**Smart Box for valve management**

*Digital platform for intelligent valve management from EBRO ARMATUREN*

Hagen, October 2021 – Industrial valves are analogue components that play an important role in many different system processes. The Hagen-based manufacturer EBRO ARMATUREN is adopting an innovative approach to the digitalisation of valves and, with its new module EBRO Smart Box Unit SBU IO-Link, offers extensive monitoring and documentation functions. The module can be integrated seamlessly into existing digital and analogue system and process controllers via IO-Link, Bluetooth or other standardised interfaces. The benefits for customers are obvious: they have an overview of the relevant parameters at all times, can record operating states digitally and thus detect problems at an early stage thanks to automation. This allows failures to be prevented and process reliability increased.

**Meets the most stringent customer requirements**

Even by itself, EBRO SBU IO-Link meets all the demands that customers from all manner of different industries place on the digital and automated monitoring of shut-off and check valves. When combined with EBRO valves, EBRO actuators and EBRO sensor systems, the result is a perfectly coordinated overall package that guarantees customers an extremely high level of operational safety by monitoring faults. However, EBRO SBU IO-Link offers much more than that: the IO-Link technology makes it easy to integrate into an existing network and installation follows the “plug and play” principle, meaning that control and feedback are especially straightforward to handle. EBRO SBU IO-Link boasts comprehensive documentation capabilities, enabling events to be followed up at any time. The features of the SBU IO-Link reduce the total cost of ownership significantly. The fact that system maintenance and repairs can be planned cuts direct costs and ensures shorter downtimes and fewer failures.

**Smart Box Unit SBU IO-Link – the intelligent monitoring module**

The SBU IO-Link can be used both on manually operated valves (hand levers or worm gears) and on pneumatic actuators. Instead of just looking at a valve, the SBU IO-Link allows the operator to peek inside. It uses integrated sensors to record the valve’s most important parameters, which can be documented and monitored continuously. This includes a reliable Hall sensor for monitoring the end position, whose own end position and sensitivity can be adjusted electronically. Events such as pressure surges, system vibrations and faults can also be logged. Another integrated sensor checks the ambient and equipment temperature. The SBU IO-Link has eleven predefined messages at its disposal for signalling deviations from the preset values, ranging from equipment faults and equipment temperatures that are too low or too high through to ~~flap~~ opening times that are too long or too short, limits for switching cycle counters and the activation of the Bluetooth module. In combination with the “EBRO Connect” app, the Bluetooth interface provides access to detailed information on status monitoring and parameterisation even during operation.

Besides the integrated sensors, the electronic system also has two analogue and two digital process inputs, which the customer can use to connect various external sensors (e.g. fill level, flow rate, pressure) to the module and call up these values via IO-Link. This does away with the need for wiring and PLC signal inputs.

How the various operating states are signalled visually has also been optimised. For instance, the new SBU IO-Link comes with clearly visible LEDs on the top as well as the familiar position indicator. Various operating states can be assigned to the colours of these LEDs. Meanwhile, the sturdy aluminium case, which meets the requirements of protection classes IP65/67/68, protects the electronics during transport, installation and operation.

**Plug and play**

The SBU IO-Link is supplied as a 100% turnkey solution, with no additional assembly or installation work required on site. Commissioning and configuration can be done by means of programming via IO-Link or via Bluetooth using the EBRO Connect app. Customised preconfigurations are also possible.

**Future-proof communication**

The SBU IO-Link is IIoT-ready. It uses future-proof communication interfaces in the form of IO-Link, Bluetooth LE and secure data transfer via standard protocols. An IO-Link master enables data links to any number of higher-level field buses such as Profinet, EthernetIP, CAN and Devicenet, making it extremely easy to integrate the model into system and process controllers. Current values and analyses can be presented in chart form in the automation system with the help of monitoring software, meaning that faults and deviations from default values can be spotted quickly.

**Coordinated overall concept**

With the SBU IO-Link, EBRO ARMATUREN is leading the way towards digitalising shut-off and ~~check~~ control valves, including their actuation and management technology. Matthias Jortzik, Director of Valve Automation, says: “The EBRO SBU IO-Link is the first step towards digital valve management. It opens the door to comprehensive data logging right at the valve itself and allows data to be transferred to all kinds of different interfaces. The parameters that it captures will underpin all the other steps, such as process automation and valve diagnostics and analysis.”

**Captions:**

**SBU\_IO-Link\_1\_Geschlossen:**

The EBRO Smart Box Unit SBU IO-Link boasts extensive monitoring and documentation functions.

**SBU\_IO-Link\_3\_LED:**

The new EBRO SBU IO-Link has clearly visible LEDs on the top whose colours can be made to represent various operating states.

**SBU\_IO-Link\_4\_Anschlüsse:**

Besides the integrated sensors, the EBRO SBU IO-Link also has two analogue and two digital process inputs,

**SBU\_IO-Link\_6\_Antrieb+Klappe:**

The EBRO SBU IO-Link is supplied as a 100% turnkey solution, with no additional assembly or installation work required on site.

**EBRO ARMATUREN**

Since the company was founded in 1972, EBRO ARMATUREN has been developing, producing and selling shut-off, control and automation technology for industrial applications. More than 1,000 employees at three national and 30 international subsidiaries ensure that EBRO products are available in over 100 countries worldwide. Within the global network, production takes place at the headquarters in Germany and in Italy, Sweden, China and Thailand with uniformly high manufacturing and quality standards. In 2005, the Swedish manufacturer Stafsjö Valves AB was acquired and the product range was extended by an extensive portfolio of knife gate valves.

The owner-managed family business sees itself as a reliable, future- and value-oriented partner for its more than 35,000 customers worldwide: customer satisfaction, quality and safety are reflected in the range of more than 350,000 product variants, which are manufactured with high-precision technology and distributed with fast delivery performance for customers all over the world. For EBRO, it is a matter of course that, in addition to high-quality industrial valves, the corresponding drive and automation technology is also tailored as a complete unit precisely to the specific application and its requirements. This offers the customer further synergy effects in planning support, technical advice and documentation. EBRO has established itself in the market worldwide with innovative solutions, especially for demanding applications and sectors such as the chemical and pharmaceutical industry, food and beverage industry and seawater desalination.