

Servo amplifier

mcDSA-B40

Article number: 1511093



Picture similar

Technical data

Absolute maximum rating (destruction limits)	
Power supply voltage U_p no polarity reversal protection	80 V
Continuous Electronic supply voltage U_e no polarity reversal protection	33 V
Short term peak voltage < 1s U_e no polarity reversal protection	37 V
Power	
Electronic supply voltage U_e	9..30 V
Electronic current consumption@ $U_e=24V^{*1}$	typ. 25 mA
Power supply voltage U_p	9..60 V
Max. output current	30 A
Continuous output current @ $U_p=24V^{*2}$	10 A
Continuous output current @ $U_p=48V^{*2}$	8.5 A
PWM	
Output voltage	90% U_p
PWM frequency	12.5, 25 ^{*3} kHz
Mechanical	
Size LxWxH	110 x 23 x 77 mm
Weight	110 g
Environment	
Protection class	IP20
Ambient temperature (operation)	-40..70 °C
Ambient temperature (storage)	-40..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,/H1,H2,/H2,H3,/H3
Max. frequency (per channel)	10 kHz
Input voltage (24V tolerant)	0..5 V
Signal type	open collector, differential, 5V pull up intern 920 Ohm
Digital inputs	
Number - digital inputs	4 (Din0..3)
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 power amplifier switched off, 5V output (sensor supply) is free

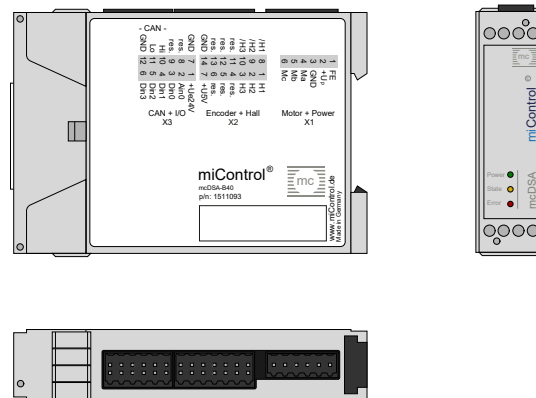
*2 connector cable with max. possible cable cross-section, PWM frequency 25 kHz, ambient temperature 40 °C (t >40 °C derating), RMS current: 10 A → 8.2 Aeff, 8.5 A → 6.9 Aeff

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

*3 default value

Additional technical data are available in mcManual.

Scheme



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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		
1	H1	Hall sensor 1
2	H2	Hall sensor 2
3	H3	Hall sensor 3
4	res.	Reserved
5	res.	Reserved
6	res.	Reserved
7	+U5V	5V output voltage for sensor supply Sensors: hall
8	/H1	Hall sensor 1 inverted
9	/H2	Hall sensor 2 inverted
10	/H3	Hall sensor 3 inverted
11	res.	Reserved
12	res.	Reserved
13	res.	Reserved
14	GND	Ground for sensor supply Notice: don't connect with system GND
X3 I/O's and CAN		
1	+Ue24V	Electronic supply voltage
2	Ain0	Analog input 0
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	res.	Reserved
9	res.	Reserved
10	CAN Hi	CAN High
11	CAN Lo	CAN Low
12	CAN GND	CAN Ground