

Parker Hannifin ([www.parker-emd.com](http://www.parker-emd.com)) has developed a brushless motor series known as MotorNet with an integrated drive and control. Fewer interconnections, ease in overcoming EMC (electro magnetic compatibility) problems and compactness of this integrated approach lead to cost benefits. The range covers nominal torques from 1.4 Nm to 5 Nm, and nominal speeds from 3,000 1/min to 6,000 1/min. The same drive unit is combined with three different motor sizes, therefore the nominal and maxi-

## *CANopen brushless motors*

imum currents are the same over the complete range. The supply voltage is 230 V AC three-phase for the motor supply and 24 V DC for the logic supply. Communication with MotorNet is exclusively via CAN and this is used both for configuration and control. Two protocols are available on CAN, CANopen and the proprietary profile SBC-CAN, which is optimized for position, speed and torque control. The CAN baud-rate can be up to 1 Mbit/s. The drive

can also be configured and controlled via DeviceNet or RS-232 using a gateway known as "Bridge".

The drive has a range of standard motion control functions: current, torque and speed control, positioning with trapezoidal profiles, digital lock with variable ratio and phase correction, electronic cam, real-time mode (pre-defined and optimized profiles for the positioner via CAN), homing functions and position capture. In addition,

the drive has an on-board PLC by default, programmable via standard languages (instruction list and ladder logic). The PicoPLC provides for communication of I/O signals, bus parameters etc. with the drive. In addition to the CAN and power connections, the drive has two digital inputs as standard, which are generally used for fast events and position capture functions. An incremental encoder is used for feedback from the motor, allowing position control. The drive is level IP54 protected.