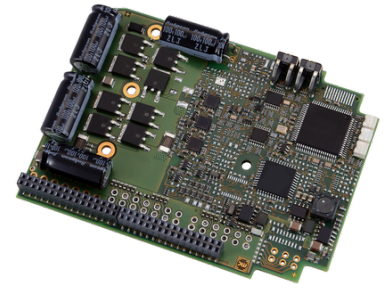


# Servo amplifier mcDSA-FS45-M

Article number: 1516012



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	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	25, 32, 50*5 kHz
Commutation type	Field Oriented Control
Mechanical	
Size LxWxH	97 x 71 x 12 mm
Weight	55 g
Environment	
Protection class	IP00
Ambient temperature (operation)	-25..55 °C
Ambient temperature (storage)	-25..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

Incremental encoder	
Type	incremental
Signals	A,/A,B,/B,Inx,/Inx
Max. frequency (per channel)	500 kHz
Input voltage (24V tolerant)	0..5 V
Signal type	differential, open collector, single ended
Digital inputs	
Number	8 (Din0..7)
Low voltage	-30..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	+/- 10 V, 12 Bit, single ended

\*1 No reverse polarity protection, the destruction limit is at overvoltage of  $\geq 33V$  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  $\geq 80V$

\*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

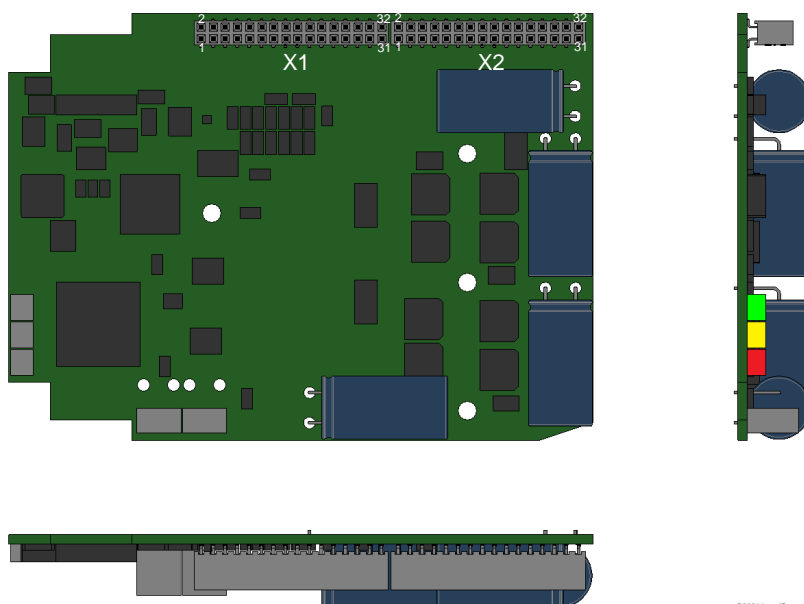
no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current

\*5 default value

Additional technical data are available in mcManual.



Scheme



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Terminal assignment

X1	Inc. encoder, I/O's and CAN	
1	CAN Hi	CAN High
2	CAN Lo	CAN Low
3	Din6	Digital input 6
4	Din7	Digital input 7
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	SpiSS	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	Inx	Inc. encoder, index channel
22	/Inx	Inc. encoder, index channel inverted
23	B	Inc. encoder, B channel
24	/B	Inc. encoder, B channel inverted
25	A	Inc. encoder, A channel
26	/A	Inc. encoder, A channel inverted
27	res.	Reserved
28	res.	Reserved
29	res.	Reserved
30	res.	Reserved
31	res.	Reserved
32	res.	Reserved

X2	Motor	
1	+U5V	5V auxiliary voltage (encoder)
2	GND	Ground for 5V auxiliary voltage (encoder)
3	Dout0	Digital output 0
4	Dout1	Digital output 1
5	+Ue24V	Electronic supply voltage
6	+Ue24V	Electronic supply voltage
7	Md	Motor phase D
8	Md	Motor phase D
9	Md	Motor phase D
10	Md	Motor phase D
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