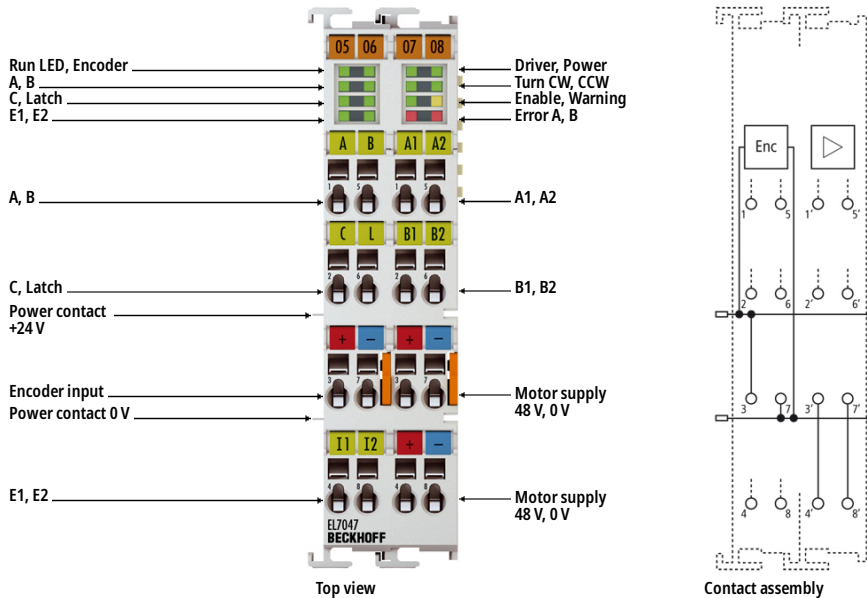


EL7047 | EtherCAT Terminal, 1-channel motion interface, stepper motor, 48 V DC, 5 A, vector control, with incremental encoder



i Product status: Regular delivery

The EL7041 EtherCAT Terminal is intended for the direct connection of stepper Motors in the mid power range up to 5 A and a voltage range from 8...48 V. The compact stepper motor output stage is accommodated in the EtherCAT Terminal together with two digital inputs for limit switches. Through parameterization, the EL7047 can be adjusted to the motor and the application requirements. 64-fold micro-stepping ensures particularly quiet and precise motor operation.

In combination with a corresponding [stepper motor](#), the EL7047 represents a cost-effective and compact drive solution. With the torsion-proof, integrated encoder (1,024 inc/rev), the AS2000 stepper motors are ideal for the closed-loop control of the EL7047.

The output current of the terminal can be increased to 6.5 A in conjunction with the ZB8610 fan cartridge (continuous operation and under full load).

The TwinCAT 3 Drive Manager 2 serves as commissioning tool. Thanks to the structured design and the wide range of functions, commissioning of the axis is simple and intuitive.

Product information

Technical data

Technical data	EL7047
Technology	compact drive technology
Connection method	direct motor connection + feedback

Number of inputs	2 x end position, 1 x encoder
Load type	2-phase stepper motor (uni-/bipolar)
Number of outputs	1 x stepper motor, 1 x motor brake
Supply voltage electronics	24 V DC (via power contacts)
Supply voltage power	8...48 V DC (external)
Output current	max. 5.0 A
Performance increase	yes, through ZB8610 fan cartridge
Output current with ZB8610	max. 6.5 A
Step frequency	configurable up to 16,000 full steps/s
Step pattern	64-fold micro stepping
Current controller frequency	approx. 30 kHz
Resolution	approx. 5000 positions in typ. applications (per revolution)
Encoder input signal	5...24 V DC, typ. 5 mA, single-ended
Encoder connection	A, B, C, gate/latch
Input frequency	max. 400,000 increments/s (with 4-fold evaluation)
Current consumption power contacts	typ. 50 mA
Current consumption E-bus	typ. 140 mA
Distributed clocks	yes
Special features	travel distance control, encoder input, vector control
Electrical isolation	500 V (E-bus/field potential)
Relative humidity	95 %, no condensation
Weight	approx. 90 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
Protect. rating/installation pos.	IP20/see documentation
Pluggable wiring	for all ESxxx terminals
Approvals/markings	CE, UL

Housing data	EL-24-2x8pin
Design form	compact terminal housing with signal LEDs
Material	polycarbonate
Dimensions (W x H x D)	24 mm x 100 mm x 68 mm
Installation	on 35 mm DIN rail, conforming to EN 60715 with lock
Side by side mounting by means of	double slot and key connection
Marking	labeling of the BZxxx series
Wiring	solid conductor (e), flexible conductor (f) and ferrule (a): spring actuation by screwdriver

Connection cross-section	s*: 0.08...2.5 mm ² , st*: 0.08...2.5 mm ² , f*: 0.14...1.5 mm ²
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16
Stripping length	8...9 mm
Current load power contacts	I _{max} : 10 A

*s: solid wire; st: stranded wire; f: with ferrule