ABB motion control products
MicroFlex e150 servo drives

The MicroFlex e150 servo drive combines Ethernet technology, advanced multitasking programming and single phase operation in a compact package.

The MicroFlex e150 can operate from 105 to 250 V AC single or three-phase and is available in multiple current/ power ratings.

Ethernet and motor encoder feedback interfaces are fully integrated and optimized for demanding motion applications.

Safe torque-off is a standard feature, to meet the new European machinery directives.

Highlights
– Wide range of motion functions
– Embedded Ethernet including EtherCAT®, Modbus/TCP and Ethernet/IP
– Precision control of rotary and linear servo motors
– Advanced Mint programming
– Safety as standard

Applications
– Cutting and forming
– Pick and place
– Packaging (form, fill, seal, labelling etc.)
– Pharmaceutical/life sciences
– Laser/water-jet/textile cutting machines

Motion control without complexity
The MicroFlex e150 is designed to control a wide range of motion applications from simple point to point motion to advanced motion. Motion features include homing, indexing, change of target "on the fly", electronic gearing, CAM profiler, flying shear and high speed position latch features for registration.

Embedded Ethernet
Ethernet interface offers EtherCAT® for real-time control of multi-axis systems. In addition also EtherNet/IP™, Modbus TCP and RAW Ethernet are supported to enable control possibilities with other controllers such as PLC and Industrial PCs.

Precise control of rotary and linear motors
The drive provides precision motor control of servo motors, both rotary and linear. Universal encoder interface can be simply configured by software to support a wide range of feedback types.

Advanced programming as standard
The drive is also an intelligent drive, offering Mint programming as standard. Mint is a high level multitasking language, tailored for motion applications. This powerful but simple programming language within Mint WorkBench provides control of communications, logic, motion and HMI interactions.

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Real-time control of multi-axis system with EtherCAT®

EtherCAT® connectivity offers a real-time drive control interface for advanced multi-axis systems. The drive is an ideal partner to the ABB AC500 PLC product line, providing an industry standard solution with IEC 61131 programming and PLCopen motion functions.
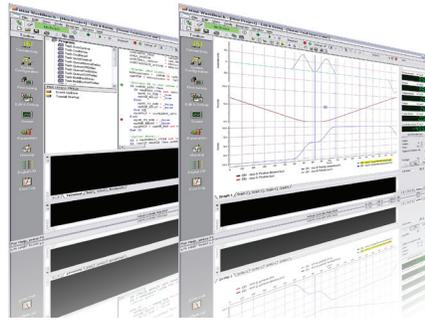
Advanced motion with simple and easy commissioning

Mint WorkBench PC tool offers fast and simple setup, commissioning and monitoring in a single software tool. In addition to a step by step configuration wizard, oscilloscope view and parameter handling, it also includes motion programming. For fast help and support the tool can package all data as a single file, which can be sent by email.
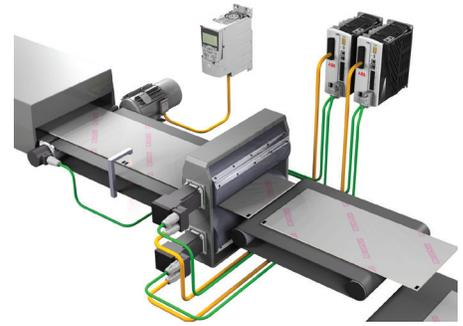
Motion technology fully integrated

The drive can be used as a stand alone single axis machine controller. Mint programming and Ethernet connectivity combined with on board I/O and HMI connectivity is offering a cost competitive solution in typical motion applications.

EtherNet - EtherCAT® real-time technology

– EtherCAT® interface - 2 port with LED network activity
– EtherNet/IP™ and Modbus TCP
– TCP/IP mode of operation (non real-time) with ActiveX support or RAW Ethernet

AC servo - 1- or 3-phase

– 105 to 250 V AC 50/60Hz
– AC servo motors, rotary and linear
– 1, 3, 6 and 9 A rms with 200% for 3 s
– One IP20 frame size: 180 x 80 x 157 mm (H x W x D)/1.5 kg
– Fanless operation < 4 A rms @40 °C
– Footprint EMC filter to IEC 61800-3 category 2

24 V DC supply to maintain communications/ position

Motor feedback - universal encoder

– Support for incremental + Halls, 1v SInCos, SSI, BiSS, EnDat 2.1/2.2
– Dual encoder function supports one incremental (no Halls) and one serial encoder simultaneously for 'Dual loop' or line shaft encoder functions
– Standard 15-pin connection, software selected operation

Mint motion - advanced motion programming

– Powerful Mint multitasking software
– Motion capability including linear motion, indexing, flying shears, software CAM profiler and more
– HMI, communications and logic handling

Safety - safe torque-off (STO)

– Dedicated 2 channel safe torque-off in accordance to IEC 61800-5-2, SIL3 PLe

Additional digital I/O

– 6 x digital inputs (10 in total)
– 4 x digital outputs (7 in total)

USB and serial - communications

– USB for configuration and customer PC application interfaces (supported by free ActiveX components)
– RS485 serial for PLC, HMI or other device communications

I/O - digital and analog

– 4 x digital inputs (10 in total)
– 2 x latch inputs 1µS latency for registration
– 3 x digital outputs (7 in total)
– 2 x analog inputs +/-10 V 12 bit
– 1 x analog output +/-10 V 12 bit

For more information please contact your local ABB representative or visit:

www.abb.com/motion
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