Four-quadrant PWM Servo Controller Touts Large Bandwidth

Maxon’s NEW ESCON 36/2 DC is a four-quadrant PWM servo controller for use with DC motors up to 72 W. This fast digital current controller features a large bandwidth for optimal motor current/torque control. The drift-free and dynamic speed behavior enables a speed range of 1 rpm to 150,000 rpm. The unit provides a range of functions, with fully configurable digital and analog inputs and outputs. When matched up with the company’s range of motors, high demanding and dynamic drive solutions are asserted to be possible. Additionally, it can be run in various operating modes (speed controller (closed loop), speed controller (open loop), current controller). This compact servo controller is controlled by an analog set value. The value can be specified by analog voltage, an external or internal potentiometer, a defined value or by a PWM signal with variable duty cycle. Other functions include the ability to enable or disable the power stage depending on the direction of rotation, or to use speed ramps for acceleration and deceleration. The speed can be regulated by a digital incremental encoder (two-channel, with/without line driver), DC tacho or without encoder (IxR compensation).

Designed to be user-friendly with an easy start-up, no in-depth knowledge of drive technology is required. When the servo controller is connected to a PC via a USB port, it can easily and efficiently be configured with the "ESCON Studio" graphical user interface. During startup and configuration of the inputs and outputs, monitoring, data recording and diagnostics, the user has access to a large variety of functions and is assisted by user-friendly software wizards, as well as an automatic procedure for fine-tuning the controller. It comes fully equipped with everything that is needed. No additional external filters or motor chokes are required and pre-assembled cables for the startup are available as accessories.

The ESCON 36/2 DC has protective circuits against overcurrent, excess temperature, under- and over-voltage, against voltage transients and against short-circuits in the motor cable. It is equipped with protected digital inputs and outputs and an adjustable current limitation for protecting the motor and the load. The motor current and the actual speed of the motor shaft can be monitored by means of the analog output voltage.

The large range for the input voltage and the operating temperature allows flexible use in a variety of drive applications. With its exceptional efficiency of 95 percent, the inexpensive ESCON 36/2 DC is a first-class choice for mobile, highly efficient yet consumption-optimized applications.

Maxon Precision Motors
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