Servo amplifier

mcDSA-E50

Article number: 1511720

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*1	typ. 60 mA
Power supply voltage Up	9..60 V
Max. output current	25 A
Continuous output current*2	8 A
Output voltage	90% Up
PWM frequency	25, 32*3, 50 kHz
Mechanical	
Size LxWxH	78 x 74 x 28 mm
Weight	100 g
Environment	
Protection class	IP20
Operating temperature	-25..55 °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
Incremental encoder	
Type	incremental
Signals	A,B,Inx
Max. freqency (per channel)	100 kHz
Input voltage	0..5 V
Signal type	open collector, single ended, 920 Ohm input impedance
Hall sensors	
Signals	H1,H2,H3
Max. freqency (per channel)	10 kHz
Input voltage	0..5 V
Signal type	open collector, single ended, 5V pull up intern 920 Ohm
Digital inputs	
Number	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, 20 kOhm input impedance
Signal type - Ain2	0..5 V, 12 Bit, single ended, 5V pull up intern 1,5 kOhm

*1 power amplifier switched off, 5V output (sensor supply) is free
*2 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C (t > 40 °C derating)
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.

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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 and inc. encoder	
1	H1	Hall sensor 1
2	H2	Hall sensor 2
3	H3	Hall sensor 3
4	A	Inc. encoder, A channel
5	res.	Reserved
6	B	Inc. encoder, B channel
7	res.	Reserved
8	Inx	Inc. encoder, index channel
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

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