

Press release

Lining up for the start: Kistler's new 4080B/BT miniature absolute pressure sensors – more rugged than ever before

Early detection thanks to real-time monitoring

Winterthur, November 2018

Kistler is in pole position with the next generation of its tried-and-tested miniature absolute pressure sensors in the 4080 family. Designed for high-precision pressure and temperature monitoring in harsh motorsport environments, the new Type 4080B and 4080BT piezoresistive sensors feature advanced electronics and fully media-separated measuring elements. These exceptionally rugged sensors ensure constantly reliable operation paired with maximum measurement accuracy and signal quality.

Development work on modern powertrain systems focuses on the complex interaction between the engine, the power electronics and the control technology – and sensors play a key part here. Ambient conditions present challenges such as limited space, vibrations and major temperature fluctuations as well as electrical or electromagnetic effects, and critical operating conditions must also be identified as early as possible.

Daniel Haas, Product Manager Motorsport at Kistler, explains the background: "To develop these new additions to our Type 4080 family of pressure and temperature sensors, we collaborated closely with leading engineers; we also drew on our vast experience in the innovative world of motor sport – where our sensors show their true grit."

Extremely rugged, reliable and precise

Types 4080B and 4080BT, the latest miniature absolute pressure sensors in our 4080 family, are specifically designed for harsh ambient conditions in motorsport and demanding requirements on the test bench. They feature integrated high-precision signal conditioning and a very wide, fully compensated temperature range from 25 to 150°C. An entirely media-separated measuring element ensures reliable operation with maximum measurement accuracy and signal quality. Enhanced electromagnetic compatibility also guarantees operation and measurement accuracy in environments exposed to electrical or electromagnetic effects.

Exceptionally compact, compatible and versatile

Thanks to their compact dimensions and high temperature resistance, the new absolute pressure sensors can be used for all standard onboard applications in motorsport. The most compact model – Type 4080BT – is ideal for demanding applications in the most confined spaces, and is available

in pressure ranges of 5, 10 and 20 bar. As well as the media-separated measuring element, this sensor features an integrated PT1000 temperature probe – making it an excellent choice for measurements in fuel systems, cooling water circuits or transmission applications. Based on integrated signal conditioning, the measuring element supplies voltage output signals for the pressure module and temperature probe. These advantages make the Type 4080BT suitable for universal use, and it also offers maximum flexibility for connection to a data acquisition system.

With pressure ranges of 5, 10, 20, 130 and 250 bar, Type 4080B offers a wider pressure range than Type 4080BT – so it is the solution of choice for use in power steering, hydraulic and braking systems.

Optional plug-and-play LEMO connectors save time and effort when connecting both sensor types to the test bench.

Visuals (Reproduction is free of charge provided that the Kistler Group is credited as the source of the image)



Kistler's impressive Type 4080BT absolute pressure sensor features an integrated temperature probe and compact dimensions that make it ideal for use in very confined spaces. The practical plug-and-play LEMO connector ensures fast and easy connection to a test bench.



The Type 4080B absolute pressure sensor features a wider pressure range of 250 bar, so it is the solution of choice for measurements in power steering, hydraulic and braking systems.

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About the Kistler Group

Kistler is the global market leader for dynamic pressure, force, torque and acceleration measurement technology. Cutting-edge technologies provide the basis for Kistler's modular solutions.

Customers in industry and scientific research benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. Unique sensor technology from this owner-managed Swiss corporation helps to shape future innovations not only in automotive development and industrial automation but also in many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler plays a key part in the ongoing development of the latest megatrends. The focus is on issues such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0.

Some 2 000 employees at 61 facilities across the globe are dedicated to the development of new solutions, and they offer application-specific services at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2017, it posted sales of CHF 422 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.