

Smart Safety – Proven Reliability

The new Cerabar and Deltabar pressure devices

Advantages at a glance

Smart Safety

- Virtual wizards guide users through the SIL setup and proof testing, minimizing operator error
- Safety by design: Developed according to IEC 61508
- A checksum algorithm (CRC) ensures that safety relevant parameters are unchanged
- Backlight changes from green to red in the event of an alarm

Simplicity

- Intuitive operation via Endress+Hauser SmartBlue app and Bluetooth® interface
- Wizards simplify commissioning considerably
- The HistoROM ensures safe and easy transmission of the parameters
- The device can be operated by programming buttons without opening the cover

IIoT ready

- Verification of devices without process interruption thanks to Heartbeat Technology
- Heartbeat Monitoring can detect anomalies in the process and blocked impulse lines
- Heartbeat Technology provides smart diagnostic functions



We are relaunching the proven pressure and differential pressure devices. They are easier to operate and more efficient to maintain in safety-critical systems. Thanks to Heartbeat Technology, they provide a data basis for predictive maintenance.

In the chemical and other industries, the proportion of safety-critical systems has risen significantly in recent years, as has the number of complex proof tests. However, the higher maintenance requirements in these areas must not interfere with plant availability.

Efficient instrument directed operating concepts prevent systematic errors in device parameterization, maintain the high safety level of the plant and at the same time reduce maintenance costs. This applies to both commissioning and on-site service.

Smart Safety

The new family of pressure instrumentation offers **guided setup sequences** for commissioning, SIL parameter setup and SIL proof testing. They guide the user step by step through the test procedure. When the test is completed, a report is automatically generated and can be downloaded and visualized via the Bluetooth® interface and the Endress+Hauser SmartBlue app.

A further feature to exclude systematic errors is the automatically generated **checksum parameter (CRC)**. It is derived from the setting of all safety-relevant parameters and is recorded in the protocol. If only one parameter is changed, the checksum also changes. This means that you can see at a glance whether a parameter has been modified. This speeds up the inspection process.

A further safety feature: the backlight changes from green to red in the event of an alarm. This means that process anomalies and malfunctions are immediately noticeable. The new product families are **developed according to IEC 61508**. This enables direct use in SIL2 applications. In SIL3 applications, the devices can be used in homogeneous redundancy.

With the mobile **data memory HistoROM** you can transfer the parameters of the measuring point without errors when replacing the electronics. This allows you to replace the device quickly and smoothly, even without special device knowledge.

Simplicity

The intuitive operation is reflected in the interface with the SmartBlue app and any mobile device. This means that even measuring points that are difficult to reach, or those in dangerous plant sections, are easy to operate.

The **Bluetooth® connection** has a special protocol that meets the increased safety requirements in industrial applications. The Fraunhofer Institute AISEC tested the interface for its level of protection and rated it „High“ for protocol and algorithm. Therefore, it is nearly impossible for hackers to access the connection between the app and the device.


IIoT ready

The digital innovations of the next generation of devices help to simplify daily work. They create the opportunity for users to optimize their production processes by providing data-based insights from the process.

With Heartbeat Technology you obtain **transparency of devices and process conditions**. With the SmartBlue app, for example, you always have real-time data from your pressure transmitter at your finger tips.

The continuous diagnostic function of the pressure transmitters achieves a **diagnostic coverage of over 95 percent**. A verification protocol detailing the current device status can be generated at any time without interrupting the process. This allows you to schedule plant revisions and maintenance work in advance, thereby reducing downtime.

With Heartbeat Technology, you can also **detect anomalies in the process**, e.g. deviations in loop resistance and blocked impulse lines. This allows you to record other measured variables, such as pressure peaks caused by water and steam hammer. In this way you are able to detect mechanical stress on the surrounding plant components and generate a database for predictive maintenance. This considerably improves the basis for decision-making in maintenance processes and enables more targeted maintenance operations.



The electronic nameplate (RFID/QR code) gives you access to comprehensive measuring point documentation anytime and anywhere.

The new pressure product families are ready for the intelligent networking of processes and the data-driven optimization of Industry 4.0.

With the Bluetooth® interface for data transmission, the device can be easily configured and verified using the SmartBlue app.

Heartbeat Technology offers documented verification of the measuring point without process interruption. The monitoring functions create the data basis for predictive maintenance. They detect irregularities in the process and systematic faults such as blocked impulse lines in real time.

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