



EL7411 | BLDC motor terminal with incremental encoder, 50 V DC, 4.5 A (I_{rms})

The EL7411 BLDC motor terminal provides high control performance in a very compact design for the medium output range of BLDC motors. Due to the fast control technology and the connection of an incremental encoder, both very high speed profiles and dynamic positioning tasks can be implemented. Maximum operational reliability is provided through the monitoring of numerous parameters, such as overvoltage, undervoltage, overcurrent, terminal temperature or motor load via the calculation of an I²T model. The terminal's output current can be increased in conjunction with the ZB8610 fan cartridge.

Technical data	EL7411
Technology	compact Drive Technology
Load type	brushless DC motors (BLDC)
Number of channels	1
Number of outputs	1 x BLDC motor, 1 x motor brake, 1 x fan supply, 1 x fan mode, 1 x sensor supply, 1 x encoder supply
Number of inputs	2 x end position, 1 x encoder, 1 x fan diag, 3 x Hall effect sensor
Connection method	direct motor connection + feedback
Supply voltage electronics	24 V DC (via power contacts)
Supply voltage power	8...50 V DC (external)
Output current (rms)	4.5 A
Peak current (rms)	max. 9.0 A for 1 s
Performance increase	yes, through ZB8610 fan cartridge
Output current with ZB8610 (rms)	7.0 A up to 55 °C, 8.0 A up to 45 °C operating temperature
Peak current with ZB8610 (rms)	max. 16.0 A for 1 s up to 55 °C operating temperature
Frequency range	1 Hz...1.6 kHz
PWM clock frequency	16 kHz
Current controller frequency	32 kHz
Output voltage motor brake	24 V DC
Output current motor brake	max. 0.5 A
Current consumption power contacts	typ. 50 mA + holding current motor brake
Current consumption E-bus	typ. 120 mA
Distributed clocks	yes
Special features	compact and system-integrated
Electrical isolation	500 V (E-bus/field potential)
Weight	approx. 95 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
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 20/see documentation
Pluggable wiring	–
Approvals/markings	CE, UL in preparation

Accessories	
EL9576	brake chopper terminal, 72 V, 155 μ F
ZB85xx	shield busbar with mounting rail holder, shield busbar clamps
ZK4701-04x1-2xxx	supply cables for compact Drive Technology
ZB8610	fan cartridge for EtherCAT and Bus Terminals