

Servo amplifier

mcDSA-E45-RS232

Article number: 1503604 (HC Version 1503609)

Technical data

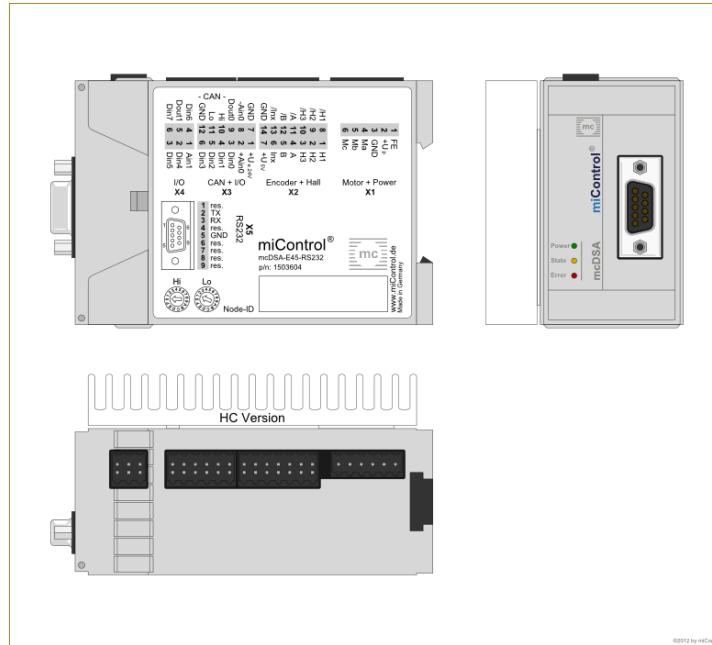
| Power | |
|---|--|
| Electronic supply voltage Ue | 9..30 V |
| Electronic current consumption @ Ue=24V (Bus not connected) | typ. 65 mA |
| Power supply voltage Up | 9..60 V |
| Max. output current | 50 A |
| Output voltage | 100% Up |
| PWM frequency | 25, 32*, 50 kHz |
| Min. load inductance | 200 µH |
| Mechanical | |
| Size LxWxH (HC Version) | 110 x 45(62) x 77 mm |
| Weight (HC Version) | 170 (370) g |
| Environment | |
| Protection class | IP20 |
| Operating temperature | 0..70 °C |
| Rel. humidity (non-condensing) | 5..85 % |
| Incremental encoder | |
| Type | incremental |
| Signals | A, /A, B, /B, Inx, /Inx |
| Max. frequency (per channel) | 500 kHz |
| Input voltage (24V tolerant) | 5 V |
| Signal type | differential, open collector, single ended |
| Hall sensors | |
| Signals | H1, /H1, H2, /H2, H3, /H3 |
| Max. frequency (per channel) | 10 kHz |
| Input voltage (24V tolerant) | 5 V |
| Signal type | differential, open collector, single ended |
| Digital inputs | |
| Number | 8 (Din0..7) |
| Low voltage | -30..5 V |
| High voltage | 8..30 V |
| Digital outputs | |
| Number | 2 (Dout0..1) |
| Continuous output current | 2.5 A |

* default value

Additional technical data are available in mcManual.

| Load | resistive, inductive |
|-----------------------|------------------------------------|
| Output voltage | Electronic supply voltage Ue |
| Signal type | positive switching |
| Analog inputs | |
| Number | 1 (Ain0) |
| Signal type | +/- 10 V, 12 Bit, differential |
| Number | 1 (Ain1) |
| Signal type | +/- 10 V, 12 Bit, single ended |
| CAN bus | |
| Protocol | DS301 |
| Device profile | DS402 |
| Max. baudrate | 1 Mbit/s |
| CAN specification | 2.0B |
| Galvanically isolated | no |
| RS232 | |
| Type | Data Communication Equipment (DCE) |
| Physical layer | RS232 |
| Baudrate | 9600 bit/s |

Scheme



Terminal assignment

| X1 Motor | | |
|--------------------------|---------|--|
| 1 | FE | Functional earth |
| 2 | +Up | Power supply voltage |
| 3 | GND | Ground for power supply voltage |
| 4 | Ma | Motor phase A |
| 5 | Mb | Motor phase B |
| 6 | Mc | Motor phase C |
| X2 Hall and inc. encoder | | |
| 1 | H1 | Hall sensor 1 |
| 2 | H2 | Hall sensor 2 |
| 3 | H3 | Hall sensor 3 |
| 4 | A | Inc. encoder, A channel |
| 5 | B | Inc. encoder, B channel |
| 6 | Inx | Inc. encoder, index channel |
| 7 | +U5V | 5V auxiliary voltage (hall and encoder) |
| 8 | /H1 | Hall sensor 1 inverted |
| 9 | /H2 | Hall sensor 2 inverted |
| 10 | /H3 | Hall sensor 3 inverted |
| 11 | /A | Inc. encoder, A channel inverted |
| 12 | /B | Inc. encoder, B channel inverted |
| 13 | /Inx | Inc. encoder, index channel inverted |
| 14 | GND | Ground for 5V auxiliary voltage (hall and encoder) |
| X3 I/O's and CAN | | |
| 1 | +Ue24V | Electronic supply voltage |
| 2 | +Ain0 | Analog input 0, plus |
| 3 | Din0 | Digital input 0 |
| 4 | Din1 | Digital input 1 |
| 5 | Din2 | Digital input 2 |
| 6 | Din3 | Digital input 3 |
| 7 | GND | Ground for electronic supply voltage |
| 8 | -Ain0 | Analog input 0, minus |
| 9 | Dout0 | Digital output 0 |
| 10 | CAN Hi | CAN High |
| 11 | CAN Lo | CAN Low |
| 12 | CAN GND | CAN Ground |

| X4 I/O's | | |
|----------|-------|------------------|
| 1 | Ain1 | Analog input 1 |
| 2 | Din4 | Digital input 4 |
| 3 | Din5 | Digital input 5 |
| 4 | Din6 | Digital input 6 |
| 5 | Dout1 | Digital output 1 |
| 6 | Din7 | Digital input 7 |
| X5 RS232 | | |
| 1 | res. | Reserved |
| 2 | TX | Transmit Signal |
| 3 | RX | Receive Signal |
| 4 | res. | Reserved |
| 5 | GND | Ground |
| 6 | res. | Reserved |
| 7 | res. | Reserved |
| 8 | res. | Reserved |
| 9 | res. | Reserved |