

Parker Hannifin's (www.parker.com) electromechanical division has launched a series of small high-performance brushless servo drives. The SLVD drives measure 141 mm x 86 mm x 140 mm and the family includes models that can deliver shaft powers of up to 1.5 kW. Comprehensive communications facilities include RS-422/RS-485 as standard, with CANopen and DeviceNet interfaces available via an optional gateway. The drive also offers industry-standard step-direction and ± 10 V analog control inputs, for users who wish to migrate existing machines to modern servo technology without changing host controllers. In addition to resolver and encoder inputs, the drive features two digital and two analog user-definable inputs, two digital user-definable out-

CANopen and DeviceNet brushless servo drives

puts, and an encoder emulation output. All digital I/O uses PLC-compatible 24 V signal levels for ease of system integration. The drives enable high torque and acceleration/deceleration figures to be obtained from small frame size units. Designed for direct-online operation from a standard 230 V AC mains supply, the servo drives are available with a choice of three power output stages, offering current ratings of 1.25 A, 2.5 A and 5 A continuous (2.5 A, 5 A and 10 A peak). High frequency switching techniques are employed to maximize performance and efficiency, and thereby reduce internal heat dissipation. The drives can be used with any stan-

dard 3-phase brushless servo motor that uses sinusoidal commutation and resolver feedback, but are designed for optimum performance with the company's MB and SMB series motors. The two families include 20 models that are for use with SLVD drives, offering eight different frame sizes from 56 mm to 205 mm, continuous torque ratings from 0.2 Nm to 28 Nm, and peak torque ratings as high as 144 Nm. Three of these motors are special high torque density models that can generate up to 30% more torque than conventional servo motors of the same size. SLVD servo drives can be used for position, speed or torque control,

and are capable of handling advanced motion control functions such as encoder following, cam profiling and electronic gearbox; a fast servo loop update time of 128 μ s helps ensure accurate current control for applications involving dynamically-changing move data.

The drives are essentially parameter-driven units designed to be controlled directly from a PC, but they also incorporate a picoPLC based controller that can store up to 128 program steps, enabling simple motion control sequences to be commanded by external events or signals from a host controller, such as a PLC. An optional plug-on front panel keypad and display module allows all basic drive parameters, such as motor idle and run speeds, to be set up without the use of a PC.