Servo amplifier

mcDSA-E42-HC

Article number: 1511132

Picture similar

Technical data

Supply voltages	
Electronic supply voltage Ue*1	9..30 V
Electronic current consumption@ Ue=24V*2	typ. 50 mA
Power supply voltage Up*3	9..60 V
Output current	
Max. output current	30 A
Continuous output current @ Up=24V*4	12 A
Continuous output current @ Up=48V*4	12 A
PWM	
Output voltage	90% Up
PWM frequency	25, 32*5, 50 kHz
Mechanical	
Size LxWxH	110 x 39 x 77 mm
Weight	310 g
Environment	
Protection class	IP20
Ambient temperature (operation)*6	-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

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	4 (Din0..3)
Low voltage	-30..5 V
High voltage	6..30 V
Digital outputs	
Number	1 (Dout0)
Continuous output current	1.5 A
Load	resistive, inductive
Output voltage	Electronic supply voltage Ue
Signal type	positive switching
Analog inputs	
Number	1 (Ain0)
Signal type	0..10 V, 12 Bit, single ended

*1 No reverse polarity protection, the destruction limit is at overvoltage of >= 33V or short-term peak voltage of 37V < 1s
*2 power amplifier switched off, 5V output (sensor supply) is free
*3 No reverse polarity protection, the destruction limit is at overvoltage of >= 80V
*4 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C (t >40 °C derating), RMS current: 12 A → 9.8 Aeff no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current
*5 default value
*6 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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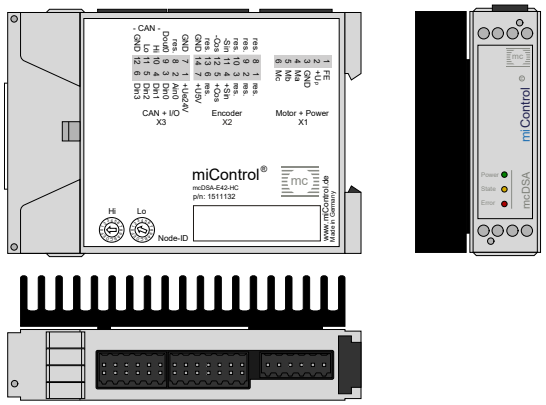
Scheme



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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	Encoder	
1	res.	Reserved
2	res.	Reserved
3	res.	Reserved
4	+Sin	Encoder, plus sine signal
5	+Cos	Encoder, plus cosine signal
6	res.	Reserved
7	+U5V	5V auxiliary voltage (encoder)
8	res.	Reserved
9	res.	Reserved
10	res.	Reserved
11	-Sin	Encoder, minus sine signal
12	-Cos	Encoder, minus cosine signal
13	res.	Reserved
14	GND	Ground for 5V auxiliary voltage (encoder)
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	Dout0	Digital output 0
10	CAN Hi	CAN High
11	CAN Lo	CAN Low
12	CAN GND	CAN Ground

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