

Summary of your selected configuration

Motor - DCX16S EB SL 12V

Planetary gearhead - GPX16 A 26:1

Sensor - ENX16 EASY 256IMP

Total weight of the drive: 59 g

Functions		
Gearhead type	Standard version	
Reduction	26 : 1	*
Number of stages	2	*
Commutation	Precious metal brushes	
Spark suppression (CLL)	with CLL	
Supply voltage	Nominal voltage 12 V	
Motor bearings	Sintered sleeve bearings	
Counts per turn	256	*
Form and Fit		
Gear shaft	with flat	
Shaft length L1	11.75	mm
Length of flat L2	7.8	mm
Height of flat D2	2.8	mm
Gear flange	Standard flange	
Amount of threads	3	
Thread diameter	M2	
Pitch circle diameter TK	13	mm
Electrical connection, motor	Cable	
Connector type, motor	No connector	
Cable length L1 for motor	200	mm
Cable type	AWG24	
Electrical connection, encoder	Standard	
Cable length L1 for encoder	200	mm
Cable type for encoder	TPE ribbon cable	
Connector type, encoder	10-pol 2.54mm pin header	
Connection orientation (motor)	0	degree
Connection orientation (encoder)	0	degree
Add-ons		
Labeling	Standard labeling	

(*) These values have been changed through the configuration.

Motor - DCX16S EB SL 12V



Values at nominal voltage

Nominal voltage	12 V
No load speed	6260 rpm
No load current	11 mA
Nominal speed	3320 rpm
Nominal torque (max. continuous torque)	5.19 mNm
Nominal current (max. continuous current)	0.299 A
Stall torque	11.2 mNm
Stall current	0.624 A
Max. efficiency	75.4 %

Characteristics

Max. output power	4.35 W
Terminal resistance	19.2 Ohm
Terminal inductance	0.581 mH
Torque constant	18 mNm/A
Speed constant	531 rpm/V
Speed/torque gradient	568 rpm/mNm
Mechanical time constant	6.11 ms
Rotor inertia	1.03 gcm ²

Thermal data

Thermal resistance housing-ambient	23.5 K/W
Thermal resistance winding-housing	9.9 K/W
Thermal time constant of the winding	9.32 s
Thermal time constant of the motor	227 s
Ambient temperature	-30..85 °C
Max. winding temperature	100 °C

Mechanical data

Max. permissible speed	8680 rpm
Min. axial play	0 mm
Max. axial play	0.2 mm
Radial backlash	0.015 mm
Max. axial load (dynamic)	0.1 N
Max. force for press fits (static)	60 N
Max. radial load	2 N

Further specifications

Number of pole pairs	1
Number of commutator segments	7
Weight	28 g
Number of autoclave cycles	0
Typical noise level	40 dBA

Information about motor data: http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_049_EN.pdf

11.02.2015 / **Subject to change without notice** / Your configuration: B743DDC10882 / Revision number: 1

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Planetary gearhead - GPX16 A 26:1



Gearhead data

Reduction	26:1
Absolute reduction	4950/190
Max. transmittable power (continuous)	3.1 W
Max. transmittable power (intermittent)	3.9 W
Number of stages	2
Max. continuous torque	0.2 Nm
Max. intermittent torque	0.23 Nm
Direction of rotation, drive to output	=
Max. efficiency	80 %
Weight	25 g
Average backlash no-load	1.6 degree
Mass inertia	0.108 gcm ²
Gearhead length	20.7 mm

Technical data

Output shaft bearing	KL
Gearhead type	GPX
mm from flange	5 mm
Min. axial play	0 mm
Max. axial play	0.1 mm
Max. permissible radial load	60 N
mm from flange	5 mm
Max. axial load (dynamic)	12 N
Max. force for press fits	60 N
Recommended motor speed	14000 rpm
Max. intermittent input speed	17500 rpm
Min. recommended temperature range	-40..100 °C
Number of autoclave cycles	0

Information about gearhead data: http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_203_EN.pdf

Sensor - ENX16 EASY 256IMP



Type

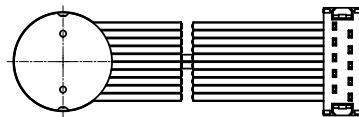
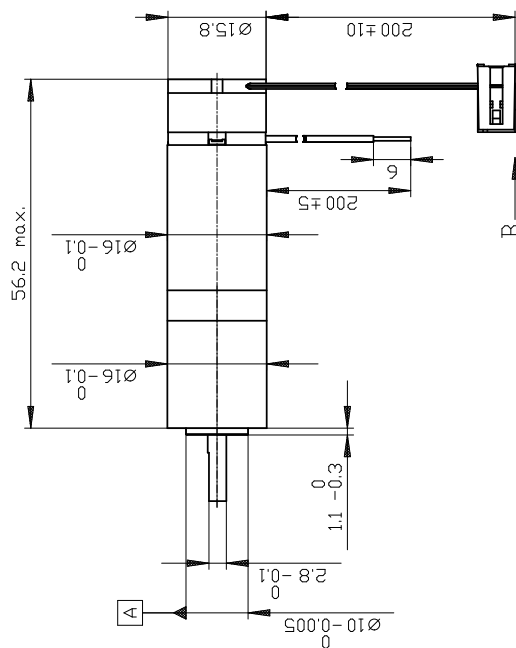
Counts per turn	256
Number of channels	3
Line Driver	RS422
Max. outer diameter	15.8 mm
Max. housing length	8.5 mm
Max. electrical speed	120000 rpm
Max. speed	30000 rpm


Technical data

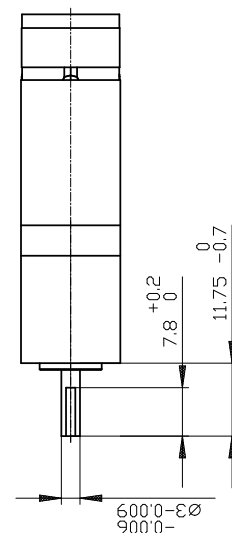
Supply voltage	4.5..5.5 V
Output signal driver	Differential, EIA RS 422
Current per cable	-20...20 mA
Min. statuslength	30 °el
Max. state length	175 °el
Signal rise time/Signal fall time	20/20 ns
Min. state duration	500 ns
Direction of rotation	A for B, CW
Index position	A low & B low
Index synchronously to AB	yes
Index pulse width	90 °e
Typical current draw at standstill	17 mA
Max. moment of inertia of code wheel	0.05 gcm ²
Weight (Standard cable length)	6.4 g
Operating temperature range	-40..100 °C
Number of autoclave cycles	0

Datasheet: http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/ENXEASY_en.pdf

Drawings are not to scale!



Pin 10	Pin 2		Pin 1
Pin 9	Pin 1		Pin 1
Stecker Typ Sensor sensor connector type			
25mm Federleiter/pin header			
Pinbelegung pin allocation			
Pin 1	Nicht verbinden do not connect		
Pin 2	VCC		
Pin 3	GND		
Pin 4	Nicht verbinden do not connect		
Pin 5	Kanal A \		
Pin 6	Kanal A		
Pin 7	Kanal B \		
Pin 8	Kanal B		
Pin 9	Kanal I \		
Pin 10	Kanal I		



Kabel nicht dargestellt
no cable visualisation