

Press release

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Platinum temperature sensors by Heraeus raise performance limits in e-mobility

To shorten the charging times of electric cars, more efficient power transmission is needed. At the same time, charging plugs must be safe despite the high energy transfer. Platinum sensors from Heraeus Nexensos offer a reliable solution: they can withstand greater loads while offering a consistently high level of safety. With their precise measurement results, they allow longer operation at the load limit.

More power in less time. This demand certainly applies to the charging times of electric cars, because this is the only way to efficiently shape the future of e-mobility. However, the optimization of charging times is reaching its limit primarily from a safety point of view. Charging plugs must function reliably over a long period of time, and the charging capacity needs to remain stable over the long term as well. A major challenge here is the heat generated by the high energy transfer, which can damage both the plug and the connection in the car. To reliably protect the devices and their users, platinum sensors from Heraeus quickly detect when temperatures begin to rise. The sensors deliver precise, drift-free measurements over their entire service life.

Optimized for the Future of E-mobility

"Platinum thin-film sensors have proven to be stable long-term and, thanks to their drift stability, response behavior and precision, meet the highest safety requirements," explains Martin Bleifuss, Head of Application Engineering at Heraeus Nexensos. This means that nothing stands in the way of progressive development and performance enhancement. Platinum temperature sensors, for example on printed circuit boards, were specially designed for use in heat quantity measurement. The design development focused on cost minimization, the strict requirements of the electronics industry, and the option of fully automatic further processing.

The SMD version of the platinum sensor is pre-applied on a printed circuit board. As the rear side is potential-free, the sensor is positioned on the metallic contact pins simply by means of shrink

tubing or metal springs. This flexible connection opens up new, advantageous thermal and design connections. The placement directly on the metal pins guarantees the best reaction time for optimum protection.

Proven Know-How for a Growing Market

The demand for reliable technology for e-mobility is growing steadily - particularly in Asia. China leads the way and has introduced a quota for electric cars and plug-in hybrids, while government subsidies are also boosting the market. Electric mobility is also accelerating its expansion in Europe. "The use of efficient sensors is thus one of the most important success factors in international competition. Established electronics manufacturers worldwide, such as Phoenix Contact, rely on Heraeus' technical expertise in the development of their products" says Bleifuss.

More information at the Sensor +Test trade fair in Nuremberg: June 25 - 27, Hall 1 Stand 440.

About Heraeus

A globally leading technology group, Heraeus is headquartered in Hanau, Germany. Founded in 1851, it is a family-owned portfolio company which traces its roots back to a pharmacy opened by the family in 1660. Today, Heraeus combines businesses in the environmental, energy, electronics, health, mobility and industrial applications sectors. In the 2017 financial year, Heraeus generated revenues of €21.8 billion. With approximately 13.000 employees in 40 countries, the FORTUNE Global 500-listed company holds a leading position in its global markets. Heraeus is one of the top 10 family-owned companies in Germany.

With technical expertise, a commitment to excellence, a focus on innovation and entrepreneurial leadership, we are constantly striving to improve our performance. We create high-quality solutions for our clients and strengthen their long-term competitiveness by combining unique material expertise with leadership in technology.

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Picture caption:
Heraeus Platinum Temperature Sensors
for E-Mobility. Example: Phoenix
Contact Charging Plug