Servo amplifier

mcDSA-E52-HC

Article number: 1512970

Certification: cULus *1 E475093

Picture similar

Technical data

Supply voltages	
Electronic supply voltage Ue*2	9..30 V
Electronic current consumption@ Ue=24V*3	typ. 40 mA
Power supply voltage Up*4	9..60 V
Output current	
Max. output current	25 A
Continuous output current (certified UL)*5 @Up ≤ 24V @Up ≤ 60V	 9.5 A 9 A
Continuous output current (not certified)*6 @Up ≤ 24V @Up ≤ 48V	 14.5 A 14.5 A
PWM	
Output voltage	90% Up
PWM frequency	25, 32*7, 50 kHz
Mechanical	
Size LxWxH	87 x 74 x 29 mm
Weight	150 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
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 Ue
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

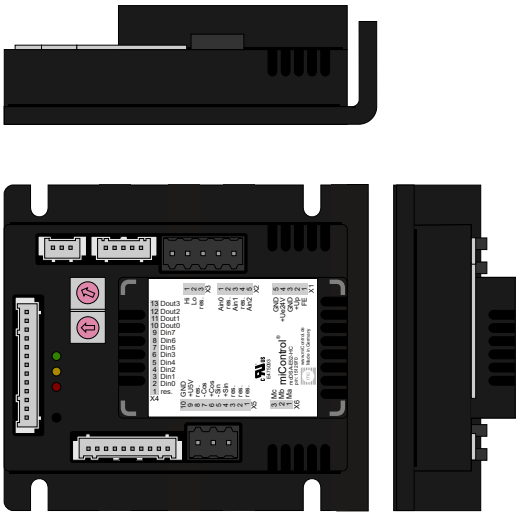
*1 The certified performance data must be observed (see UL Instruction Note)
*2 No reverse polarity protection, the destruction limit is at overvoltage of >= 33V or short-term peak voltage of 37V < 1s
*3 power amplifier switched off, 5V output (sensor supply) is free
*4 No reverse polarity protection, the destruction limit is at overvoltage of >= 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: 9.5 A → 7.7 Aeff, 9 A → 7.3 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: 14.5 A → 11.8 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.

miControl® GmbH
Chausseestraße 34
14979 Großbeeren (bei Berlin)

Web: www.miControl.de e-mail: info@miControl.de Tel.:+49 (3379) 312 59-0 Fax:+49 (3379) 312 59-19

Scheme



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

miControl® GmbH
Chausseestraße 34
14979 Großbeeren (bei Berlin)

Web: www.miControl.de *e-mail:* info@miControl.de *Tel.:*+49 (3379) 312 59-0 *Fax:*+49 (3379) 312 59-19