Bosch Rexroth’s BODAS 32-bit Compact RC4-5 Controller offers the optimal balance of power and flexibility
Rexroth expands its portfolio of robust electronic controllers that are fit-for-duty for mobile hydraulic applications

The new BODAS RC4-5/30 controller, powered by 80 MHz, 32 bit TriCore technology, combines computational power with a generous assortment of flexible inputs and outputs in a shielded aluminum package suited for the many rigors of mobile equipment applications.

Founded on the unparalleled quality and innovation of BOSCH technology, Rexroth’s robust RC4-5 controller offers the optimal balance of power and flexibility to maximize both hydraulic component and overall system performance. However, the secret to realizing best in class electrohydraulic control performance is how the RC4-5 drives proportional solenoids.

The RC4-5 offers four fast and accurate Pulse Width Modulated (PWM) driver outputs with closed-loop current control. Closed-loop current control compensates for the real world changes in voltage and resistance to provide repeatable performance from machine to machine, day-in and day-out. Adjustable parameters for solenoid current, linearization and PWM frequency easily adapts the RC4-5 to a wide variety of 12- and 24-volt electro-proportional components. Finally, software algorithms embedding Rexroth’s considerable knowledge of drive and control enables the RC4-5 to smoothly and accurately
unleash the phenomenal power of hydraulics to meet the performance demands of today’s mobile equipment.

While controlling hydraulic power is often a core requirement for mobile equipment, the RC4-5 also provides a flexible set of inputs and outputs to support a wide variety of work, travel, auxiliary and operator functions for system integration. Many common sensors for force, speed, pressure, position and temperature measurement may be directly connected to the controller while two CAN bus channels offer communication gateways to a wider array of devices including joysticks, displays and engines. The RC4-5’s compact envelope of approximately 5” X 6” X 2” also makes this controller a good fit for mobile equipment where installation space is usually limited.

The computational power of the RC4-5 is also a good fit for the increased features, functionalities, and performance specifications to compete in the quickly evolving global mobile equipment market. With its 80 MHz, high performance 32-bit processor, the compact RC4-5 can easily handle multiple simultaneous complex control tasks. This often relieves the concerns of project managers and engineers undertaking a new software development.

Software development is executed using standard C/C++ program language which leverages common knowledge and development tool chains already existing in industry. To boost development speed and application performance, Rexroth offers their C-API, C Application Program Interface which encapsulates basic operations, fault detection, diagnostics and sophisticated control techniques for hydraulics in an easy to use library. Included with the C-API is the interface for Rexroth’s standard powerful mobile electronic support tool BODAS-service.

The BODAS-service tool allows controllers to be FLASH programmed, configured, optimized, diagnosed, and data logged in a user friendly environment. Since this tool supports the general Rexroth product program, it is already used by factory and service technicians worldwide. Demo versions of BODAS-service may be downloaded free of charge at www.boschrexroth.com.

About Bosch Rexroth:
Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves machines and systems of any size. The company bundles global application experience in the market segments of Mobile
Applications, Machinery Applications and Engineering, Factory Automation, and Renewable Energies to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 37,500 associates generated sales revenue of approximately 6.5 billion euros in 2012.

To learn more, please visit www.boschrexroth-us.com

About Bosch:
The Bosch Group is a leading global supplier of technology and services. According to preliminary figures, its roughly 281,000 associates generated sales of 46.4 billion euros ($61.6 billion) in 2013*. The Bosch Group comprises Robert Bosch GmbH and its more than 350 subsidiaries and regional companies in some 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. Its operations are divided into four business sectors: Automotive Technology, Industrial Technology, Consumer Goods, and Energy and Building Technology. This worldwide development, manufacturing, and sales network is the foundation for further growth. In 2013, Bosch applied for some 5,000 patents worldwide. The Bosch Group’s products and services are designed to fascinate, and to improve the quality of life by providing solutions which are both innovative and beneficial. In this way, the company offers technology worldwide that is “Invented for life.” Additional information on the global organization is available online at www.bosch.com, www.bosch-press.com, and http://twitter.com/BoschPresse.

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