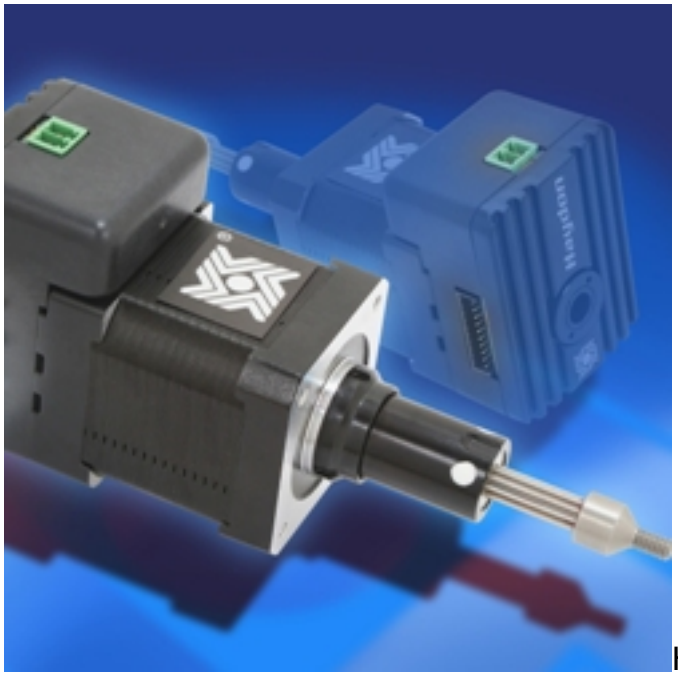
Linear Actuator with RS-485 Communication Protocol



Haydon Kerk Motion Solutions has broadened its IDEA™ line of programmable linear actuators with a RoHS compliant, easy-to-use electronic drive and fully programmable control unit integrated with a linear actuator. The compact, versatile unit is ideally suited for equipment or systems that require a small footprint. The IDEA platform also has added the capability of communication using an RS-485 data protocol, overcoming the limitations of other drive communication methods and making the RS-485 IDEA programmable linear actuator perfect for industrial applications.
The main advantage for using the RS-485 protocol, especially for industrial equipment such as stepper drives, industrial motor drives, and servo systems, is the ability for long data transmissions that exhibit excellent immunity to electrical noise. The RS-485 protocol utilizes “differential” signal lines for limiting common mode noise coupling and twisted pair cabling for cancelling out induced noise current. These allow IDEA devices to communicate over a 1000-foot network without the need for termination resistors and to reach up to 256 addressable device nodes. An industrial controller can send commands to all the drives at once or control each drive separately when assigned a unique identifier, a number between 0 and 255.

Among the hardware features of the IDEA Drive platform are programmable current control, a single supply voltage of 12 to 48 VDC, 2.6Arms (3.68Apeak) max rated current per phase, and 8 opto-isolated general purpose I/O. The inputs are rated for 5 to 24 VDC, 4mA max per input. The outputs are open collector, 5 to 24 VDC, 200mA maximum per output.

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