

PRESS INFORMATION

Bosch Rexroth Introduces PXC7100 Precision Welding Control System for Low Voltage Resistance Welding

Jennifer Fanning | 07/28/2026 | USA | JS26001

- PRI-web user interface supports connected manufacturing environment for resistance welding small parts
- Real-time transfer of data improves productivity and machine output

Bosch Rexroth's PXC7100 control system expands its resistance welding portfolio to better serve precision welding operations in the welding, forming, metal joining and assembly industries. The PXC7100 is cost-effective, simplifies commissioning and improves precision from enhanced process monitoring.

The PXC7100 control system is suitable for applications with particularly low voltage like splice compacting micro strands, contacting sensors or welding batteries. Unlike ultrasonic welding, resistance welding enables manufacturers to reliably extend or compress coated strands, making it well-suited for electronic applications that require corrosion-resistant conductors.

Intuitive connection and control

As part of the PRI-web user interface, a setup wizard enables quick commissioning of the PXC7100. When using the optional Measuring Gun Data (MGD) module, only one bus cable is required for all signal cables for the welding control unit, which significantly reduces the amount of cabling required. The MGD module digitizes all analog sensors such as force signal, position signal, current signal, transformer data and process data directly at the welding head.

The pre-processed data is transferred directly to the welding control in real time with a 1 kHz cycle rate via the Weld Interface Controller (WIC) Bus, where it's processed further. The scaling data, counters and mechanical data are also stored in the MGD module. When using the integrated servo function, no additional PLC or machine-side motion logic is required to control the electrode. Thanks to the web-based PRI-web user interface, users can operate the PXC7100 simply and intuitively, on the computer or via mobile devices.

Process data can be transferred via the IoT Connector, which supports the MQTT and OPC UA protocols, so that it can then be further processed as required and used as part of quality assurance or predictive maintenance tasks.

The PXC7100 builds on Bosch Rexroth's comprehensive resistance welding and joining solutions portfolio, which combines intelligent controls, software and automation technologies to deliver precise, repeatable welding processes across automotive, battery, electronics and industrial manufacturing applications.

For more information about Bosch Rexroth's resistance welding and joining solutions, visit www.boschrexroth.com/en/in/industrial-automation/joining-technology/.

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 31,900 associates generated sales revenue of 6.5 billion euros in 2025.

Basic Information Bosch

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The Bosch Group is a leading global supplier of technology and services. It employs roughly 412,000 associates worldwide (as of December 31, 2025). According to preliminary figures, the company generated sales of 91 billion euros in 2025. 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 490 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 82,000 associates in research and development.

Press Contact

Please get in touch with our Press Contact



Eden Estabrook

+1 7047148522

Eden.Estabrook@boschrexroth-us.com