

Your configuration

maxon motor

driven by precision

Part number*: B74421A7E48E

Consists of:

Motor - DCX22S GB KL 24V
Planetary gearhead - GPX22 A 138:1
Sensor - ENC30 HEDL 5540 500IMP

maxon motor worldwide

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

E-Mail: e-shop@maxonmotor.com

Internet: www.maxonmotor.com

Total price	CHF 371.80	Pieces
	CHF 303.20	Pieces
	CHF 263.60	Pieces

After an order is placed at the e-shop, the product is manufactured in Switzerland and shipped from the factory within 11 days.

General Terms and Conditions: http://www.maxonmotor.com/maxon/view/content/terms_and_conditions_page

Interactive 3D model

Click on the icon to activate your 3D model

Configuration created on: 14.04.2015 03:06

Your configuration can be viewed here:

[?ConfigID=B74421A7E48E](http://www.maxonmotor.com/maxon/view/content/contact_page?ConfigID=B74421A7E48E)

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

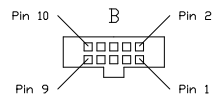
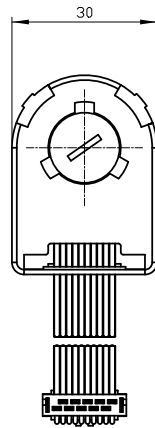
Attachments / CAD files

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.

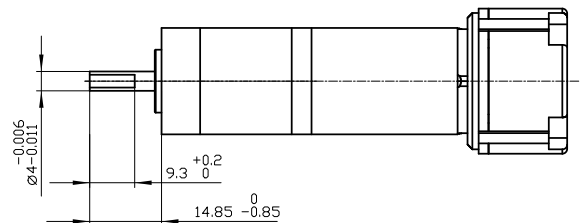
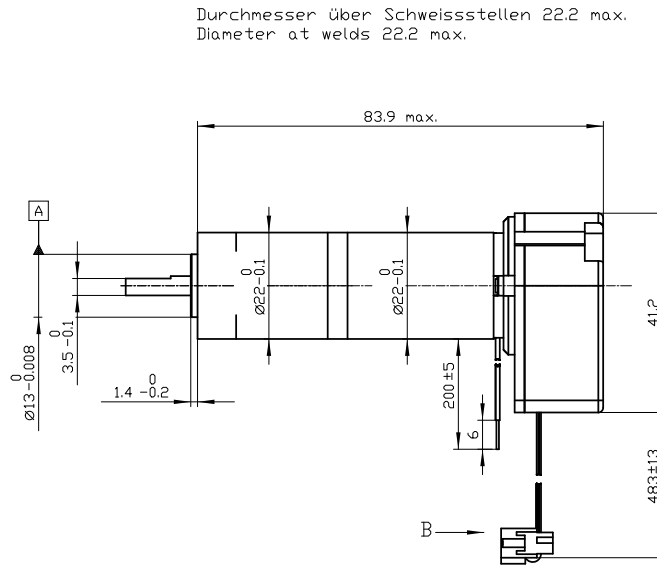
B74421A7E48E.stp (STP AP 214)

Motor - DCX22S GB KL 24V
Planetary gearhead - GPX22 A 138:1
Sensor - ENC30 HEDL 5540 500IMP

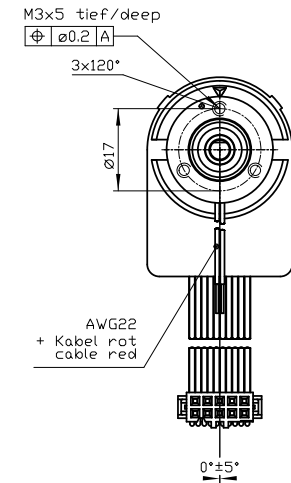
Drawings are not to scale!



Stecker Typ Sensor sensor connector type	
2.54mm Federleiste/pin header	
Pinbelegung pin allocation	
Pin 1	kein Anschluss do not connect
Pin 2	VCC
Pin 3	GND
Pin 4	kein Anschluss do not connect
Pin 5	Kanal A \ channel A \
Pin 6	Kanal A channel A
Pin 7	Kanal B \ channel B \
Pin 8	Kanal B channel B
Pin 9	Kanal I \ (Index) channel I \ (Index)
Pin 10	Kanal I (Index) channel I (Index)



Kabel nicht dargestellt
no cable visualisation



Summary of your selected configuration

Motor - DCX22S GB KL 24V

Planetary gearhead - GPX22 A 138:1

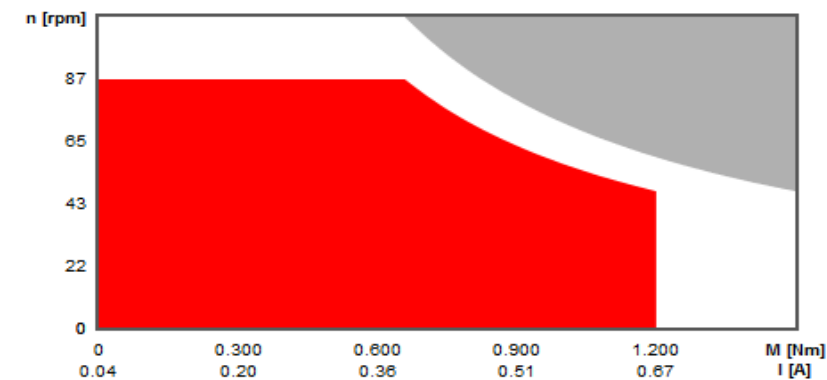
Sensor - ENC30 HEDL 5540 500IMP






Total weight of the drive: 165 g

Functions		
Gearhead type	Standard version	
Reduction	138 : 1	*
Number of stages	3	*
Commutation	Graphite brushes	
Supply voltage	Nominal voltage 24 V	
Motor bearings	Preloaded ball bearing	
Counts per turn	500	
Hysteresis	0.17°m	
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
Electrical connection, motor	Cable	
Connector type, motor	No connector	
Cable length L1 for motor	200	mm
Cable type	AWG22	
Electrical connection, encoder	Standard	
Cable length L1 for encoder	483	mm
Cable type for encoder	PVC 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	
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 Rth2 50%		

Your entries

Available voltage	24 V
Speed	0 rpm
Torque	0 mNm

Values of the drive at available voltage

Available voltage	24 V
Max. speed at given load	57 rpm
Max. continuous torque	1200 mNm
Max. continuous current	0.67 A

Required electrical data for you operating point

Speed	0 rpm
Torque	0 mNm
Required voltage	0 V
Required current	0 A

Motor - DCX22S GB KL 24V



Values at nominal voltage

Nominal voltage	24 V
No load speed	12400 rpm
No load current	35.9 mA
Nominal speed	10800 rpm
Nominal torque (max. continuous torque)	15.4 mNm
Nominal current (max. continuous current)	0.87 A
Stall torque	120 mNm
Stall current	6.51 A
Max. efficiency	85.9 %

Characteristics

Max. output power	24 W
Terminal resistance	3.69 Ohm
Terminal inductance	0.231 mH
Torque constant	18.4 mNm/A
Speed constant	520 rpm/V
Speed/torque gradient	104 rpm/mNm
Mechanical time constant	6.07 ms
Rotor inertia	5.55 gcm ²

Thermal data

Thermal resistance housing-ambient	16 K/W
Thermal resistance winding-housing	7 K/W
Thermal time constant of the winding	20 s
Thermal time constant of the motor	528 s
Ambient temperature	-40..100 °C
Max. 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 commutator segments	9
Weight	70 g
Number of autoclave cycles	0
Typical noise level	41 dBA

Settings for
Escon Studio

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

Planetary gearhead - GPX22 A 138:1



Gearhead data

Reduction	138:1
Absolute reduction	341550/2470
Max. transmittable power (continuous)	6 W
Max. transmittable power (intermittent)	7.5 W
Number of stages	3
Max. continuous torque	1.2 Nm
Max. intermittent torque	1.5 Nm
Direction of rotation, drive to output	=
Max. efficiency	74 %
Weight	60 g
Average backlash no-load	1.8 degree
Mass inertia	0.287 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. intermittent input speed	15000 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 - ENC30 HEDL 5540 500IMP



Type

Counts per turn	500
Number of channels	3
Line Driver	AM26C31QD
Max. outer diameter	30 mm
Max. housing length	18.3 mm
Max. electrical speed	12000 rpm
Max. speed	30000 rpm

Technical data

Versorgungsspannung Typisch	5 V
Supply voltage tolerance +/-	10 %
Output signal driver	Differential, EIA RS 422
Current per cable	-20...20 mA
Min. state length	45 °el
Min. state length	135 °el
Signal rise time/Signal fall time	180/40 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	60 mA
Max. moment of inertia of code wheel	0.6 gcm ²
Weight (Standard cable length)	35 g
Operating temperature range	-40..100 °C
Number of autoclave cycles	0

