



### SOFTWARE



### TECHNICAL DATA

<b>Operating voltage</b>	12-24 VDC, +/- 5%
<b>Rated current (RMS)</b>	3 A
<b>Peak current (RMS)</b>	3 A (CL3-E-1-0F), 6 A (CL3-E-2-0F)
<b>Motor controller</b>	Open-loop stepper motor, closed-loop stepper motor with encoder, BLDC with sinusoidal commutation via hall sensor, BLDC with sinusoidal commutation via encoder
<b>Operating modes</b>	Profile position mode, velocity mode, homing mode, cyclic sync position mode, cyclic sync velocity mode, cyclic sync torque mode, clock/direction mode, application program (NanoJ)
<b>Interfaces</b>	CANopen, Modbus RTU (RS232, RS485 2-wire), Micro USB
<b>Encoder</b>	5 V single-ended signal, max. resolution 65536 CPR (16-bit), UVW connection for hall sensor
<b>Hall sensor</b>	5 V single-ended signal
<b>Inputs</b>	5 digital inputs (5 V), 1 analog input 10-bit, 0–10 V or 0–20 mA (switchable in the software), 1 analog input 10-bit, 0–10 V
<b>Outputs</b>	3 transistor outputs (open drain, max. 24 V/100 mA)
<b>Protective circuit</b>	Overtemperature, overvoltage (ballast switching), protection against polarity reversal (fuse required in supply cable)

### VERSIONS

Type	Min. Operating Voltage V	Max. Operating Voltage V	Peak Current (RMS) A	Suitable for	Weight kg
CL3-E-1	12	24	3	Stepper Motors, BLDC Motors	0.02
CL3-E-2-0F	12	24	6	Stepper Motors, BLDC Motors	0.02

### ORDER IDENTIFIER

**CL3-E-**  
 1-0F = low-current version  
 2-0F = high-current version



### ACCESSORIES

<b>ZK-GHR3-500-S</b>	RS232 Cable
<b>ZK-GHR12-500-S</b>	IO Cable
<b>ZK-GHR10-500-S-GHR</b>	Encoder Cable
<b>ZK-GHR13-500-S-GHR</b>	Encoder Cable
<b>ZK-MICROUSB</b>	USB Cable
<b>ZK-PD4-C-CAN-4-500-S</b>	CANopen Cable
<b>ZK-XHP2-500-S</b>	Power Cable
<b>ZK-XHP-4-300</b>	Motor Cable



### CAUTION

We recommend using a back-up capacitor of sufficient size to stabilize the operating voltage.



### DIMENSIONS (IN MM)

