

Press release

A bridge to digitalization

Kistler Group launches world's first charge amplifier with IO-Link technology

Winterthur, 15 April 2020

A flexible new amplifier for today's industrial applications: [Kistler](#) introduces the miniature charge amplifier with IO-Link – suitable for use in a wide range of applications including robotics, the packaging industry and the food and beverage sector, as well as being ideal for OEMs. This intelligent amplifier combines analog and digital communication technology to pave the way for Industry 4.0.

Kistler is launching its 5028A charge amplifier – the first device of its type on the market that can use IO-Link technology to output analog signals from piezoelectric sensors as digital measurement data. Benefits for users include highly rigid and dynamic piezoelectric measurement technology, digital data that is resistant to interference from disturbance variables, and end-to-end communication all the way through to sensor level. IO-Link technology supplies users with real-time data to monitor the condition of their plants and measurement chains. This opens the way to predictive maintenance: for example, users can initiate maintenance tasks on a plant if data is regularly outside of the setpoint range. When the IO-Link component is replaced, the new parameters are transferred automatically.

By incorporating a digital interface into the 5028A charge amplifier, Kistler is taking another step towards the fully networked factory in keeping with the goals of Industry 4.0. Users receive reliable data for process evaluation – and they can start work on processing the data immediately. With the 5028A, the raw analog signal is already digitized in the amplifier. The disturbance variables that occur in conventional analog systems due to inductive or capacitive couplings can therefore be avoided from the outset. Likewise, complex and costly individual cabling for analog and control signals is eliminated. However, the 5028A is also suitable for alternative use as an analog charge amplifier with reset/operate input. It delivers proven performance for controlling fast processes with low latency and jitter. Stefan Affeltranger, Product Manager in Kistler's Production Monitoring section, is firmly convinced of the new product's potential: "The 5028A charge amplifier is the world's first amplifier for measurement data from piezoelectric sensors with communication based on IO-Link. This device will fit easily into almost any industrial application that calls for lightweight components and simple solutions."

Standard interfaces ensure flexible use

As well as its extended functional scope, the 5028A charge amplifier offers customers another decisive benefit: the interfaces with the upstream sensor as well as the customer's downstream system are compliant with industrial standards. This means that the charge amplifier can be integrated into any existing network that supports IO-Link. This advantage guarantees easy, cost-efficient installation – and users can be sure that data is transmitted reliably and securely. Kistler is thus taking another step towards the harmonization of proprietary connector types according to commonly used standards. This will make the products easier to use. Even on the smallest of Kistler's amplifiers, customers themselves can now adjust the settings in line with their own requirements. This innovation is Kistler's response to an industry-wide trend: growing demand for more flexible use of components in different systems.

Much valuable space can be saved thanks to the compact dimensions of the 5028A charge amplifier, which can easily be positioned on robot heads or other moving parts. The new device can be used generally in mechanical engineering applications and is also suitable for sectors such as medical technology, because it allows verification of changes to settings at any time. This product's favorable cost-to-benefit ratio underscores the economic advantages of IO-Link technology – an aspect that is also highlighted by the IO-Link Consortium.

Free Webinar on May 14th, 2020 on charge amplifier with IO-Link technology

Dipl. Ing. FH Stefan Affeltranger, Product Manager at Kistler, will present the new charge amplifier with IO-Link technology in a free webinar on **Thursday, 14th May 2020 at 10:00 (CET)**. Participants will get to know the product and the benefits of IO-Link technology, learn for which industrial applications the amplifier is outmost suitable and understand the added value on the way to a Smart Factory.

Click [here](#) to register.

Image material (please name the Kistler Group as picture source)



The new 5028A charge amplifier with IO-Link can output analog signals from piezoelectric sensors as digital measurement data, with the key advantages of flexibility, miniature format and lightweight design.



Analog, digital, and digital with IO-Link technology – as well as the option of analog operating mode: charge amplifiers from Kistler are designed to meet a variety of requirements.

Media contact

Suzanne Graeser Bieri
Divisional Marketing Manager IPC
Tel.: +41 52 2241 469
Email: suzanne.graeserbieri@kistler.com

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 2,200 employees at more than 60 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 2019, it posted sales of CHF 466 million. About 7% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.