



EPP7041-3002 | Stepper motor module 50 V DC, 5 A, with incremental encoder, for high-speed applications

The EPP7041-3002 EtherCAT P Box is intended for the direct connection of different stepper motors. The PWM output stages for two motor coils cover a wide voltage and current range. The EPP7041-3002 can be adjusted to the motor and the application by changing just a few parameters. 256-fold micro-stepping ensures particularly quiet and precise motor operation. Connection of an incremental encoder enables a simple servo axis to be realised. Two digital inputs and a digital 0.5 A output enable connection of end switches and a motor brake.

The hardware- and software-based configuration make the stepper motor module particularly suitable for applications that are subject to unsteady motor operation due to natural resonance of the motor and the moved mass.

Technical data	EPP7041-3002
Number of outputs	1 stepper motor, 1 digital 24 V DC output
Number of inputs	2 digital inputs, encoder system (24 V DC encoder)
Connection method	M12, screw type
Load type	2-phase stepper motor (uni-/bipolar)
Nominal voltage	8...50 V DC
Distributed clocks	yes
Protocol	EtherCAT
Bus interface	2 x M8 socket, shielded, screw type, EtherCAT-P-coded
Output current	2 x 3.5 A, 2 x 5 A peak current (overload- and short-circuit proof)
Step frequency	configurable up to 8000 full steps/s
Step pattern	256-fold micro stepping
Current controller frequency	dynamic
Diagnostics LED	error phase A and B, loss of step/stagnation, power, enable
Resolution	approx. 5000 positions (per revolution, depending on motor and encoder type)
Power supply connection	not necessary
Bit width in the process image	input/output: 2 x 16 bit data + 1 x 16 bit control/status
Electrical isolation	500 V
Current consumption from Us	typ. 100 mA
Special features	for high-speed applications, travel distance control, encoder input, load indication, motor supply via plug
Weight	approx. 165 g
Operating/storage temperature	-25...+60 °C/-40...+85 °C
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 65/66/67 (conforms to EN 60529)/variable
Approvals/markings	CE, UL in preparation

Accessories	
ZK700x-010x-0xxx	Cables for EtherCAT P: Ultra-fast Communication and Power in One Cable
ZK2020-3xxx-xxxx	Cables for M8 power supply
ZK4701-04x1-2xxx	supply cables for compact Drive Technology
Cables, gears and couplings	accessories for AS2000 stepper motors
Cables and gears	prefabricated connecting cables in IP 20 and IP 67 protection for AS10xx stepper motors