

■ Closed loop motor controller with encoder input, SMC136

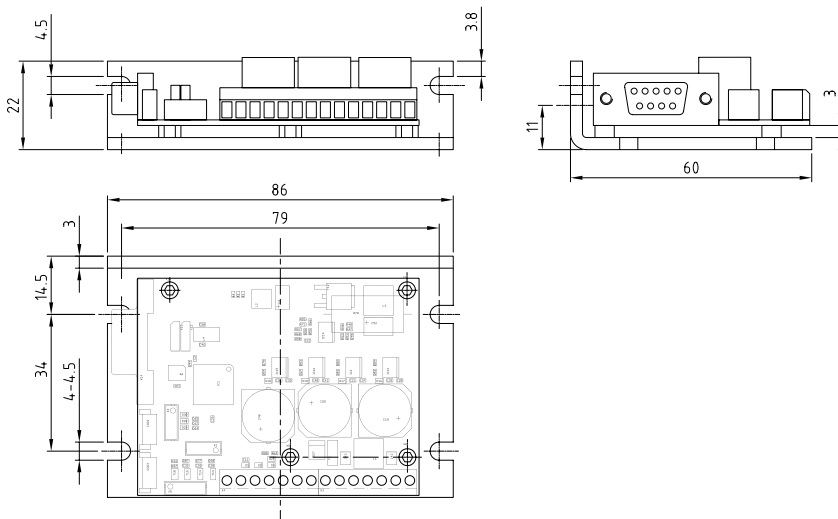


Technical data

| | |
|-----------------------------|--|
| Operating voltage: | 12 to 72 V DC |
| Phase current: | Nominal current 6 A, max. 9 A (eff) |
| Interface: | RS485 4-wire/CAN |
| Operating mode: | RS485 Position, speed, flag position, clock direction, analog, joystick CANopen: Position, homing mode, velocity mode, interpolated position mode (in compliance with CAN standard DS402) |
| Operating mode: | 1/1, 1/2, 1/4, 1/5, 1/8, 1/10, 1/32, 1/64, adaptive microstep, Feed constant |
| Step frequency: | 16 kHz in full step, multiple conforming to microstep (e.g. up to 1 MHz at 1/64) |
| Inputs: | 6 digital inputs (TTL), 1 analog input +10/-10V |
| Outputs: | 3 digital outputs (Open Drain) |
| Position monitoring: | Yes, depending on the encoder |
| Current reduction: | Adjustable 0 - 100% |
| Protection circuit: | Overvoltage, undervoltage and heatsink temperature > 75 °C |
| Temperature range: | 0 to + 40 °C |

! Attention: Always use a backup capacitor for the controller operating voltage. This capacitor should always be positioned as closely as possible to the controller. Controllers up to 4 A require a capacitor of 4700 μ F and controllers up to 10 A require a capacitor of 10,000 μ F. Otherwise there is a risk of the controller being destroyed.

Outline drawing (mm)



Hall sensor (X1)

| Pin | Function* |
|-----|-----------|
| 1 | GND |
| 2 | Hall 1 |
| 3 | Hall 2 |
| 4 | Hall 3 |
| 5 | +5 V |

Encoder (X2)

| Pin | Function* |
|-----|-----------|
| 1 | GND |
| 2 | CH-B |
| 3 | INDEX |
| 4 | CH-A |
| 5 | +5 V |

Motor and supply (X3)

| Pin | Function* Stepper motor | BLDC |
|-----|----------------------------|------|
| 1 | GND | GND |
| 2 | Motor coil A | V |
| 3 | Motor coil A\ | U |
| 4 | Motor coil B | W |
| 5 | Motor coil B\ | n.c. |
| 6 | 72 V | 72 V |
| 7 | GND | GND |

Inputs/outputs (X4)

| Pin | Function* |
|-----|-------------|
| 1 | GND |
| 2 | Output 1 |
| 3 | Input 6 |
| 4 | Input 5 |
| 5 | Input 4 |
| 6 | Analog in 1 |
| 7 | GND |

Inputs/outputs (X5)

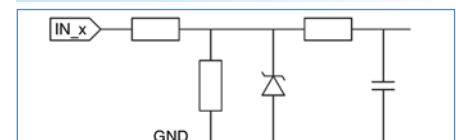
| Pin | Function* |
|-----|-----------|
| 1 | GND |
| 2 | Output 3 |
| 3 | Output 2 |
| 4 | Input 3 |
| 5 | Input 2 |
| 6 | Input 1 |

Communication (X14)

| Pin | Function* |
|-----|------------|
| 1 | n.c. |
| 2 | Rx+ / CAN- |
| 3 | GND |
| 4 | Tx+ |
| 5 | n.c. |
| 6 | GND |
| 7 | CAN + |
| 8 | GND |
| 9 | Tx- |

* from the perspective of the connected controller

Input circuits



Order identifier

SMC136