HEIDENHAIN and Q-DAS®

Two Leading Companies Cooperate

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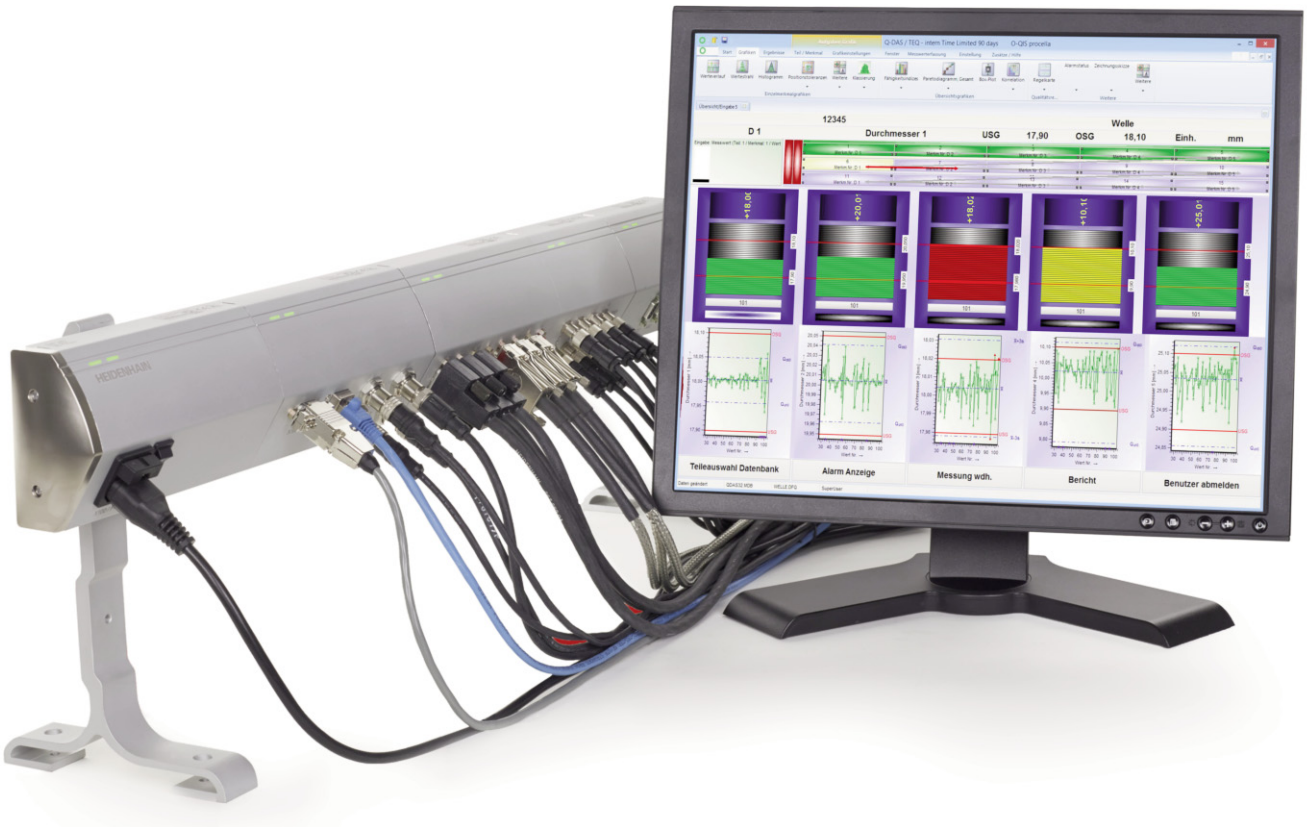
HEIDENHAIN measurement technology and Q-DAS® software collect, process, evaluate and archive information from more than 250 measuring channels simultaneously. The full integration of the software into the hardware makes the handling of this technology easy and comfortable.

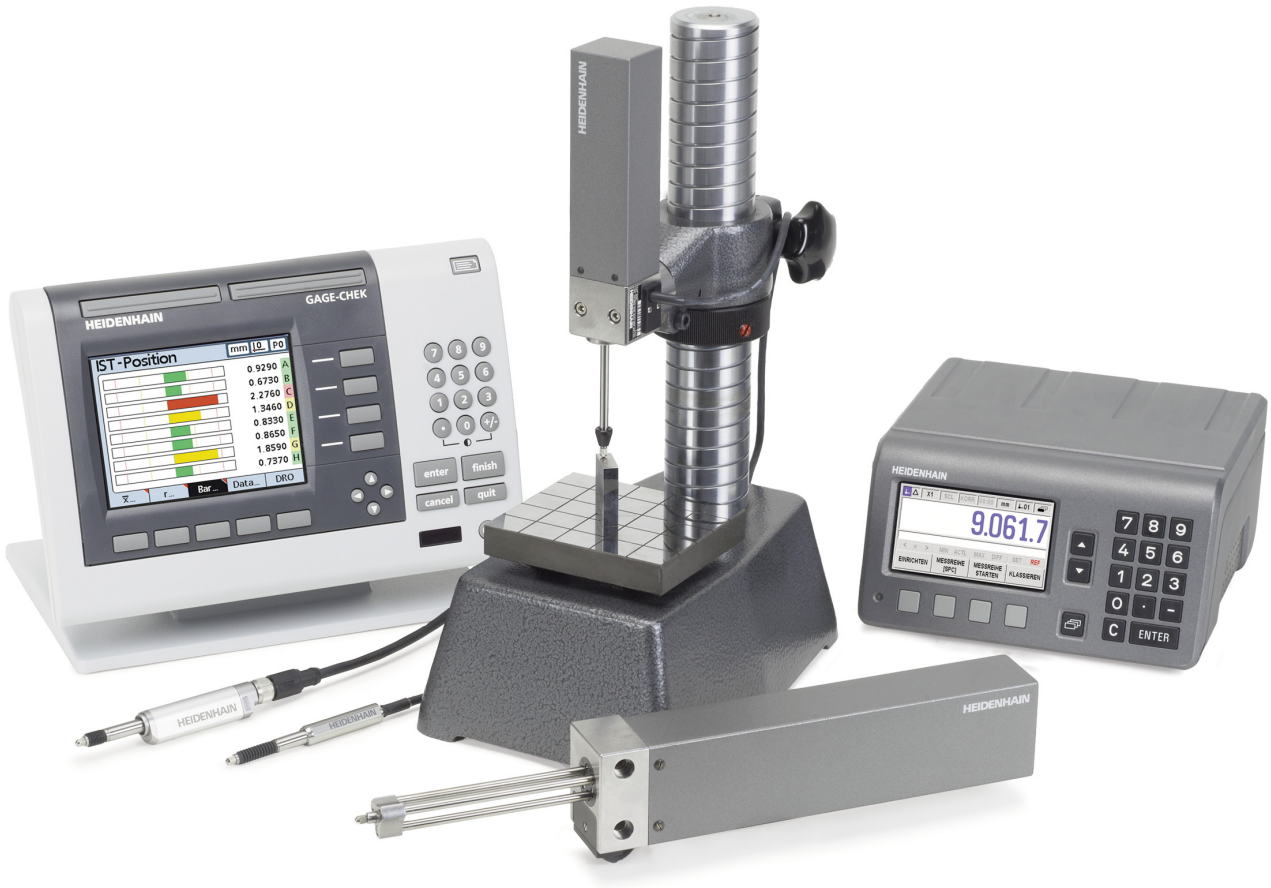
Multipoint measuring stations become more and more important in industrial metrology. It is characteristic of these applications that electronics control the simultaneous recording of several measured values taken from a test item – in case of complex measuring tasks this process often follows a specified test procedure. For many years now HEIDENHAIN has been providing position displays capable of evaluating information from up to 8 axes. Today, the follow-up MSE 1000 modular evaluation electronics unit can even record data from up to 250 measuring channels via various interfaces.

However, evaluating a measurement means more than just collecting information on site. If you want to achieve results based on these measurements, you must process, evaluate and archive the collected information. This is where the idea of cooperation between Q-DAS® and HEIDEHAIN was born – successful software solutions now support precision measurement technology.

The current version 11 of procella® integrated MSE 1000 software-based into the Q-DAS® world. Q-DAS engineers succeeded in providing all functionalities of their software to this Q-DAS®/HEIDENHAIN solution which makes it easier for users to handle this complex measuring station. As an example, you can configure all channels by using procella®.

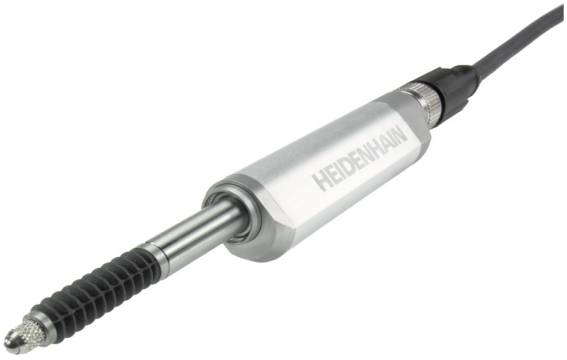
When designing the MSE 1000, HEIDENHAIN made a point creating electronics whose modules are as simple to install as possible and relatively easy to connect to measuring apparatuses. The technology identifies the selected system configuration of the modules automatically; users do not even notice this process. They just have to define and adjust the single measuring channels. You do not even need to configure the measuring instrument in case you apply an instrument with EnDat interface since it is capable of providing all required data itself and is immediately ready to take a measurement.





MSE 1000 supports the HEIDENHAIN EnDat protocol for absolute encoders but also any common incremental encoder, of course, further connection facilities for analog sensors as well as LVDTs and HBTs of best-known manufacturers. Modules with switching inputs or switching outputs allow for the interaction with further actuators of the measuring apparatus.

As described above, MSE 1000 provides the opportunity to connect measuring instruments with EnDat interface and use the entire range of functions. This leads our users to the key advantages in maintaining their measuring systems with foresight. EnDat devices even include an online diagnosis function showing the function reserve of absolute track and incremental track of the length gauges of the ACANTO series. Users may select further functional criteria, such as lighting condition, signal amplitude and generation of position values. These functions increase the availability and operating reliability of the system considerably.



In summary, HEIDENHAIN offers the following modules for the MSE 1000.

- Axis module for length and angle encoders (1 VSS, TTL/RS-485, EnDat 2.2, LVDT, HBT)
- Axis module including a universal interface for different sensors (± 10 V, 4…20 mA)
- Compressed-air module controlling e.g. pneumatically operated probes
- I/O module for digital inputs and outputs
- Power supply modules (100…240 V AC, 24 V DC)

Users can mount the modules on a standard rail according to DIN in order to work at a tidy and compact measuring station. MSA 1000 transfers data over standard Ethernet.

Due to the hardware of HEIDENHAIN and the Q-DAS® software, users have come full circle since they benefit from more than 20 years of experience in recording, evaluating and processing measured values.