

Servo amplifier

mcDSA-F57

Article number: 1512079



Picture similar

Technical data

| Absolute maximum rating (destruction limits) | |
|--|-----------------|
| Power supply voltage Up no polarity reversal protection | 70 V |
| Continuous Electronic supply voltage Ue no polarity reversal protection | 33 V |
| Short term peak voltage < 1s Ue no polarity reversal protection | 37 V |
| Power | |
| Electronic supply voltage Ue | 9..30 V |
| Electronic current consumption @ Ue=24V*1 | typ. 60 mA |
| Power supply voltage Up | 9..60 V |
| Max. output current | 50 A |
| Continuous output current*2 | 12.5 A |
| PWM frequency | 32 kHz |
| Mechanical | |
| Size LxWxH | 78 x 74 x 28 mm |
| Weight | 95 g |
| Environment | |
| Protection class | IP20 |
| Operating temperature*6 | -40..70 °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 | yes |

| Sensor supply (Encoder) | |
|---------------------------------|-----------------------------------|
| 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 | 6 (Din0..5) |
| Number - hardware enable inputs | 2 (EN-A..B) |
| Low voltage | 0..5 V |
| High voltage | 8..30 V |
| Digital outputs | |
| Number | 4 (Dout0..3) |
| Continuous output current | 0.3 A |
| Load | resistive, inductive |
| Output voltage | Electronic supply voltage Ue |
| Signal type | positive switching |
| Analog inputs | |
| Number | 3 (Ain0..2) |
| Signal type - Ain0..1 | +/- 10 V, 12 Bit, differential |
| Signal type - Ain2 | 0..5 V, 12 Bit, single ended |

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

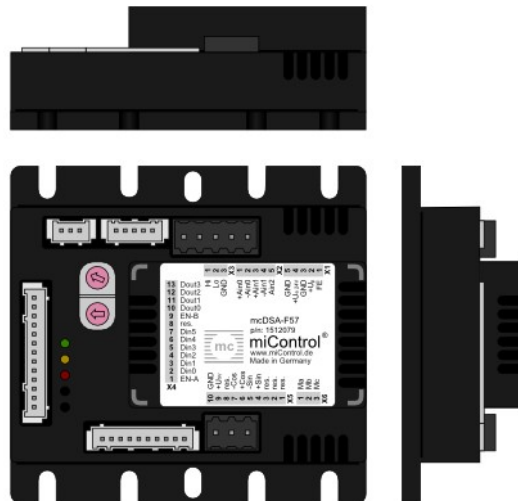
*2 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C (t > 40 °C derating)
no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current

*6 Hex-Switches should be not used at T < -25°C(setting of node ID only possible by firmware parameters)

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, plus |
| 2 | -Ain0 | Analog input 0, minus |
| 3 | +Ain1 | Analog input 1, plus |
| 4 | -Ain1 | Analog input 1, minus |
| 5 | Ain2 | Analog Input 2 (5V) |
| X3 CAN bus | | |
| 1 | CAN Hi | CAN High |
| 2 | CAN Lo | CAN Low |
| 3 | CAN GND | CAN Ground |
| X4 Digital inputs/outputs | | |
| 1 | EN-A | Hardware enable channel A |
| 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 | res. | Reserved |
| 9 | EN-B | Hardware enable channel B |
| 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 |