



Twice as safe under pressure

In processing facilities in the chemical, pharmaceutical and energy industries, the main focus today, more than ever, is on "safety". That's why SIL, or Safety Integrity Level, is becoming more and more important, providing modern process instrumentation with a coherent concept that can minimize potentially high risks to people and the environment.

Reliable measurement, easy integration

VEGADIF 85, a differential pressure transmitter developed especially with safety in mind, is VEGA's new component for reliable, continuous control and monitoring of industrial processes. Its strengths lie not only in functional safety, but also in the option of measuring differential and static pressure simultaneously with just one instrument. Housed in a compact single-chamber case, the transmitter is designed for economic efficiency and installation with low space requirements. These features are flanked by particularly simple, intelligent operation: a real plus in terms of error avoidance.

VEGADIF 85 is now qualified and approved according to SIL-2 (SIL-3) for manufacturing processes that depend on certified components, simple, user-friendly operation and permanently transparent processes. It can be parameterised conveniently via cable connection as well as wirelessly via Bluetooth. Its measured values can be integrated into the existing processes in no time at all – always in a form suitable to the respective conditions and requirements.

Unaffected by steam

Differential pressure, a robust and universal measuring principle, is used in many processes, especially for gases or steam. The pressure difference is determined by means of an orifice disc that narrows the flow in a pipe at a predetermined point. Flowing steam or gas builds up a higher pressure in front of the constriction point than behind it. The difference between the two values – before and after the restriction –

can be used to deduce the absolute quantity of gas that flows through.

Differential pressure transmitters are characterized by their high accuracy in measuring flow rates, even at pressures of only a few mbar. They also handle extreme temperatures with no problem. VEGA rounds out these advantages with a large number of available measuring ranges. Many different process fittings are available in conjunction with single or double sided chemical seals: denoted as CSS or CSB respectively. With this high-performance line of products, highly accurate, fail-safe measurements can be realized even under the most challenging conditions.

Differential and static pressure with one instrument

VEGADIF 85 sensors are equipped with a second, piezoresistive detector. They are thus the first transmitters of their kind that can measure both differential pressure and static pressure. And they can easily handle these two different measuring tasks in parallel. For example, they ensure a high degree of fail-safety in pipelines by determining the dynamic pressure and the superimposed static pressure at the same time: a measuring task that always required two separate pressure transmitters until now.

Where Bluetooth makes sense

There are many ways to simplify processes. However, it is important to strike the right balance between safety and convenience. Wireless data transmission can offer real added value in cases where access to data is difficult. With intuitive, simplicity, Bluetooth makes operation more flexible via smartphone, tablet or PC and provides transparency in wide-ranging applications.

Bluetooth is now available as an option for the new generation of differential pressure transmitters. Since it is part of the tried-and-trusted modular VEGA instrument platform plics®, it implements safety precautions at various levels already proven in the field. These include current encryption modes at the interface level, i.e. via PC or smartphone, as well as the necessary access codes that protect the sensor from unauthorized access. By the way, Bluetooth is also something for older systems: the current display and adjustment module PLICSCOM is downward compatible for the majority of VEGA measuring instruments manufactured since 2002 and now operating in the field.

Flameproof housing

In process engineering applications, pressure transmitters have to withstand environments where flammable gases, vapours or mists can escape from closed systems. Under certain conditions, with oxygen from the air mixed in in the right proportion, there is a great risk of explosion. The electronics used in VEGADIF 85 are 100% intrinsically safe and flameproof according to ATEX, IECEx and CSA. This means that the instruments can be safely adjusted at any time, even during operation in hazardous areas.

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