

Servo amplifier

mcDSA-E40-EtherCAT-HC

Article number: 1511120



Picture similar

Technical data

Supply voltages		Sensor supply (Encoder/Hall)	
Electronic supply voltage Ue* ¹	9..30 V	Output voltage	5 V
Electronic current consumption@ Ue=24V* ²	typ. 80 mA	Max. output current	0.2 A
Power supply voltage Up* ³	9..60 V	Incremental encoder	
Output current		Type	incremental
Max. output current	30 A	Signals	A,/A,B,/B,I _{nx} ,/I _{nx}
Continuous output current @ Up=24V* ⁴	12 A	Max. frequency (per channel)	500 kHz
Continuous output current @ Up=48V* ⁴	12 A	Input voltage (24V tolerant)	0..5 V
PWM		Signal type	differential, open collector, single ended
Output voltage	90% Up	Hall sensors	
PWM frequency	25, 32*, 50 kHz	Signals	H1,/H1,H2,/H2,H3,/H3
Mechanical		Max. frequency (per channel)	10 kHz
Size LxWxH	110 x 61 x 77 mm	Input voltage (24V tolerant)	0..5 V
Weight	357 g	Signal type	differential, open collector, single ended
Environment		Digital inputs	
Protection class	IP20	Number - digital inputs	4 (Din0..3)
Ambient temperature (operation)	-25..70 °C	Low voltage	0..5 V
Ambient temperature (storage)	-25..85 °C	High voltage	8..30 V
Rel. humidity (non-condensing)	5..90 %	Digital outputs	
CAN bus		Number	1 (Dout0)
Protocol	DS301	Continuous output current	1.5 A
Device profile	DS402	Load	resistive, inductive
Max. baudrate	1 Mbit/s	Output voltage	Electronic supply voltage Ue
CAN specification	2.0B	Signal type	positive switching
Galvanically isolated	no	Analog inputs	
EtherCAT		Number	1 (Ain0)
Type	EtherCAT Slave	Signal type	0..10 V, 12 Bit, single ended
Physical layer	100 Base-Tx EtherCAT		
Bus controller	ET1100		
Max. baudrate	100 Mbit/s		
Number of ports	2xRJ45 (In,Out)		
Protocol	CoE (CANopen over EtherCAT)		

*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: 12 A → 9.8 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.



miControl® GmbH

Chausseestraße 34

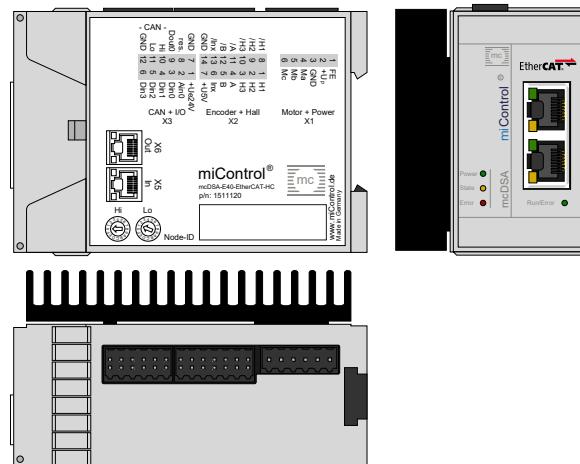
14979 Großbeeren (bei Berlin)

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mcDSA-E40-EtherCAT-HC - PV1.13.00.00 / DV1.00.00.05

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

Scheme



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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 Hall and inc. encoder		
1	H1	Hall sensor 1
2	H2	Hall sensor 2
3	H3	Hall sensor 3
4	A	Inc. encoder, A channel
5	B	Inc. encoder, B channel
6	Inx	Inc. encoder, index channel
7	+U5V	5V output voltage for sensor supply Sensors: encoder, hall
8	/H1	Hall sensor 1 inverted
9	/H2	Hall sensor 2 inverted
10	/H3	Hall sensor 3 inverted
11	/A	Inc. encoder, A channel inverted
12	/B	Inc. encoder, B channel inverted
13	/Inx	Inc. encoder, index channel inverted
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
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	res.	Reserved
9	Dout0	Digital output 0
10	CAN Hi	CAN High
11	CAN Lo	CAN Low
12	CAN GND	CAN Ground
X5 EtherCAT - In port		
-	In	In
X6 EtherCAT - Out port		
-	Out	Out