

# Servo amplifier

## mcDSA-B60

Article number: 1511990



Picture similar

### Technical data

| Supply voltages                                 |                            |
|---|----------------------------|
| Electronic supply voltage $U_e^{*1}$            | 9..30 V                    |
| Electronic current consumption @ $U_e=24V^{*2}$ | typ. 20 mA                 |
| Power supply voltage $U_p^{*3}$                 | 9..60 V                    |
| Output current                                  |                            |
| Max. output current                             | 15 A                       |
| Continuous output current @ $U_p=24V^{*4}$      | 5 A                        |
| Continuous output current @ $U_p=48V^{*4}$      | 4.3 A                      |
| PWM   |                            |
| Output voltage                                  | 90% $U_p$                  |
| PWM frequency                                   | 12.5, 25 <sup>*5</sup> kHz |
| Mechanical                                      |                            |
| Size LxWxH                                      | 74 x 45 x 17 mm            |
| Weight  | 30 g                       |
| Environment                                     |                            |
| Protection class                                | IP20                       |
| Ambient temperature (operation)                 | -25..70 °C                 |
| Ambient temperature (storage)                   | -25..85 °C                 |
| Rel. humidity (non-condensing)                  | 5..90 %                    |
| CAN bus   |                            |
| Protocol  | DS301                      |
| Max. baudrate                                   | 1 Mbit/s                   |
| CAN specification                               | 2.0B                       |
| Galvanically isolated                           | no                         |

| Sensor supply (Hall)         |                               |
|------------------------------|-------------------------------|
| Output voltage               | 5 V                           |
| Max. output current          | 0.2 A                         |
| Hall sensors                 |                               |
| Signals                      | H1,H2,H3                      |
| Max. frequency (per channel) | 10 kHz                        |
| Input voltage                | 0..5 V                        |
| Signal type                  | open collector, single ended  |
| Digital inputs               |                               |
| Number - digital inputs      | 3 (Din0..2)                   |
| Low voltage                  | 0..5 V                        |
| High voltage                 | 8..30 V                       |
| Analog inputs                |                               |
| Number                       | 1 (Ain0)                      |
| Signal type                  | 0..10 V, 12 Bit, single ended |

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

\*2 power amplifier switched off, 5V output (sensor supply) is free

\*3 No reverse polarity protection, the destruction limit is at overvoltage of  $\geq 80V$

\*4 connector cable with max. possible cable cross-section, PWM frequency 25 kHz, ambient temperature 40 °C ( $t > 40$  °C derating), RMS current: 5 A  $\rightarrow$  4.1 Aeff, 4.3 A  $\rightarrow$  3.5 Aeff

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

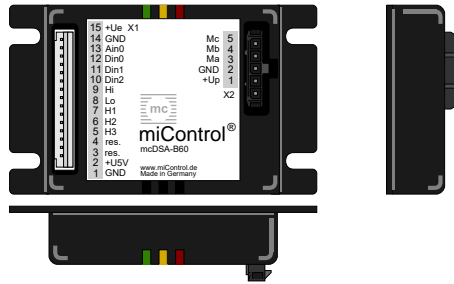
\*5 default value

Additional technical data are available in mcManual.



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## Scheme



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## Terminal assignment

| X1 Hall, I/O's and CAN |        |   |
|------------------------|--------|---|
| 1                      | GND    | Ground for sensor supply<br>Notice: don't connect with system GND |
| 2                      | +U5V   | 5V output voltage for sensor supply<br>Sensors: hall              |
| 3                      | res.   | Reserved  |
| 4                      | res.   | Reserved  |
| 5                      | H3     | Hall sensor 3   |
| 6                      | H2     | Hall sensor 2   |
| 7                      | H1     | Hall sensor 1   |
| 8                      | CAN Lo | CAN Low   |
| 9                      | CAN Hi | CAN High  |
| 10                     | Din2   | Digital input 2   |
| 11                     | Din1   | Digital input 1   |
| 12                     | Din0   | Digital input 0   |
| 13                     | Ain0   | Analog input 0  |
| 14                     | GND    | Ground for electronic supply voltage                              |
| 15                     | +Ue    | Electronic supply voltage   |
| X2 Motor               |        |   |
| 1                      | +Up    | Power supply voltage  |
| 2                      | GND    | Ground for power supply voltage                                   |
| 3                      | Ma     | Motor phase A   |
| 4                      | Mb     | Motor phase B   |
| 5                      | Mc     | Motor phase C   |