

Servo amplifier

mcDSA-E20XC-EtherCAT

Article number: 1512648



Picture similar

Technical data

Supply voltages		EtherCAT	
Electronic supply voltage Ue* ¹	9..30 V	Type	EtherCAT Slave
Electronic current consumption@ Ue=24V* ²	typ. 85 mA	Physical layer	100 Base-Tx EtherCAT
Power supply voltage Up* ³	9..60 V	Bus controller	ET1100
Output current		Max. baudrate	
Max. output current	160 A	Number of ports	100 Mbit/s
Continuous output current @ Up=24V* ⁴	70 A	Protocol	2xRJ45 (In,Out)
Continuous output current @ Up=48V* ⁴	63 A	CoE (CANopen over EtherCAT)	
PWM		Sensor supply (Encoder/Hall)	
Output voltage	90% Up	Output voltage	5 V
PWM frequency	25, 32* ⁵ , 50 kHz	Max. output current	0.2 A
Mechanical		Incremental encoder	
Size LxWxH	111 x 100 x 55 mm	Type	incremental
Weight	630 g	Signals	A,/A,B,/B,Inx,/Inx
Environment		Max. frequency (per channel)	100 kHz
Protection class	IP20	Input voltage	0.5 V
Ambient temperature (operation)* ⁶	-40..40 °C	Signal type	differential, open collector, single ended
Ambient temperature (storage)	-40..85 °C	Hall sensors	
Rel. humidity (non-condensing)	5..90 %	Signals	H1,/H1,H2,/H2,H3,/H3
CAN bus		Max. frequency (per channel)	10 kHz
Protocol	DS301	Input voltage	0.5 V
Device profile	DS402	Signal type	open collector, single ended
Max. baudrate	1 Mbit/s	Digital inputs	
CAN specification	2.0B	Number - digital inputs	4 (Din0..3)
Galvanically isolated	no	Low voltage	0.5 V
		High voltage	8..30 V
Digital outputs		Digital outputs	
		Number	1 (Dout0)
		Continuous output current	1.5 A
		Load	resistive, inductive
		Output voltage	Electronic supply voltage Ue
		Signal type	positive switching
Analog inputs		Analog inputs	
		Number	1 (Ain0)
		Signal type - Ain	+/- 10 V, 12 Bit, differential

*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: 63 A → 51 Aeff, 70 A → 57 Aeff

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

*⁵ default value*⁶ Hex-Switches should be not used at T < -25°C (setting of node ID only possible by firmware parameters)

Additional technical data are available in mcManual.



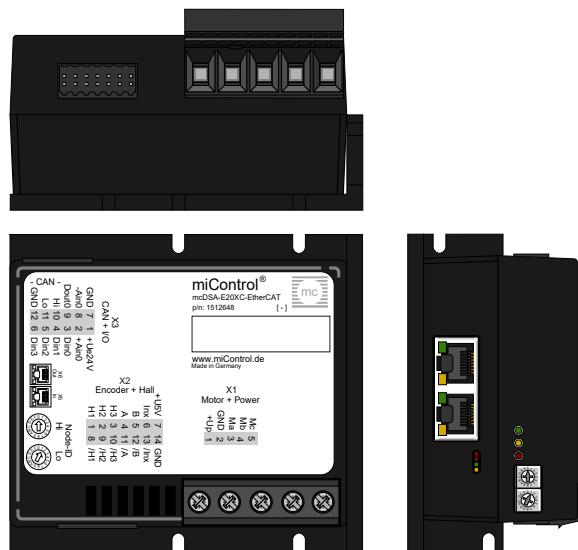
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Scheme



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Terminal assignment

X1 Motor		
1	+Up	Power supply voltage
2	GND	Ground for power supply voltage
3	Ma	Motor phase A
4	Mb	Motor phase B
5	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, 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
X5 EtherCAT - In port		
-	In	In
X6 EtherCAT - Out port		
-	Out	Out