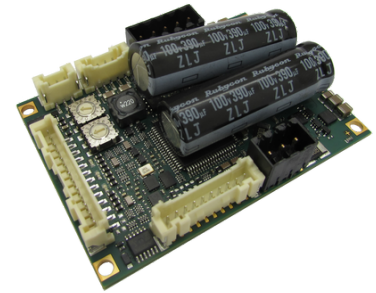


Servo amplifier

mcDSA-F56-Lp

Article number: 1513901

 Certification: 


Picture similar

Technical data

Supply voltages	
Electronic supply voltage U_e^{*2}	9..30 V
Electronic current consumption @ $U_e=24V^{*3}$	typ. 60 mA
Power supply voltage U_p^{*4}	9..60 V
Output current	
Max. output current	50 A
Continuous output current (certified UL) ^{*5}	
@ $U_p \leq 24V$	9.5 A
@ $U_p \leq 60V$	9.0 A
Continuous output current (not certified) ^{*6}	
@ $U_p \leq 24V$	14.5 A
@ $U_p \leq 48V$	13 A
PWM	
PWM frequency	32 kHz
Commutation type	Field Oriented Control
Mechanical	
Size LxWxH	70 x 50 x 19 mm
Weight	50 g
Environment	
Protection class	IP00
Ambient temperature (operation) (certified UL)	-40..40 °C
Ambient temperature (operation) (not certified)	-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	yes

Sensor supply (Encoder/Hall)	
Output voltage	5 V
Max. output current	0.2 A
Encoder	
Type	magnetic sensor
Signals	A, B channels internally
Resolution	12 bit per motor shaft revolution
Signal type	Magnetic sensor with magnet on the motor shaft
Hall sensors	
Signals	H1,H2,H3
Max. frequency (per channel)	10 kHz
Input voltage	0..5 V
Signal type	open collector, single ended
Digital inputs	
Number - digital inputs	7 (Din0..6)
Number - hardware enable inputs	2 (EN-A..B)
Low voltage	0..5 V
High voltage	8..30 V
Digital outputs	
Number	4 (Dout0..3)
Continuous output current (certified UL)	0.3 A
Load	resistive, inductive
Output voltage	Electronic supply voltage U_e
Signal type	positive switching
Analog inputs	
Number	3 (Ain0..2)
Signal type - Ain0..1	+/- 10 V, 12 Bit, differential
Signal type - Ain2 / PT1000	0..5 V, 12 Bit, single ended / PT1000

*1 The certified performance data must be observed (see UL Instruction Note)

*2 No reverse polarity protection, the destruction limit is at overvoltage of $\geq 33V$ or short-term peak voltage of $37V < 1s$

*3 power amplifier switched off, 5V output (sensor supply) is free

*4 No reverse polarity protection, the destruction limit is at overvoltage of $\geq 70V$

*5 connector cable with max. possible cable cross-section, PWM frequency 32 kHz (SVPWM), ambient temperature 40 °C, I/O's and 5V output active, RMS current: 9.5 A \rightarrow 6.7 Aeff, 9.0 A \rightarrow 6.4 Aeff

*6 connector cable with max. possible cable cross-section, PWM frequency 32 kHz (SVPWM), ambient temperature 40 °C, I/O's and 5V output free, RMS current: 14.5 A \rightarrow 10.3 Aeff, 13 A \rightarrow 9.2 Aeff

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

Additional technical data are available in mcManual.



miControl® GmbH

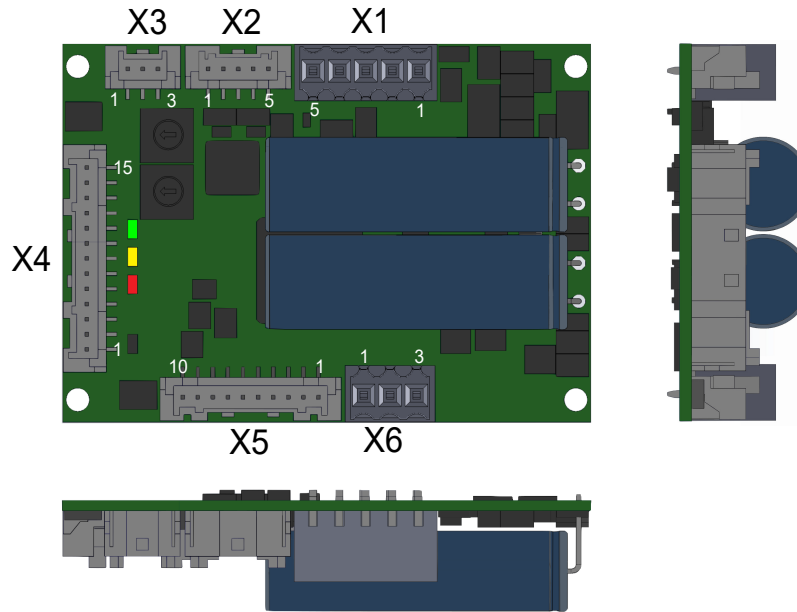
Chausseestraße 34

14979 Großbeeren (bei Berlin)

 Copyright 2024 by miControl® - Modifications and errors excepted
 mcDSA-F56-Lp - PV1.14.00.00 / DV1.00.00.04

Web: www.miControl.de e-mail: info@miControl.de Tel.: +49 (3379) 312 59-0 Fax: +49 (3379) 312 59-19

Scheme



©2022 by miControl

Terminal assignment

X1 Supply		
1	FE	Functional earth
2	+Up	Power supply voltage
3	GND	Ground for power supply voltage
4	+Ue24V	Electronic supply voltage
5	GND	Ground for electronic supply voltage
X2 Analog inputs		
1	+Ain0	Analog input 0, plus
2	-Ain0	Analog input 0, minus
3	+Ain1	Analog input 1, plus
4	-Ain1	Analog input 1, minus
5	Ain2	Analog Input 2 (5V) / PT1000
X3 CAN bus		
1	CAN Hi	CAN High
2	CAN Lo	CAN Low
3	CAN GND	CAN Ground
X4 Digital inputs/outputs		
1	EN-A	Hardware enable channel A
2	Din0	Digital input 0
3	Din1	Digital input 1
4	Din2	Digital input 2
5	Din3	Digital input 3
6	Din4	Digital input 4
7	Din5	Digital input 5
8	Din6	Digital input 6
9	EN-B	Hardware enable channel B
10	Dout0	Digital output 0
11	Dout1	Digital output 1
12	Dout2	Digital output 2
13	Dout3	Digital output 3

X5 Hall sensors		
1	H1	Hall sensor 1
2	H2	Hall sensor 2
3	H3	Hall sensor 3
4	res.	Reserved
5	res.	Reserved
6	res.	Reserved
7	res.	Reserved
8	res.	Reserved
9	+U5V	5V output voltage for sensor supply Sensors: hall
10	GND	Ground for sensor supply Notice: don't connect with system GND
X6 Motor		
1	Ma	Motor phase A
2	Mb	Motor phase B
3	Mc	Motor phase C