

# Servo amplifier

## mcDSA-E47-PROFINET

Article number: 1512521



Picture similar

**Technical data**

Supply voltages		PROFINET	
Electronic supply voltage Ue* <sup>1</sup>	9..30 V	Type	Slave
Electronic current consumption@ Ue=24V* <sup>2</sup>	typ. 100 mA	Physical layer	100 Base-Tx
Power supply voltage Up* <sup>3</sup>	9..60 V	Max. baudrate	100 Mbit/s
Output current		Number of ports	
Max. output current	50 A	2xRJ45 (PORT1, PORT2)	
Continuous output current @ Up=24V* <sup>4</sup>	10 A	Sensor supply (Encoder)	
Continuous output current @ Up=48V* <sup>4</sup>	8.5 A	Output voltage	5 V
PWM		Max. output current	0.2 A
Output voltage	100% Up	Encoder	
PWM frequency	25, 32*, 50 kHz	Type	sin / cos
Mechanical		Signals	+Sin,-Sin,+Cos,-Cos
Size LxWxH	110 x 45 x 77 mm	Resolution	13 bit per sine period
Weight	170 g	Input voltage	1 V peak-peak, differential
Environment		Signal type	sine/cosine, analog, differential
Protection class	IP20	Digital inputs	
Ambient temperature (operation)	-25..70 °C	Number - digital inputs	7 (Din0..6)
Ambient temperature (storage)	-25..85 °C	Low voltage	0..5 V
Rel. humidity (non-condensing)	5..90 %	High voltage	8..30 V
CAN bus		Digital outputs	
Protocol	DS301	Number	2 (Dout0..1)
Device profile	DS402	Continuous output current	1.5 A
Max. baudrate	1 Mbit/s	Load	resistive, inductive
CAN specification	2.0B	Output voltage	Electronic supply voltage Ue
Galvanically isolated	no	Signal type	positive switching
Analog inputs		Analog inputs	
		Number	2 (Ain0..1)
		Signal type - Ain0	+/- 10 V, 12 Bit, differential
		Signal type - Ain1	+/- 10 V, 12 Bit, single ended

\*<sup>1</sup> No reverse polarity protection, the destruction limit is at overvoltage of >= 33V or short-term peak voltage of 37V < 1s\*<sup>2</sup> power amplifier switched off, 5V output (sensor supply) is free, bus not connected\*<sup>3</sup> No reverse polarity protection, the destruction limit is at overvoltage of >= 80V\*<sup>4</sup> 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

\*<sup>5</sup> default value

Additional technical data are available in mcManual.



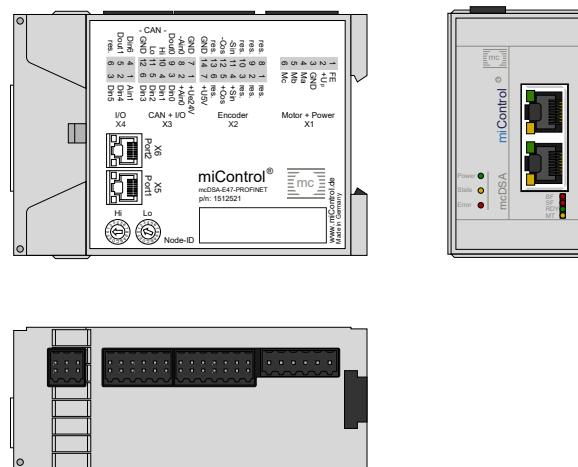
miControl® GmbH

Chausseestraße 34

14979 Großbeeren (bei Berlin)

Copyright 2024 by miControl® - Modifications and errors excepted  
mcDSA-E47-PROFINET - PV1.13.00.00 / DV1.00.00.02Web: [www.miControl.de](http://www.miControl.de) e-mail: [info@miControl.de](mailto:info@miControl.de) Tel.: +49 (3379) 312 59-0 Fax: +49 (3379) 312 59-19

## Scheme



©2023 by miControl

## 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 output voltage for sensor supply Sensors: 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 sensor supply Notice: don't connect with system GND
X3	I/O's and CAN	
1	+Ue24V	Electronic supply voltage
2	+Ain0	Analog input 0, plus
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	-Ain0	Analog input 0, minus
9	Dout0	Digital output 0
10	CAN Hi	CAN High
11	CAN Lo	CAN Low
12	CAN GND	CAN Ground

X4	I/O's	
1	Ain1	Analog input 1
2	Din4	Digital input 4
3	Din5	Digital input 5
4	Din6	Digital input 6
5	Dout1	Digital output 1
6	res.	Reserved
X5	PROFINET - PORT1	
-	PORT1	PORT1
X6	PROFINET - PORT2	
-	PORT2	PORT2