

## **ESCON Module 50/5—the miniaturized OEM plug-in Module of maxon motor control's Servo Controller Series**

Easy-to-use with excellent motor control characteristics, and peak performance.

**New to the ESCON servo controller family, maxon motor introduces a miniaturized OEM plug-in module; the ESCON Module 50/5. The compact, powerful 4-quadrant PWM servo motor controller offers efficient control of permanent-magnet activated brushed and brushless DC with Hall sensors up to approximately 250 Watts. As part of the ESCON family it stands for high usability, exceptional performance, and unprecedented power density in servo motor controller technology. Its built-in comfort, functionality, protection, and performance are hard to beat.**

The powerful OEM plug-in module 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. It offers a wide range of functions with fully configurable digital and analog inputs and outputs and can be run in various motion control operating modes (speed controller (closed loop), speed controller (open loop), current controller). And it perfectly matches maxon's range of motors and thus allows dynamic drive solutions that meet the highest demands. Thereby, it fully integrates into complex applications with little effort.

This with a distinctive benefit: Customers can fully focus on their main task; the development of their own device. For the motor control part they can make use of maxon motor's vast drive know-how already built into the ESCON Module. An indepth Motherboard Design Guide is available for integration to OEM PCBs and a suitable motherboard makes initial commissioning a simple task.

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 interesting functions 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 by means of a digital incremental encoder (2-channel, with/without line driver), DC tachometer or Hall sensors.

### **Startup made easy**

Top performance should not be a matter of practice makes perfect. Therefore, the servo motor controller has been designed specifically with easy startup and user-friendliness in mind. No in-depth knowledge of drive technology is required. Additionally available is a motherboard for easy initial commissioning of the ESCON Module 50/5.

When connected to a PC via a USB port, the servo motor controller 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.

### **Top-notch protection**

The ESCON Module 50/5 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.

## Uncompromised flexibility and efficiency

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 robotics. With its exceptional efficiency of 98%, this economical ESCON Module 50/5 is a first-class choice for mobile, highly efficient yet consumption-optimized applications.

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



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**maxon motor ag**  
Brünigstrasse 220  
P.O. Box 263  
CH-6072 Sachseln

Phone +41 41 666 15 00  
Fax +41 41 666 16 50  
Web [www.maxonmotor.com](http://www.maxonmotor.com)

