Servo amplifier

mcDSA-E51-Lp

Article number: 1514028

Certification: *1

Picture similar

Technical data

Absolute maximum rating (destruction limits)	
Power supply voltage Up no polarity reversal protection	80 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*2	typ. 40 mA
Power supply voltage Up	9..60 V
Max. output current	25 A
Continuous output current (certified UL)*3 @Up=24V @Up=60V	 7.5 A 7 A
PWM	
PWM frequency	25, 32*4, 50 kHz
Mechanical	
Size LxWxH	70 x 50 x 18 mm
Weight	50 g
Environment	
Protection class	IP00
Operating temperature *5	-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	no

Sensor supply (Encoder/Hall)	
Output voltage	5 V
Max. output current	0.2 A
Encoder	
Type	magnetic sensor
Signals	A, B channels internally
Resolution	12 bit per motor shaft revolution
Signal type	Magnetic sensor with magnet on the motor shaft
Hall sensors	
Signals	H1,H2,H3
Max. freqency (per channel)	10 kHz
Input voltage	0..5 V
Signal type	open collector, single ended
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	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	0..10 V, 12 Bit, single ended
Signal type - Ain2	0..5 V, 12 Bit, single ended

*1 take into consideration the performance data
*2 power amplifier switched off, 5V output (sensor supply) is free
*3 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C, I/O's and 5V output active
*4 default value
*5 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.

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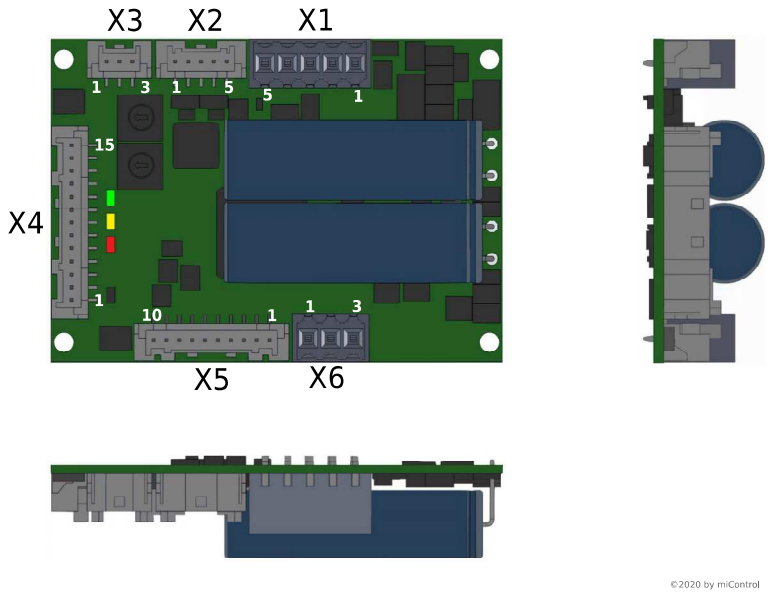
Scheme



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)
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	Hall sensors	
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: 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

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