STEPPER MOTOR & DC MOTOR CONTROLLERS SMDC

General characteristics

1. Maximum number of channels (axes) for motor control 5 - 3 – 1;
2. Each of the channels can control either one stepper motor or one DC motor. The motor type is set in the settings by the user.
3. Control is carried out by means of commands sent from the PC to the controller by USB 1.1 connection (virtual COM port is used) or UART via Modbus protocol RTU.
4. All channels are controlled independently, i.e. user can move at the same time all five motors.
5. Maximum speed allowed 32765 steps per second. The actual speed depends on the supply voltage, characteristics of a particular motor, load, and anther the mechanical characteristics of a particular product.
6. The movement speed is set by the user independently for each channel (from 1 to 32765 steps / sec).
7. Available modes of split step: 1, ½, ¼, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256. It is set by the user separately for each channel.
8. Smooth acceleration / deceleration is supported. Acceleration for acceleration and deceleration set separately by the user for each channel. Acceleration in the range of 1 – 37717 steps / sec ^ 2
9. The user can set the maximum peak current in the windings for the modes: acceleration /braking, movement within the range from 60 to 1920 mA.
10. Three external signals are available that can be triggered for end sensors or home position sensors (for each channel).
11. The current motor position and settings are stored in ROM and are not lost after shutdown nutrition.
12. Each channel can automatically perform home positioning. The home position can be any of the three available signals (limit sensors).
13. The following emergencies are handled: under voltage or lack thereof; excess current (e.g. short circuit of motor windings); overheating of the motor driver; limit sensor triggering.
14. There is protection against polarity reversal of the board power supply.
15. When the limit sensor is triggered, the motor stops automatically.
16. For each of the cards, you can set the identification number and name of the card. The serial number of the board is set by the manufacturer and cannot be changed.
17. Each channel / axis can be assigned a channel / axis name.
18. Each channel supports hold mode (stepper motors only), after stopping, the current in the windings is reduced to the value specified by the user (within the range of 60 - 1920 mA) .

Electrical characteristics

1. Supply voltage from 6 to 45 volts, user selectable as needed.
2. Maximum current consumption by the controller up to 8.5 amperes (r.m.s.). This is achieved if all channels simultaneously consume 1.64 amperes (r.m.s.).
3. Maximum current for each channel 1.64 A (r.m.s.). 1.92 A peak when properly cooled.
4. For each channel, a voltage of 5 volts is output to the connector (two pins, one controlled, the other not). The maximum current on both pins at the same time should not exceed 100 mA.