

## maxon motor Extends its ESCON Range of DC Motor Controller Products

maxon motor have expanded their ESCON controller family with 2 new products - the ESCON 70/10 and the ESCON 50/5 module for OEM integration. The series stands for unprecedented power density controller technology. It's built-in functionality, protection and performance are hard to beat.

The ESCON 70/10 features high usability and exceptional performance. For brushed DC motor and brushless DC motors, the servo controller is controlled by means of an analogue set value. This value can be specified by means of analogue voltage up to 700W, an external or internal potentiometer, a defined value or by means of a PWM signal with variable duty cycle. Other interesting functions are the ability to enable or disable the power stage depending on the direction of rotation or the use of 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.

The ESCON 50/5 Module is a miniaturised OEM plug-in for the servo controller series. The compact, powerful 4-quadrant PWM servo motor controller offers efficient control of permanent-magnet brushed and brushless DC motors with Hall sensors, up to approximately 250 Watts.

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 behaviour, enables a speed range of 0 to 150,000 rpm. It offers a wide range of functions with fully configurable digital and analogue inputs and outputs and can be run in various motion control operating modes (speed controller (closed loop), speed controller (open loop), current controller). The ESCON 50/5 matches maxon's range of motors and allows dynamic drive solutions that meet the highest demands. Thereby, it fully integrates into complex applications with little effort.

This enables customers to 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 drive know-how already built into the ESCON Module. An in-detail Motherboard Design Guide is available for integration to OEM PCBs and a suitable motherboard makes initial commissioning a simple task.

Speed and torque servo controllers in the ESCON range have the following features:

- Freely assignable I/O for flexible integration.
- PWM input for set point values so that it can be driven from a PLC or chip.
- Analogue inputs and outputs – freely assignable to current, velocity, temp monitoring.
- A tight fast current loop 53.6 KHz for excellent steady speed control.
- High efficiency 95%.
- Solutions for DC brushed and DC brushless motors.
- Large chokes to control smaller motors and capacitive suppressed precious metal brushed motors also, meaning that there are no extra ancillaries required to run many types of motor.
- 4 quadrant control for regeneration and controlled deceleration (e.g. cam arrangement).

Other products in the ESCON range include:

- **ESCON 36/2 DC, 4-Q Servocontroller, 10-36 V, 2A/4A**  
The ESCON 36/2 DC is a small-sized, powerful 4-quadrant PWM servo controller for the highly efficient control of permanent magnet brushed DC motors up to approximately 72 Watts.

- **ESCON 36/3 EC, 4-Q Servocontroller for EC motors, 2.7/9 A, 10 - 36 VDC**  
The ESCON 36/3 EC is a small-sized, powerful 4-quadrant PWM servo controller for the highly efficient control of brushless EC motors up to approximately 100 Watts.
- **ESCON 50/5, 4-Q Servocontroller for DC/EC motors, 5/15 A, 10 - 50 VDC**  
The ESCON 50/5 is a small-sized, powerful 4-quadrant PWM servo controller for the highly efficient control of permanent magnet brushed DC motors or brushless EC motors up to approximately 250 Watts.

## About maxon motor

maxon motor is the world's leading supplier of DC motors, brushless motors, gearheads and controllers. We offer high quality, innovation, competitive pricing and highly specialised solutions.

Where are maxon motors used today?

Aerospace  
Robotics  
Medical science  
Industrial automation  
Instrumentation & inspection  
Communication  
Surveillance cameras  
Automotive  
Consumer applications

maxon's motors, gearheads, encoders, brakes and controllers are all perfectly compatible and offer an almost unending number of possible combinations. The maxon modular system gives the ideal combination for the required application.

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