

Hi-drive: Hi! New drive!

Parker Hannifin presents “Hi-drive”, a new range of fully-digital drives for brushless motors with currents from 2A to 100A and operating from 230V or 480V AC supplies. Hi-drive is able to control asynchronous motors, and its target market is where high precision, accuracy, performance, fieldbus connectivity and custom applications are required.

Hi-drive has several motion control functions already built-in including current, torque and speed control, positioning with trapezoidal profiles, digital lock with variable ratio and phase correction, electronic cam, real-time mode, S-ramp positioning, homing functions and position capture. For motor feedback, either a resolver or encoder (incremental, SinCos or EnDat absolute) can be used. In addition, an auxiliary encoder input is available for position loop control or for speed reference using an external feedback device. An encoder simulation port is also available.

Hi-drive can be configured using custom software for the PC which communicates with the drive directly via RS232. An RS422/485 port is available in addition. The standard version of Hi-drive has two CANBus ports with either standard CANopen or with the proprietary profile “SBC-CAN”, a synchronous serial bus which allows position and speed control as well as synchronisation. Up to three optional fieldbus expansion boards can be added. Fieldbuses available include Profibus-DP, DeviceNet, CANopen, Sercos, Ethernet and Safety Bus. In order to customise the drive, Hi-drive's standard version incorporates “picoPLC”, a built-in PLC environment programmable with standard languages (Instruction List and Ladder). PicoPLC allows the external world (input and output signals, bus parameters, etc.) to communicate with the drive and to execute function sequences. Should the custom application require additional computational resources, an optional board can be inserted which is programmable with PLC commands according to IEC 61131-3 (Instruction List, Ladder, Function Block Diagram, Sequential Flow Chart, Structured Text). In addition to Hi-drive's standard inputs and outputs, various I/O expansion boards can be added.

EMI filter is integrated and safety relè is possible as option. In addition holding brake management with a dedicated output port is included as standard in the drive.

