

## Servo amplifier

**mcDSA-E27**

Article number: 1511113



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. 70 mA
Power supply voltage Up	9..60 V
Max. output current	100 A
Continuous output current @ Up=24V*2	35 A
Continuous output current @ Up=48V*2	26 A
Max. Output voltage	100% Up
PWM frequency	25, 32*3, 50 kHz
Mechanical	
Size LxWxH	111 x 100 x 30 mm
Weight	380 g
Environment	
Protection class	IP20
Operating temperature*4	-40..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	yes

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	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 - Ain0	+/- 10 V, 12 Bit, differential
Signal type - Ain1	+/- 10 V, 12 Bit, single ended

\*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

\*4 t &lt; -25°C, setting of the NodeID is only allowed by firmware parameters, because the functioning of the Hex-Switches at these temperatures is not longer guaranteed

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
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