

EC: Allen-Bradley Kinetix 5700 Servo Drive

Motion Control - Drives, servo drives: The Kinetix 5700 servo drive provides servo and induction motor control from one platform for large machines with high axis counts and power requirements, saving cabinet space and reducing configuration time and wiring requirements. This is a Control Engineering 2016 Engineers' Choice Honorable Mention.

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Large custom machines with high axis counts and substantial power demands have traditionally required separate high-axis and high-power servo drive platforms to meet their motion-control requirements. The Allen-Bradley Kinetix 5700 servo drive combines those capabilities into a single servo drive platform, resulting in cabinet-space savings, easier configuration and commissioning, and reduced wiring requirements.

The next-generation Kinetix 5700 servo drive features dual-axis servos and a power-dense design, enabling machine builders to realize up to 70% cabinet-space savings. DSL feedback ports support single-cable technology and can help reduce motion wiring requirements by as much as 60%. The Kinetix 5700 servo drive also combines high-performance servo and vector motor control to help reduce machine complexity, and reduce time and labor costs during integration.

Load observer real-time tuning technology helps eliminate the need to tune each individual axis and can deliver high-performance motion control out of the box. This can reduce commissioning time by days or weeks—or even months in the largest machines. Once a machine is operational, the Kinetix 5700 servo drive uses tracking notch filter technology to detect and eliminate resonant frequencies, and automatically make tuning adjustments over time to help optimize performance. This can reduce the need for regular tuning maintenance and even help prevent machine failures.

The Kinetix 5700 servo drive supports traditional hardwired safety and more advanced integrated safety, in which safety data is transmitted using the same wires and IP addresses as motion and control data. Integrated safety can help reduce overall system wiring, save time and money in installation, and help remove potential points of failure. It also makes safety zoning and configuration changes easier by eliminating the need to physically re-wire devices.



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