

ESCON 36/3 EC

Maxi in the matter of performance, control properties, and range of functions. Mini as far as price, size, and commissioning are concerned.

As the third member, the ESCON 36/3 EC joins the one year ago launched series of maxon motor ESCON servo controllers. It captivates by user-friendliness and outstanding performance. Very well equipped, the miniaturized device demonstrates true greatness. Its special design allows the setup of cost-optimized drive systems solely using Hall sensor feedback (no encoder necessary) without waiving the comprehensive 4-quadrant operation capabilities. All of it in miniature dimensions and unrivaled power density. It is designed for efficient control of BLDC motors (brushless DC motors, so-called EC motors) with Hall sensors up to approximately 100 Watts. As part of the ESCON family, it represents the embodiment of unrivaled power density in the field of servo controller technology offering highest comfort, extensive functionality, and best protection.

The ESCON 36/3 EC has excellent control properties and a very fast digital current controller with an enormous 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 technological masterpiece provides a wide range of functions with fully configurable digital and analog inputs and outputs and can be run in various operating modes (speed controller (closed loop), speed controller (open loop), current controller). It is perfectly matched to maxon's range of motors and thus allows dynamic drive solutions that meet the highest demands.

The compact servo controller is controlled by an analog set value specified via analog voltage, external or internal potentiometer, fixed value, or by means of PWM signal with variable duty cycle. Other interesting features are, for instance, 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 with Hall sensors.

Startup made easy

Top performance should not be a matter of practice makes perfect. Therefore the servo controller has been designed specifically with easy startup and user-friendliness in mind. Hence, 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 graphical user interface «ESCON Studio». A large variety of functions, user-friendly software wizards, and a well-designed automatic procedure to fine-tune the controller come in handy during startup and configuration of the inputs and outputs, for monitoring, data recording, and diagnostics.

As far as the hardware is concerned, the ESCON 36/3 EC comes fully equipped with everything that is needed. For example, no additional external filters or motor chokes are required.

Top-notch protection

The ESCON 36/3 EC features protective circuits against overcurrent, excess temperature, undervoltage and overvoltage, against voltage transients and short-circuits in the motor cable. Furthermore it is equipped with protected digital inputs and outputs and adjustable current limitation to protect motor and load. The motor current and the actual speed of the motor shaft can be monitored by means of the analog output voltage.

Flexibility and efficiency without compromise

The wide range for input voltage and operating temperature allows a flexible use in almost all drive applications, in automation technology, in machine manufacturing and equipment engineering, and in mechatronics. 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.

For more information on ESCON, the new servo controller range of maxon motor, visit <http://escon.maxonmotor.com>.



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*ESCON 36/3 EC
digital 4-Q servo controller for brushless DC motors
up to approximately 100 Watts*