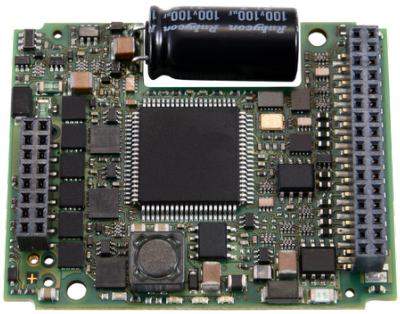
Servo amplifier

mcDSA-FS65-M

Article number: 1516018



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	10 A
Continuous output current @ Up=24V*4	3.5 A
Continuous output current @ Up=48V*5	3 A
PWM	
Output voltage	85% Up
PWM frequency	25, 32, 50*6 kHz
Commutation type	Field Oriented Control
Mechanical	
Size LxWxH	53 x 41 x 10 mm
Weight	18 g
Environment	
Protection class	IP00
Ambient temperature (operation)	-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

Incremental encoder	
Type	incremental
Signals	A,B,Inx
Max. freqency (per channel)	100 kHz
Input voltage	5 V
Signal type	open collector, single ended
Digital inputs	
Number	4 (Din0..3)
Low voltage	-10..5 V
High voltage	6..30 V
Notice	Din3 parallel with Dout1
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
Notice	Dout1 parallel with Din3
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 >= 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: 3.5 A → 2.9 Aeff, 3 A → 2.4 Aeff
no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current
*5 connector cable with max. possible cable cross-section, PWM frequency 32 kHz, ambient temperature 40 °C (t >40 °C derating), RMS current: 3.3 A → 2.9 Aeff, 3 A → 2.4 Aeff
no guarantee, since value is determined empirical, please consider the application notes to determine the continuous current
*6 default value

Additional technical data are available in mcManual.

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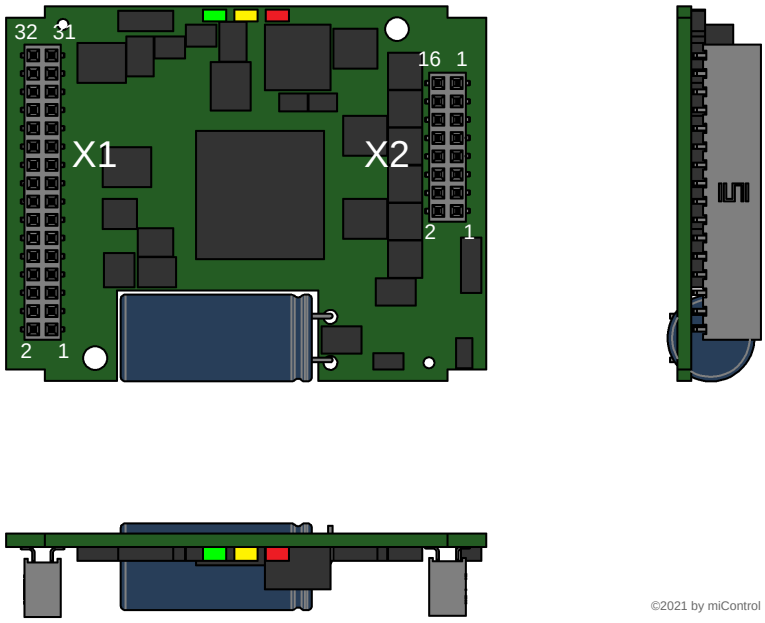
Scheme



Terminal assignment

X1	Inc. encoder, I/O's and CAN	
1	Inx	Inc. encoder, index channel
2	/Id7	Node-ID Bit 7 inverted
3	+U5V	5V auxiliary voltage (hall and encoder)
4	/Id6	Node-ID Bit 6 inverted
5	B	Inc. encoder, B channel
6	/Id5	Node-ID Bit 5 inverted
7	A	Inc. encoder, A channel
8	/Id4	Node-ID Bit 4 inverted
9	res.	Reserved
10	/Id3	Node-ID Bit 3 inverted
11	res.	Reserved
12	/Id2	Node-ID Bit 2 inverted
13	res.	Reserved
14	/Id1	Node-ID Bit 1 inverted
15	CAN Lo	CAN Low
16	/Id0	Node-ID Bit 0 inverted
17	CAN Hi	CAN High
18	Erw2	mcSPI expansion signal 2
19	Dout0	Digital output 0
20	Erw1	mcSPI expansion signal 1
21	Din2	Digital input 2
22	SpiCLK	mcSPI Clock
23	Din1	Digital input 1
24	SpiMOSI	mcSPI Master Out
25	Din0	Digital input 0
26	Spi/SS	mcSPI Slave Select
27	Ain0	Analog input 0
28	SpiMISO	mcSPI Master In
29	Ain1	Analog input 1
30	Din3/Dout1	Digital input 3 / Digital output 1
31	GND	Ground for 5V auxiliary voltage (hall and encoder)
32	res.	Reserved

X2	Motor	
1	+Up	Power supply voltage
2	res.	Reserved
3	+Up	Power supply voltage
4	FE	Functional earth
5	GND	Ground for power and electronic supply voltage
6	GND	Ground for power and electronic supply voltage
7	Ma	Motor phase A
8	+Ue	Electronic supply voltage
9	Ma	Motor phase A
10	+Ue	Electronic supply voltage
11	Mb	Motor phase B
12	Mb	Motor phase B
13	Mc	Motor phase C
14	Md	Motor phase D
15	Mc	Motor phase C
16	Md	Motor phase D

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