miControl®

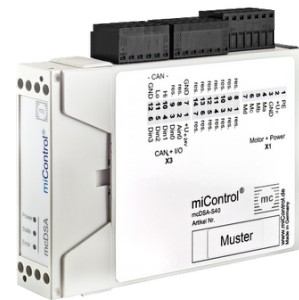## Servo amplifier

mcDSA-S40

Article number: 1511164

Picture similar

Technical data

Supply voltages	
Electronic supply voltage Ue*¹	9..30 V
Electronic current consumption@ Ue=24V*²	typ. 35 mA
Power supply voltage Up*³	9..60 V

Output current	
Max. output current	20 A
Continuous output current @ Up=24V*⁴	7 A
Continuous output current @ Up=48V*⁴	6 A

PWM	
Output voltage	85% Up
PWM frequency	32 kHz

Mechanical	
Size LxWxH	110 x 23 x 77 mm
Weight	110 g

Environment	
Protection class	IP20
Ambient temperature (operation)*⁵	-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

Auxiliary voltage	
Output voltage	5 V
Max. output current	0.2 A

Digital inputs	
Number - digital inputs	4 (Din0..3)
Low voltage	0..5 V
High voltage	8..30 V

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: 7 A → 5.7 Aeff, 6 A → 4.9 Aeff
no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current
*⁵ Hex-Switches should be not used at T < -25°C (setting of node ID only possible by firmware parameters)

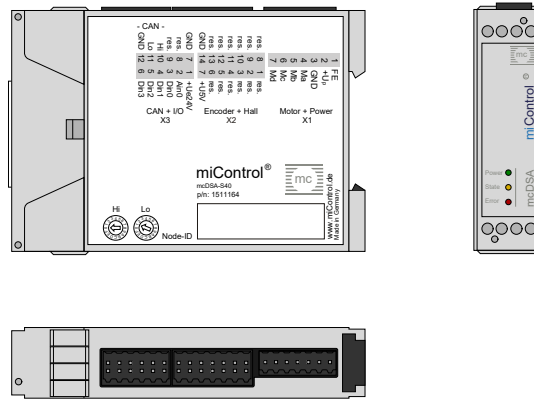Additional technical data are available in mcManual.

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Scheme

Terminal assignment

X1	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
7	Md	Motor phase D
X2	Reserved	
1	res.	Reserved
2	res.	Reserved
3	res.	Reserved
4	res.	Reserved
5	res.	Reserved
6	res.	Reserved
7	+U5V	5V output voltage (auxiliary voltage)
8	res.	Reserved
9	res.	Reserved
10	res.	Reserved
11	res.	Reserved
12	res.	Reserved
13	res.	Reserved
14	GND	Ground of the auxiliary voltage Notice: don't connect with system GND
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	res.	Reserved
10	CAN Hi	CAN High
11	CAN Lo	CAN Low
12	CAN GND	CAN Ground