

Servo amplifier

mcDSA-B50-HC

Article number: 1513866

 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}	
@ $U_p \leq 24V$	15 A
@ $U_p \leq 48V$	14.5 A
PWM	
Output voltage	90% U_p
PWM frequency	12.5, 25 ^{*7} kHz
Mechanical	
Size LxWxH	87 x 74 x 29 mm
Weight	155 g
Environment	
Protection class	IP20
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
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	4 (Din0..3)
Low voltage	0..5 V
High voltage	8..30 V
Digital outputs	
Number	4 (Dout0..3)
Continuous output current (certified UL)	0.3 A
Load	resistive, inductive
Output voltage	Electronic supply voltage U_e
Signal type	positive switching
Analog inputs	
Number	2 (Ain0..1)
Signal type - Ain	0..10 V, 12 Bit, single ended

*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

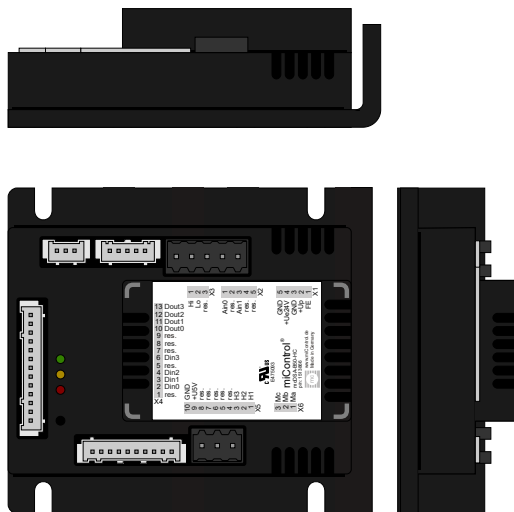
*6 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C, I/O's and 5V output free, RMS current: 15 A → 12.2 Aeff, 14.5 A → 11.8 Aeff

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



©2023 by miControl

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	res.	Reserved
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	res.	Reserved
7	res.	Reserved
8	res.	Reserved
9	res.	Reserved
10	Dout0	Digital output 0
11	Dout1	Digital output 1
12	Dout2	Digital output 2
13	Dout3	Digital output 3

X5 Hall and inc. encoder		
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	res.	Reserved
8	res.	Reserved
9	+U5V	5V output voltage for sensor supply Sensors: encoder, hall
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