ABB announces extended motion control offering

Nuremberg, 22 November 2011 – ABB now offers an extensive range of motion controllers and servo drives for diverse industrial applications such as labeling, packaging, bottling, pick and place, laser cutting / trimming, stacking, web feeders and high speed rotary wrappers.

“The ABB motion control product range extends to multi-axis motion controllers, high performance servo drives, rotary servo motors and linear motors – all of which will seamlessly interface to provide a complete motion control solution,” says Mark Crocker General Manager Motion Control, Low Voltage Drives. “With technology that is proven to work, we can ensure that we can continue to help manufacturers reduce energy consumption, increase equipment uptime, eliminate wasteful maintenance and increase productivity.”

This range of products further complements ABB’s industrial machine control offering of AC500 series PLCs featuring IEC61131 programming and PLCopen motion library, human-machine interfaces, ABB machinery drives and Jokab safety products.

Multi-axis motion control
The multi-axis motion control products meet the demands of rapidly developing automation lines, providing increased productivity, reliability and flexibility. NextMove e100 is ABB’s Mint programmable motion controller and incorporates real-time Ethernet POWERLINK for dozens of axes of control with vastly improved cabling infrastructure. There are four variations: panel mount motion controller, Ethernet machine controller, PC based motion controller and rack-based motion controller. The NextMove ES is a rack mount controller that achieves a high axis density in small space. It also provides a rapid swap out in downtime critical industries such as semiconductors and solar.

AC servo drives
The servo drives offering for analogue motion control comprises the analog MicroFlex and EuroFlex. Both drives are suitable for brushless AC servo motors and rotary and linear motors. The analog MicroFlex is rated at 1.5 A, 3 A, 6 A and 9 A, 105 to 250 V AC while the analog EuroFlex, which features a EuroCard rack mounted format, is 60 V DC, 5 A continuous and 15 A peak.

For digital motion control, the company now offers the MicroFlex e100 and the MotiFlex e100, with the new MicroFlex e150 Ethernet servo drive with EtherCAT capability being introduced at the SPS fair.

The MicroFlex e100 is a compact servo drive suitable for advanced control of rotary and linear motors and rated 1.5, 3, 6 and 9A, 105 to 250 V AC. It features an integrated, real-time Ethernet interface, CANopen and encoder input along with a versatile integrated I/O. The new MicroFlex e150 Ethernet servo drive family has four single-phase options offering output powers of 1.5, 3, 6 or 9 A. The drives feature as standard real-time operation with EtherCAT, and compatibility with EtherNet/IP, Modbus TCP and TCP/IP protocols.

The MotiFlex e100 is an advanced servo drive available in three-phase, 180 to 560 V AC up to 65 A. It features integrated, real-time Ethernet, CANopen and a universal encoder input along with standard TCP/IP operation. Expansion slots allow for a plug-in multi-axis motion controller, fieldbus, additional feedback interfaces or digital and analogue I/O.
Complementing the above is the ABB high performance machinery drive, ACSM1, which provides high performance speed, torque and motion control for demanding machines. The drives are available as three-phase, 230 to 500 V AC up to 210 A. The drive controls induction, synchronous and asynchronous servo and high torque motors with various feedback devices.

**Rotary servo motors**
The servo drives are complemented by an extensive range of rotary servo motors, BSM servo series and high dynamic performance (HDP) AC induction servomotors.

The BSM series of ABB servo motors are ideal for operation with the ABB high performance servo and machinery drives. The HDP range is characterized by higher torque density than all main competitors. For a given requested power, because of lower rated current, a smaller size drive can be used.

**Linear motors**
Linear motors provide speed and positioning performance through direct-coupled motion and eliminate mechanical transmission devices. They offer substantial improvements over applications using ball screws and timing belts. The rugged mechanical design provides accurate motion and precision positioning for hundreds of millions of cycles.

**Software tools**
The high-level Mint programming language helps to develop motion control programs for custom applications very quickly. Mint was has grown to become an accepted industry standard in motion control software with over 100,000 installations worldwide. Mint provides an advanced programming environment, simplifying motion control through high-level commands for sophisticated applications. Mint is a Basic-like programming language that will be immediately familiar to many engineers. Its multi-tasking capabilities allow complex applications to be easily broken down into manageable pieces.

For profiling applications, MintNC offers a complete machine control front end. Standard CAD file formats (including HPGL, DXF and G-code) can be imported and motion generated from the MintNC front end. MintNC is ideally suited to 2.5D applications such as laser cutting, water jet cutting, tangential knife and glue laying.

DriveSPC tool adds additional functionality on top of the standard firmware parameter interface of the ACSM1 drives, with an extensive function block library. With the function block library the drives can be customized for a wide range of applications.

**Accessories**
ABB’s range of man-machine interfaces extends from simple operator panels to the intelligent CP600 programmable, color, TFT, touch-screen panels; all fully supported by the Mint programming language. The programmable panels can offer functions such as graphical displays, conversion of values to meaningful units, programmable alarms and passwords.

**The future**
“The exciting technologies which ABB now has will enable us to deliver exceptional products and services to customers anywhere around the world,” says Crocker “We can build on the excellent reputation these motion control products have in the marketplace. We will continue to focus on innovation, quality and services and deliver solutions that support our customers’ needs both now and in the future.”
Press release

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 130,000 people.

Please note: All information based on US-GAAP.

Figure 1: Motion Control Products

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