

Your configuration

Part number*: B72DB9E3D8E7

Consists of:

Motor - DCX22S GB KL 12V
Planetary gearhead - GPX22 C 103:1

maxon motor

driven by precision

maxon motor worldwide

http://www.maxonmotor.com/maxon/view/content/contact_page

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Interactive 3D model



Your configuration can be viewed here:

<http://maxonmotor.com/maxon/view/configurator/?ConfigID=B72DB9E3D8E7>

*If the link doesn't work, you can open your configuration with the part number from the catalog.

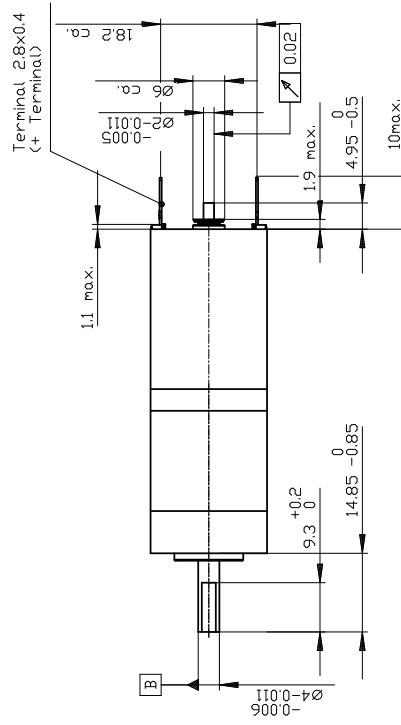
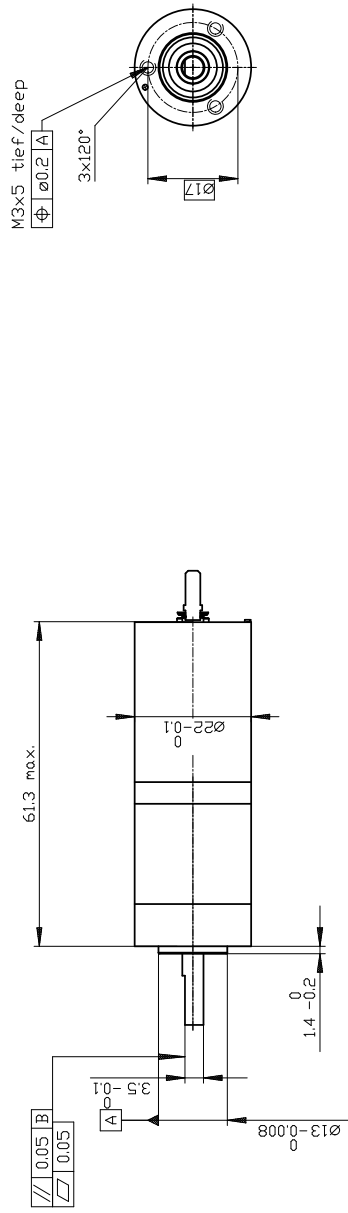
Attachments / CAD files

Please double click with left mouse button on a pushpin symbol to open a file. You could also save a file when you click the symbol with the right mouse button.

B72DB9E3D8E7.stp (STP AP 214)

**Motor - DCX22S GB KL 12V
Planetary gearhead - GPX22 C 103:1**

Drawings are not to scale!



Beschreibung Labeling
12 v 103 - 1

Summary of your selected configuration

Motor - DCX22S GB KL 12V

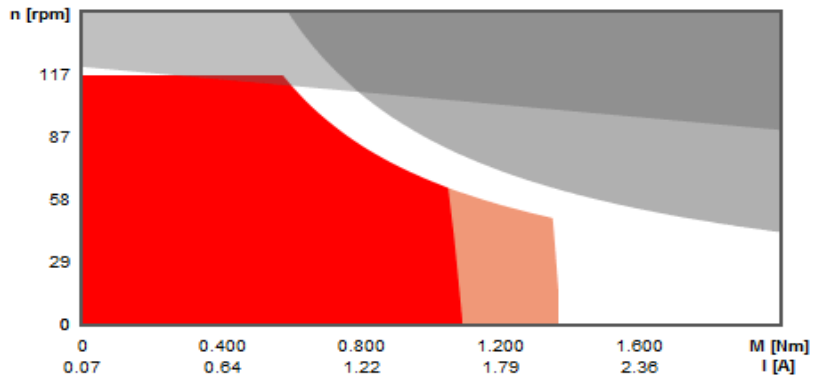
Planetary gearhead - GPX22 C 103:1

Total weight of the drive: 116 g

Functions		
Gearhead type	Ceramic version	*
Reduction	103 : 1	*
Number of stages	3	
Commutation	Graphite brushes	
Supply voltage	Nominal voltage 12 V	*
Motor bearings	Preloaded ball bearing	
Form and Fit		
Gear shaft	with flat	
Shaft bore	without transverse bore	
Shaft length L1	14.85 mm	
Length of flat L2	9.3 mm	
Height of flat D2	3.5 mm	
Gear flange	Standard flange	
Amount of threads	3	
Thread diameter	M3	*
Pitch circle diameter TK	17 mm	
Flange, rear	No flange	
Shaft, rear	straight	
Shaft length L1	4.95 mm	
Electrical connection, motor	Terminal	
Connection orientation (motor)	0 degree	
Add-ons		
Labeling	12 v 103 - 1	*
EMI Filter	no suppression	

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

Drive disposition



■	Continuous operation range	■	Out of voltage range
■	Short-term operating range	●	Selected operating point
■	Continuous operation range at reduced thermal resistance R_{th2} 50%		

Values of the drive at max. available voltage

Max. motor voltage	12 V
Max. load speed	104 min ⁻¹
Continuous torque	1112.81 mNm
Nominal current (max. continuous current)	1.66 A

Your operating point - The required data for the load

Required voltage	0.1 V
Max. load speed	0 min ⁻¹
Effective load torque (rms)	0 mNm
Effective load current (rms)	0.07 A

Motor - DCX22S GB KL 12V



Values at nominal voltage

Nominal voltage	12 V
No load speed	12400 rpm
No load current	71.7 mA
Nominal speed	10700 rpm
Nominal torque (max. continuous torque)	14.6 mNm
Nominal current (max. continuous current)	1.66 A
Stall torque	108 mNm
Starting current	11.8 A
Max. efficiency	85.2 %

Characteristics

Max. output power	22.8 W
Terminal resistance	1.02 Ohm
Terminal inductance	0.0576 mH
Torque constant	9.18 mNm/A
Speed constant	1040 rpm/V
Speed/torque gradient	116 rpm/mNm
Mechanical time constant	6.12 ms
Rotor inertia	5.05 gcm ²

Thermal data

Thermal resistance housing to ambient	16 K/W
Thermal resistance winding to housing	7 K/W
Thermal time constant of the winding	18.1 s
Thermal time constant of the motor	528 s
Ambient temperature	-40..100 °C
Max. permissible winding temperature	125 °C

Mechanical data

Max. permissible speed	18000 rpm
Min. axial play	0 mm
Max. axial play	0.1 mm
Radial backlash	0.02 mm
Max. axial load (dynamic)	2.5 N
Max. force for press fits (static)	30 N
Max. radial load	16 N

Further specifications

Number of pole pairs	1
Number of collector segments	9
Weight	60 g
Number of sterilization cycles	0
Typical noise level	41 dBA

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

Planetary gearhead - GPX22 C 103:1



Gearhead data

Reduction	103:1
Absolute reduction	371250/3610
Max. transmittable continuous power	7 W
Max. transmittable intermittent power	9 W
Number of stages	3
Max. continuous torque	1.6 Nm
Permissible intermittent torque	2 Nm
Direction of rotation, drive to drive	=
Max. efficiency	74 %
Weight	56 g
Average no-load backlash	1.8 degree
Moment inertia	0.322 gcm ²
Gearhead length	31.8 mm

Technical data

Output shaft bearing	Ball bearings
Gearhead type	GPX
Max. radial backlash	0.2 mm
mm from flange	5 mm
Min. axial play	0 mm
Max. axial play	0.05 mm
Max. permissible radial load	70 N
mm from flange	5 mm
Max. axial load (dynamic)	100 N
Max. force for press fits	100 N
Recommended motor speed	12000 rpm
Max. short-term input speed	15000 rpm
Min. recommended temperature range	-40..100 °C
Number of sterilization cycles	0

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

The following controllers are available for this drive:

Note: Please use this part number to order in the online catalog .



EPOS2 24/2
390003



EPOS2 P 24/5
378308



EPOS2 Module 36/2
360665



EPOS2 24/5
367676



EPOS2 50/5
347717



EPOS3 70/10 EtherCAT
411146



ESCON 36/2 DC
403112



ESCON 50/5
409510



ESCON Module 50/5
438725



MAXPOS 50/5
447293