Compact, Powerful Four Quadrant PWM Servo Controller

maxon’s new ESCON 36/3 EC is a 4-quadrant PWM servo controller designed for efficient control of brushless DC motors with Hall sensors up to approximately 100 Watts. The ESCON 36/3 EC has excellent control properties and a very fast digital current controller with a large bandwidth for optimal motor current/torque control. The drift-free yet extremely dynamic speed behavior enables a speed range of 0 to 150,000 rpm. The ESCON 36/3 EC provides a wide range of functions, with fully configurable digital and analog inputs and outputs. It is perfectly matched to maxon's range of motors and thus allows dynamic drive solutions that meet the highest demands. Furthermore it can be run in various operating modes (speed controller (closed loop), speed controller (open loop), current controller).

The compact servo controller is controlled by means of an analog set value. This value can be specified by means of analog voltage, an external or internal potentiometer, a defined value or by means of 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 means of Hall sensors.

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 a well-designed automatic procedure for fine tuning the controller.

The ESCON 36/3 EC has protective circuits against over current, 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%, the inexpensive ESCON 36/3 EC is a first-class choice for mobile, highly efficient yet consumption-optimized applications.

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escon.maxonmotor.com [1]

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[1] http://escon.maxonmotor.com/