Servo amplifier

mcDSA-E60

Article number: 1512699

Certification: cULus *1 E475093

Picture similar

Technical data

Supply voltages	
Electronic supply voltage Ue*2	9..30 V
Electronic current consumption@ Ue=24V*3	typ. 25 mA
Power supply voltage Up*4	9..60 V
Output current	
Max. output current	15 A
Continuous output current (certified UL)*5 @Up=24V @Up=60V	 5 A 4.3 A
PWM	
Output voltage	90% Up
PWM frequency	25, 32*6, 50 kHz
Mechanical	
Size LxWxH	74 x 45 x 17 mm
Weight	30 g
Environment	
Protection class	IP20
Ambient temperature (operation) (certified UL)	-25..40 °C
Ambient temperature (operation) (not certified)	-25..70 °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
Sensor supply (Encoder/Hall)	
Output voltage	5 V
Max. output current	0.2 A

Incremental encoder	
Type	incremental
Signals	A,B,Inx
Max. freqency (per channel)	100 kHz
Input voltage	0..5 V
Signal type	open collector, single ended
Notice	Inx parallel with H3
Hall sensors	
Signals	H1,H2,H3
Max. freqency (per channel)	10 kHz
Input voltage	0..5 V
Signal type	open collector, single ended
Notice	H3 parallel with Inx
Digital inputs	
Number (+/-30V tolerant)	2 (Din0..1)
Number (0..30V tolerant)	1 (Din2)
Low voltage	0..5 V
High voltage	8..30 V
Notice	Din2 parallel with Dout0*7
Digital outputs	
Number	1 (Dout0)
Continuous output current (certified UL)	1.5 A
Load	resistive, inductive
Output voltage	Electronic supply voltage Ue
Signal type	positive switching
Notice	Dout0 parallel with Din2
Analog inputs	
Number	1 (Ain0)
Signal type	0..10 V, 12 Bit, single ended

*1 The certified performance data must be observed (see UL Instruction Note)
*2 No reverse polarity protection, the destruction limit is at overvoltage of >= 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 >= 80V
*5 connector cable with max. possible cable cross-section, PWM frequency 32 kHz (asymmetrical), ambient temperature 40 °C, I/O's and 5V output active, RMS current: 5 A → 4.1 Aeff, 4.3 A → 3.5 Aeff
*6 default value
*7 Input voltage must not exceed Electronic supply voltage Ue

Additional technical data are available in mcManual.

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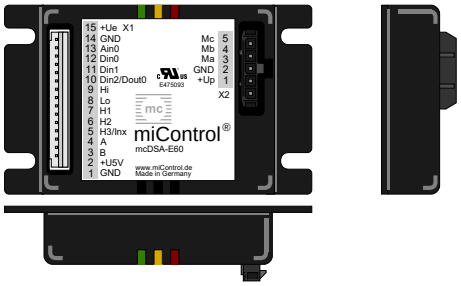
Scheme



Terminal assignment

X1	Hall, inc. encoder, I/O's and CAN	
1	GND	Ground for sensor supply Notice: don't connect with system GND
2	+U5V	5V output voltage for sensor supply Sensors: encoder, hall
3	B	Inc. encoder, B channel
4	A	Inc. encoder, A channel
5	H3/Inx	Hall sensor 3 / Inc. encoder, index channel
6	H2	Hall sensor 2
7	H1	Hall sensor 1
8	CAN Lo	CAN Low
9	CAN Hi	CAN High
10	Din2/Dout0	Digital input 2 / Digital output 0
11	Din1	Digital input 1
12	Din0	Digital input 0
13	Ain0	Analog input 0
14	GND	Ground for electronic supply voltage
15	+Ue	Electronic supply voltage
X2	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

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