

PRESS INFORMATION

Bosch Rexroth simplifies automation in Ex zones with single cable technology

Manuela Kessler | 23.03.2026 | Lohr am Main / Lohr | PI 010/26

- New MS2E Ex servo motor for zones 2 and 22 complements MKE motor series for zones 1 and 21
- Single cable solution reduces installation work and space requirements
- High power density with maximum torque of up to 360 Nm and high overload capacity
- Seamless integration into ctrlX AUTOMATION simplifies engineering



The Bosch Rexroth portfolio for explosive atmosphere areas is being expanded to include MSE and MKE motors. (Image source: Bosch Rexroth AG)

Bosch Rexroth is expanding its portfolio for potentially explosive atmospheres. With the new MS2E synchronous servo motor, the company has significantly simplified automation in zone 2 (gas) and zone 22 (dust) – and thanks to international certifications, given machine manufacturers access to global markets. The focus is on innovative single cable technology that significantly simplifies the installation, engineering, and commissioning processes.

"Explosive atmospheres place the highest demands on safety, efficiency, and international approvals. Our new Ex servo motors reduce the complexity of engineering and at the same time create maximum scalability for worldwide use," explains Marco Mehling, Business Owner Motors at Bosch Rexroth.

MS2E servo motor: more performance, less installation work

The MS2E is an Ex-certified synchronous servo motor for device group II, category 3. It is designed for zones 2 (gas) and 22 (dust) and uses the "Increased safety Ex ec" and "Protection by enclosure Ex tc" ignition protection types.

An important differentiating feature is the single cable connection with hybrid cable. It transmits power, encoder, and temperature signals via only one line. This significantly reduces wiring costs, space requirements, and potential sources of error.

The finely scaled series is available in six sizes and achieves a maximum torque of up to 360 Nm with an overload capacity of up to four times the rated torque. Thus, the MS2E covers a wide range of applications with high power density.

Additional safety is provided by high-resolution digital encoders in single-turn or multi-turn versions including functional safety according to SIL2 / PL d. An integrated motor data memory enables plug-and-play startup on the drive system ctrlX DRIVE.

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The new Type A expands the portfolio with international certifications according to ATEX, UKCA, IECEx, and CCC Ex, thus facilitating worldwide use.

MKE motor: pressure-resistant encapsulation for the harshest of environments

For applications in zones 1 and 2 (gas) and 21 and 22 (dust), Bosch Rexroth offers the MKE motor series with pressure-resistant encapsulation. With four sizes and ATEX and KCS certification, UL/CSA as an option, and now CCC Ex, the series is suitable for extremely challenging potentially explosive environments.

End-to-end system integration with ctrlX AUTOMATION

The MS2E and MKE Ex motors are fully integrated into the ctrlX AUTOMATION platform. This enables end-to-end engineering – from project planning through to installation and commissioning. Users benefit from a high-performance drive system, reduced complexity, and a consistent system architecture in potentially explosive areas.

Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile and Industrial Applications as well as Factory Automation. With its intelligent components, customized system solutions, engineering and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, around 32,600 associates generated sales revenue of 6.5 billion euros in 2024.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 417,900 associates worldwide (as of December 31, 2024). According to preliminary figures, the company generated sales of 90.5 billion euros in 2024. Its operations are divided into four business sectors: Mobility, Industrial Technology, Consumer Goods, and Energy and Building Technology. With its business activities, the company aims to use technology to help shape universal trends such as automation, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, software, and services to offer customers cross-domain solutions from a single source. It also applies its expertise in connectivity and artificial intelligence in order to develop and manufacture user-friendly, sustainable products. With technology that is "Invented for life," Bosch wants to help improve quality of life and conserve natural resources. The Bosch Group comprises Robert Bosch GmbH and its roughly 470 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 86,900 associates in research and development, of which nearly 48,000 are software engineers.

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