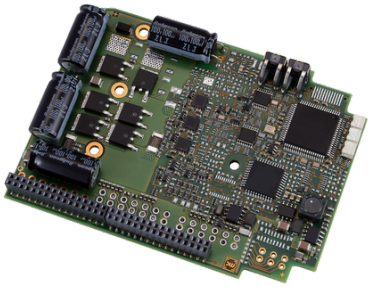
Servo amplifier

mcDSA-E47-Modul

Article number: 1504970



Picture similar

Technical data

Supply voltages	
Electronic supply voltage Ue*1	9..30 V
Electronic current consumption@ Ue=24V*2	typ. 60 mA
Power supply voltage Up*3	9..60 V
Output current	
Max. output current	50 A
Continuous output current @ Up=24V*4	10 A
Continuous output current @ Up=48V*4	8.5 A
PWM	
Output voltage	100% Up
PWM frequency	25, 32*5, 50 kHz
Mechanical	
Size LxWxH	97 x 71 x 12 mm
Weight	55 g
Environment	
Protection class	IP00
Ambient temperature (operation)*6	-40..55 °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)	
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	7 (Din0..6)
Low voltage	0..5 V
High voltage	8..30 V
Digital outputs	
Number	2 (Dout0..1)
Continuous output current	1.5 A
Load	resistive, inductive
Output voltage	Electronic supply voltage Ue
Signal type	positive switching
Analog inputs	
Number	2 (Ain0..1)
Signal type - Ain	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: 10 A → 8.2 Aeff, 8.5 A → 6.9 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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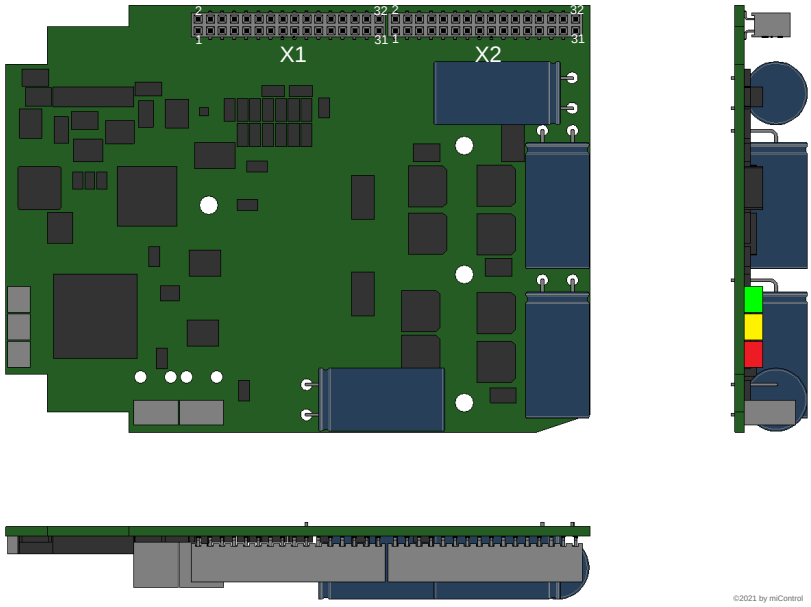
Scheme



Terminal assignment

X1	Hall, inc. encoder, I/O's and CAN	
1	CAN Hi	CAN High
2	CAN Lo	CAN Low
3	Din6	Digital input 6
4	res.	Reserved
5	Din4	Digital input 4
6	Din5	Digital input 5
7	Din2	Digital input 2
8	Din3	Digital input 3
9	Din0	Digital input 0
10	Din1	Digital input 1
11	Ain0	Analog input 0
12	Ain1	Analog input 1
13	SpiMISO	mcSPI Master In
14	Spi/SS	mcSPI Slave Select
15	SpiMOSI	mcSPI Master Out
16	SpiCLK	mcSPI Clock
17	Rx0	UART0 Receive Signal
18	Tx0	UART0 Transmit Signal
19	Erw1	mcSPI expansion signal 1
20	Erw2	mcSPI expansion signal 2
21	res.	Reserved
22	res.	Reserved
23	+Cos	Encoder, plus cosine signal
24	-Cos	Encoder, minus cosine signal
25	+Sin	Encoder, plus sine signal
26	-Sin	Encoder, minus sine signal
27	res.	Reserved
28	res.	Reserved
29	res.	Reserved
30	res.	Reserved
31	res.	Reserved
32	res.	Reserved

X2	Motor	
1	+U5V	5V output voltage for sensor supply Sensors: encoder
2	GND	Ground for sensor supply Notice: don't connect with system GND
3	Dout0	Digital output 0
4	Dout1	Digital output 1
5	+Ue24V	Electronic supply voltage
6	+Ue24V	Electronic supply voltage
7	res.	Reserved
8	res.	Reserved
9	res.	Reserved
10	res.	Reserved
11	Mc	Motor phase C
12	Mc	Motor phase C
13	Mc	Motor phase C
14	Mc	Motor phase C
15	Mb	Motor phase B
16	Mb	Motor phase B
17	Mb	Motor phase B
18	Mb	Motor phase B
19	Ma	Motor phase A
20	Ma	Motor phase A
21	Ma	Motor phase A
22	Ma	Motor phase A
23	GND	Ground for power and electronic supply voltage
24	GND	Ground for power and electronic supply voltage
25	GND	Ground for power and electronic supply voltage
26	GND	Ground for power and electronic supply voltage
27	+Up	Power supply voltage
28	+Up	Power supply voltage
29	+Up	Power supply voltage
30	+Up	Power supply voltage
31	FE	Functional earth
32	FE	Functional earth

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