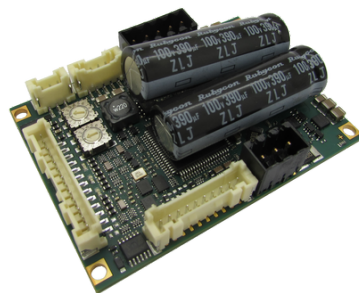


Servo amplifier

mcDSA-E52-Lp

Article number: 1512969

 Certification: 


Picture similar

Technical data

| Supply voltages | |
|---|-------------------------------|
| Electronic supply voltage U_e^{*2} | 9..30 V |
| Electronic current consumption @ $U_e=24V^{*3}$ | typ. 40 mA |
| Power supply voltage U_p^{*4} | 9..60 V |
| Output current | |
| Max. output current | 25 A |
| Continuous output current (certified UL) ^{*5} | |
| @ $U_p \leq 24V$ | 7.5 A |
| @ $U_p \leq 60V$ | 7 A |
| Continuous output current (not certified) ^{*6} | |
| @ $U_p \leq 24V$ | 9 A |
| @ $U_p \leq 48V$ | 8 A |
| PWM | |
| Output voltage | 90% U_p |
| PWM frequency | 25, 32 ^{*7} , 50 kHz |
| Mechanical | |
| Size LxWxH | 70 x 50 x 19 mm |
| Weight | 50 g |
| Environment | |
| Protection class | IP00 |
| Ambient temperature (operation) (certified UL) | -40..40 °C |
| Ambient temperature (operation) (not certified) | -40..70 °C |
| Ambient temperature (storage) | -40..85 °C |
| Rel. humidity (non-condensing) | 5..90 % |
| CAN bus | |
| Protocol | DS301 |
| Device profile | DS402 |
| Max. baudrate | 1 Mbit/s |
| CAN specification | 2.0B |
| Galvanically isolated | no |

| Sensor supply (Encoder/Hall) | |
|---|--------------------------------------|
| Output voltage | 5 V |
| Max. output current | 0.2 A |
| Encoder | |
| Type | sin / cos |
| Signals | +Sin,-Sin,+Cos,-Cos |
| Resolution | 13 bit per sine period |
| Input voltage | 1 V peak-peak, differential |
| Signal type | sine/cosine, analog, differential |
| Digital inputs | |
| Number - digital inputs | 8 (Din0..7) |
| Low voltage | 0..5 V |
| High voltage | 8..30 V |
| Digital outputs | |
| Number | 4 (Dout0..3) |
| Continuous output current (certified UL) | 0.3 A |
| Continuous output current (not certified) | 0.3 A |
| Load Dout0..2 | resistive, low inductive |
| Load Dout3 | resistive, inductive |
| Output voltage | Electronic supply voltage U_e |
| Signal type | positive switching |
| Analog inputs | |
| Number | 3 (Ain0..2) |
| Signal type - Ain0..1 | 0..10 V, 12 Bit, single ended |
| Signal type - Ain2 / PT1000 | 0.5 V, 12 Bit, single ended / PT1000 |

*1 The certified performance data must be observed (see UL Instruction Note)

*2 No reverse polarity protection, the destruction limit is at overvoltage of $\geq 33V$ or short-term peak voltage of $37V < 1s$

*3 power amplifier switched off, 5V output (sensor supply) is free

*4 No reverse polarity protection, the destruction limit is at overvoltage of $\geq 80V$

*5 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C, I/O's and 5V output active, RMS current: 7.5 A → 6.1 Aeff, 7 A → 5.7 Aeff

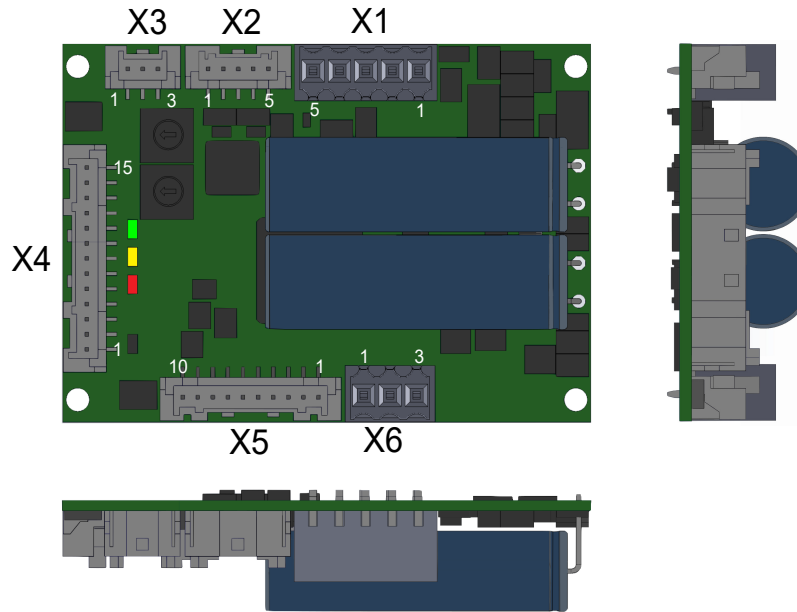
*6 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C, I/O's and 5V output free, RMS current: 9 A → 7.3 Aeff, 8 A → 6.5 Aeff

no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current

*7 default value

Additional technical data are available in mcManual.

Scheme



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Terminal assignment

| X1 Supply | | |
|---------------------------|--------|--------------------------------------|
| 1 | FE | Functional earth |
| 2 | +Up | Power supply voltage |
| 3 | GND | Ground for power supply voltage |
| 4 | +Ue24V | Electronic supply voltage |
| 5 | GND | Ground for electronic supply voltage |
| X2 Analog inputs | | |
| 1 | Ain0 | Analog input 0 |
| 2 | res. | Reserved |
| 3 | Ain1 | Analog input 1 |
| 4 | res. | Reserved |
| 5 | Ain2 | Analog Input 2 (5V) / PT1000 |
| X3 CAN bus | | |
| 1 | CAN Hi | CAN High |
| 2 | CAN Lo | CAN Low |
| 3 | res. | Reserved |
| X4 Digital inputs/outputs | | |
| 1 | res. | Reserved |
| 2 | Din0 | Digital input 0 |
| 3 | Din1 | Digital input 1 |
| 4 | Din2 | Digital input 2 |
| 5 | Din3 | Digital input 3 |
| 6 | Din4 | Digital input 4 |
| 7 | Din5 | Digital input 5 |
| 8 | Din6 | Digital input 6 |
| 9 | Din7 | Digital input 7 |
| 10 | Dout0 | Digital output 0 |
| 11 | Dout1 | Digital output 1 |
| 12 | Dout2 | Digital output 2 |
| 13 | Dout3 | Digital output 3 |

| X5 Encoder | | |
|------------|------|---|
| 1 | res. | Reserved |
| 2 | res. | Reserved |
| 3 | res. | Reserved |
| 4 | +Sin | Encoder, plus sine signal |
| 5 | -Sin | Encoder, minus sine signal |
| 6 | +Cos | Encoder, plus cosine signal |
| 7 | -Cos | Encoder, minus cosine signal |
| 8 | res. | Reserved |
| 9 | +U5V | 5V output voltage for sensor supply Sensors: encoder |
| 10 | GND | Ground for sensor supply Notice: don't connect with system GND |
| X6 Motor | | |
| 1 | Ma | Motor phase A |
| 2 | Mb | Motor phase B |
| 3 | Mc | Motor phase C |