial and commercial applications, household meters, industrial meters (DIN top hat rail meters) and communications technology. The special meters have carved out a leading position worldwide. Every second meter used in Germany for load measurement today comes from EMH metering, from Gallin – where it also manufactured. Because EMH metering is synonymous with German engineering quality. Its 300 employees manufacture more than 750,000 units each year. "We looked at production possibilities but we soon realised, only if we produce in Germany in our own production, we can achieve the quality that we and our customers expect," is how Norbert Malek puts it, who has been with the company ever since it was first established. "Made in Germany" is now an important trademark of EMH metering and its company philosophy.

### **Meters for industry, commerce and households**

And it is not only for energy suppliers that EMH metering has the right meter solutions. Industrial and commercial customers also need to measure electricity consumption, for example to gain insight into the power consumption of machinery or, in the case of area grid operators such as airports or industrial parks –

for billing internal consumers. For such submetering projects, the “Industrial Meters” division of EMH metering offers special DIN top hat rail meters.

The market for household meters and communication technology currently offers major growth potential. For the smart meter rollout in Germany, EMH metering has an entire portfolio ready: From the EDL meter to the first-generation smart meter gateway. EMH metering GmbH can manufacture its complete equipment portfolio on site. The production capacity is designed for 600,000 gateways a year. Such a gateway with the “Made in Germany” label is unique and has many advantages: Besides making production and delivery extremely fast and flexible – the complete process chain can also be adapted to the needs of customers. On request, EMH metering offers special services such as the installation of SIM cards or extended assembly such as the combination of gateways and meters to create an intelligent measurement system.

### **Solutions for the rollout of intelligent metering systems**

“We do not just supply devices, but individual customer solutions for the rollout of intelligent metering systems,” says Peter Heuell who is the CEO of EMH metering since 2017. EMH metering has long gone beyond being a pure meter manufacturer. Because after the alternative energy revolution, customers now need solutions for intelligent grids, the integration of renewable energies and new service offerings.

In addition to such new services, the portfolio continues to grow. In company’s R&D department in Brackel near Hamburg, the product range is constantly being expanded and maintained at state-of-the-art standard. In this way we are also a leader when it comes to future technologies. Example of e-mobility: The FNN-compliant EDL meter has been expanded to meet the legal requirements of electromobility and has already been approved by the PTB (German National Metrology Institute). It has been available as some time for an AC recharging infrastructure compliant with calibration regulations. And at fast recharging stations, it will be possible in future to perform billing with a DC meter from EMH metering – this has proven its worth over many years on electric locomotives.

### **Milestones of metering technology**

The broad portfolio of EMH metering GmbH & Co KG is based on the philosophy of its founder Peter Scheew. The motivation was to develop a suitable electronic energy metering solution for new requirements from the market. In 1989, Scheew developed the first ever electronic meter, laying the foundation for decisive developments in the energy sector. Especially within transport and distribution network operator, there was a great need for new solutions in the early 1990’s. Looking back it is hard to imagine, but back then energy suppliers did not have the technical tools to determine their customers’ consumption data in detail. In order to keep the grid stable and secure the energy supply, utilities must, however, be in a position to predict consumption as accurately as possible. The problem: The mechanical and hybrid meters that were standard in the 1990’s reached their limits when it came to store large amounts of data. Only fully electronic meters are capable to meet this requirement – something that hardly anyone believed at the time.

The first meter with integrated load profile storage from EMH metering was therefore a milestone in the industry. The meter was able to store the quarter-hourly values of a full month. As a result, suppliers were able to access many times more measurement data than previously and it was possible to develop the registered load profile measurement (RLM). This billing method is now standard, so that individual electricity prices can be offered to large consumers to ideally meet their needs.

Scheew and his colleagues saw increasing potential in the digital measurement of energy. For example, they integrated tariff control components in the meter. At the time, this was revolutionary. And they developed a meter that for the first time was able to measure not only the active energy but also the reactive and apparent energy as well as the voltage in the grid and at the customer end. This 4-quadrant meter from EMH was the first electricity meter to measure all 4 quadrants of the energy spectrum and was the precursor of today’s smart meter.

Creating added value and the desire to push the limits – these are the main drivers of developments at EMH metering. The familiar black chunky 3-phase meters will one day all be replaced by modern slim-line meters that measure the power digitally. Scheew's vision is now closer in our grasp as never before.

#### **About EMH GmbH & Co. KG**

EMH metering GmbH & Co. KG is one of the world's leading suppliers of digital systems for the collection, transmission, storage and distribution of energy measurement data. With intelligent and integrated measuring systems, EMH metering enables energy companies to digitise their energy systems and develop new business models. The product range comprises precision meters in the extra-high voltage and transmission networks, special meters for medium and low voltage distribution networks, electronic domestic supply meters, DIN rail meters for industrial applications as well as the corresponding communication systems and gateways. For the upcoming smart meter rollout in Germany, EMH metering is offering the necessary products and components that comply with legal requirements. EMH metering was founded in 1991 and has its headquarters in Gallin, near Hamburg. More than 250 employees work at a total of three locations.

[www.emh-metering.de](http://www.emh-metering.de)

#### **Press kontakt**

Eva Wagenbach  
möller pr  
Phone: +49 (0)221 80 10 87-89  
Email: [ew@moeller-pr.de](mailto:ew@moeller-pr.de)  
[www.moeller-pr.de](http://www.moeller-pr.de)