

BARTEC Safe.t[®] news

Customer information from BARTEC



POLARIS

New stars of Panel PC series



BARTEC Safe.t[®] Technology

Latest solution trends in hazardous areas

Whether dealing with barcode scanning, Pocket PC, visualisation of systems or communication via radio data transmission, technologies standing the test in general applications are increasingly used for applications in hazardous areas.

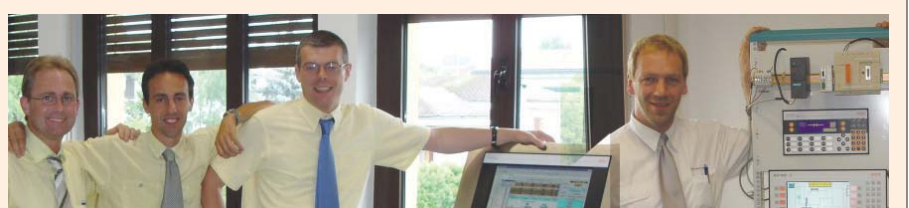
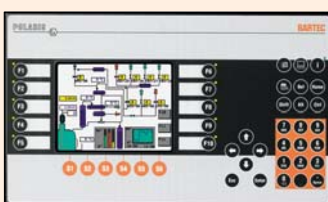
One of the most interesting examples is the Panel PC series POLARIS for the chemical, petrochemical and pharmaceutical industries. This series is certified for use in hazardous areas of zones 1 and 2 as well as 21 and 22.

With POLARIS wireless data exchange can be realised via an internal USB interface by means of wireless LAN or bluetooth

technology. Thus familiar comfort experienced in non-hazardous areas is now also available in hazardous areas.

POLARIS TFT colour graphic displays are available in six different sizes. As human machine interfaces, the 5.7" displays in compact design are perfectly suitable for control of simple machines such as mixers, dryers or fuelling stations. The 10.4" medium display range is perfectly suitable for control of complex machines or simple systems such as reactors, centrifuges or ball mills. With the 15" and 19" displays even complex systems like pharmaceutical production lines can be controlled.

www.bartec.de/polaris



great interest on the market +++++ POLARIS Roadshow arises great interest on the market+++

Automation of gas, pressure, control and measurement systems

Natural gas is transported from reservoirs and conveyance facilities to customers over great distances. The gas is transported in an underground network of pipelines throughout Europe. To be able to transfer large quantities via the network of pipelines, natural gas is compressed to a pressure of 67 bar.

Availability of equipment and explosion protection

The network of pipelines is controlled and monitored by means of a central control system and decentral gas pressure control and measurement systems. During operation different parameters are continuously measured and controlled such as gas quantity and gas pressure, temperature and moisture. Data exchange with the central units realized by modern remote systems.

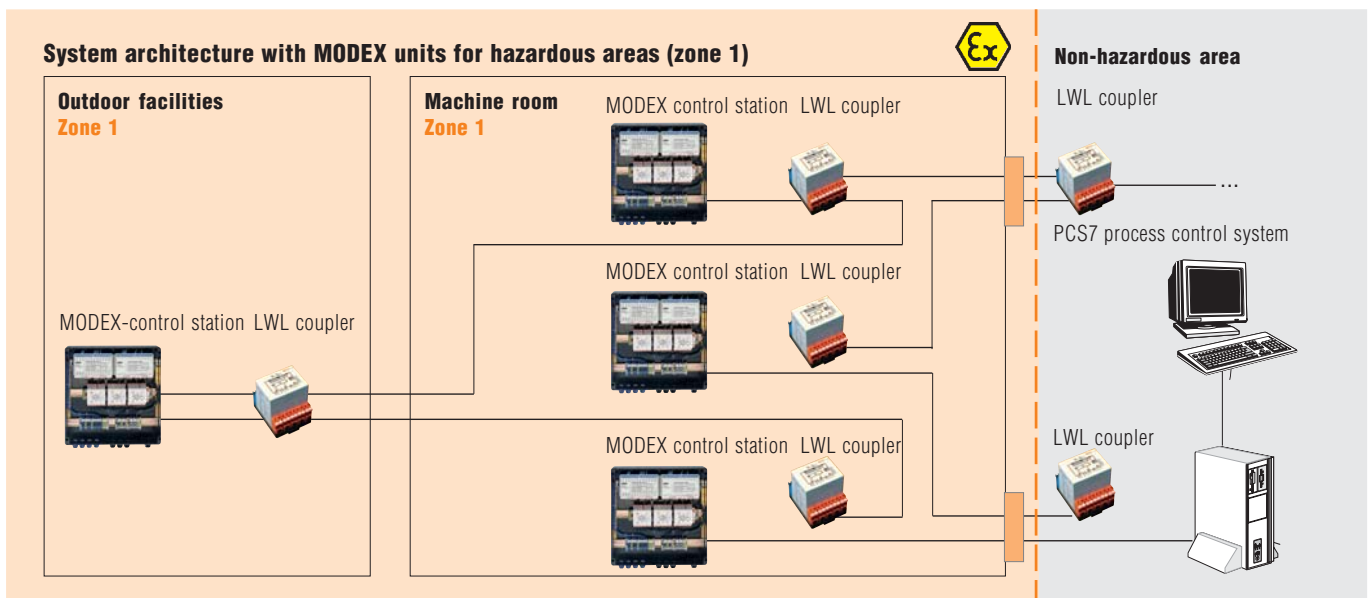
The complete gas pressure control and measurement system is controlled by a control system, type SIMATIC PCS 7, for example. It can be applied as an autonomous system and as a remote partner of the central control system. To simplify the service and monitoring function of sensors and actuators, hart protocol-capable equipment is applied. The MODEX BUS units developed by BARTEC support these requirements. They are directly integrated into the PCS 7 system. The MODEX units in flameproof enclosure (BUS modules and LWL coupler) encapsulated in an enclosure in accordance with increased safety (EEx e) present complete Remote-I/O stations - on site in hazardous areas. The connection to the existing unit bus is realized by means of a BARTEC LWL coupler. This allows maintenance in zone 1 - even when energized.

BARTEC BENKE system house

As solution partner for plant automation in hazardous areas, BARTEC BENKE has already automated several gas pressure control and measurement systems. Experts at BARTEC BENKE trust in state-of-the-art, reliable and combinable standardized technology.

During a turnkey project, all services are rendered from engineering via development of software, to procurement and installation, system testing and commissioning up to as-build documentation (calculations and assessment relevant to hazardous areas) and training of operators. Service specialists at BARTEC BENKE also support you during operation.

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Trace moisture measurement in gases and liquids

The HYGROPHIL F 5672 is the ideal solution for applications up to zone 0 where trace moisture (DT -80° ...+20°/2.5 ... 12000 ppm) is to be measured in gases and liquids. The HYGROPHIL F 5672 convinces during manufacture of technical gases, clean gases and cleanest gases due to its accuracy and its insensitivity to contamination in the natural gas and fuel sectors.

The compact and robust sensor can be very easily integrated in all types of equipment as it is compatible with many well-known connection systems (Swagelok, Gyrolok etc.) and can thus be retrofitted easily. Due to the measuring principle, the sensor is not

subject to drift thus follow-up calibration is not required. The sensor is connected to the evaluation unit by means of a flexible optical fibre cable (up to 800m), which is also suitable for use in the field. Here all the moisture parameters are calculated, displayed and transmitted via 2 programmable analogue outputs. A RS232 as well as limit value and fault relays are fitted.

With the HYGROPHIL F you can measure trace moisture accurately and with long-term stability. The manufacturing process can thus be controlled and optimised, and product quality can be maintained and improved.

NEW Retraction tool for trace moisture measurement in natural gas pipelines

www.bartec.de/messtechnik

■ stable over a long term ■ insensitive ■ convenient

An innovative further development of the trace moisture measurement unit is the new „Retraction Tool“. It has been specifically developed for the natural gas sector and allows moisture to be measured under pressure in the natural gas pipeline.

The new device convinces due to its compact design (3" weld-on flange, 350 mm height) and its easy handling. It takes only a few seconds to remove and reinstall the sensor – even at a pressure of 150 bar in the pipeline. The complex sample systems that have been used up to now can thus be replaced.

Due to direct measurement under high pressure, the measuring accuracy is considerably raised. The moisture is virtually measured on site – under pressure in the main pipeline (pressurised dew point). Undesirable effects, e. g. chemical processes taking place under pressure or difficult recalculations from the dewpoint at atmospheric pressure to the pressurised dewpoint in the pipeline (required for existing analysing systems), can be avoided with this innovative solution.

The combination of the HYGROPHIL-F 5672 and the „Retraction Tool“ is the ideal solution for moisture measurement in natural gas.



Emergency Shut Down in tank farms endangered by earthquakes



Earthquakes can cause fires and explosions in oil and gas applications, e. g. LNG terminals. For these reasons the automatic emergency shut down of critical system parts is an important function for ensuring safety. This shut down system can limit secondary damage in the wake of earthquakes.

System and measurement technology

For oil and gas tank farms endangered by earthquakes, BARTEC develops and manufactures safety systems for seismic measurement with ESD function. Acceleration sensors in combination with recording devices are key units. Connected in a network and controlled by a central network control system, these units carry out control functions.

Explosion protection

In addition to providing measurement units with a monitoring function, explosion protection measures have to be taken for these units on site. The acceleration sensors and recording units are installed in an enclosure in EEx de type of protection.

Turnkey projects

During turnkey projects, engineers at BARTEC render all on-site services from engineering, project planning up to the compilation of documentation and commissioning.

Turnkey analyzer shelters



When restructuring existing refineries analysing systems are often completely modernised. Specialists at BARTEC BENKE provide full service from engineering analysing and sample conditioning systems to constructing, approving and commissioning these systems up to training operators on site.

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Besides the central control system, process analyzing systems allowing operators to manufacture products in an ideal and knowledge-based way play a key role in refineries. Among numerous process analyzing systems applied in refineries, Physical Property Analyzers normally operated in accordance with the respective standard (DIN, ASTM, IP) required for measurement play a significant role.

BARTEC BENKE provides a wide range of process analyzing systems manufactured in its own premises and within 40 years has developed into the no. 1 in this market.

In all major refineries throughout the world these analyzing systems have been successfully applied for many years. Whether applied in distillation units, blending units for petrol, gasoil and fuel oil, in FCC units or natural gas pipelines - analyzing systems developed by BARTEC BENKE play a pivotal role.

In addition, complex safety measures are required when these systems are applied in hazardous areas.

This experience and special process knowledge gathered during decades are essential requirements for consulting services rendered before starting a new project. The competence and experience are also necessary for engineering and equipping complete analyzer shelters.