

Your configuration

Part number*: B72DCA021FF3

Consists of:

Motor - DCX32L GB KL 24V
Planetary gearhead - GPX32 A 35:1
Sensor - ENX16 EASY 1024IMP

maxon motor

driven by precision

maxon motor worldwide

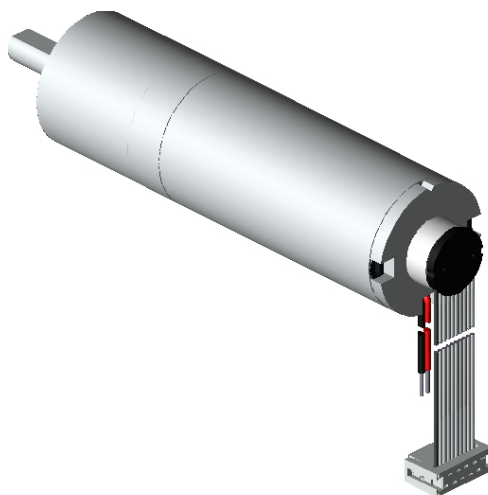
http://www.maxonmotor.com/maxon/view/content/contact_page

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Interactive 3D model



Your configuration can be viewed here:

<http://www.maxonmotor.com/maxon/view/configurator/?ConfigID=B72DCA021FF3>

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

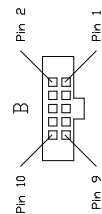
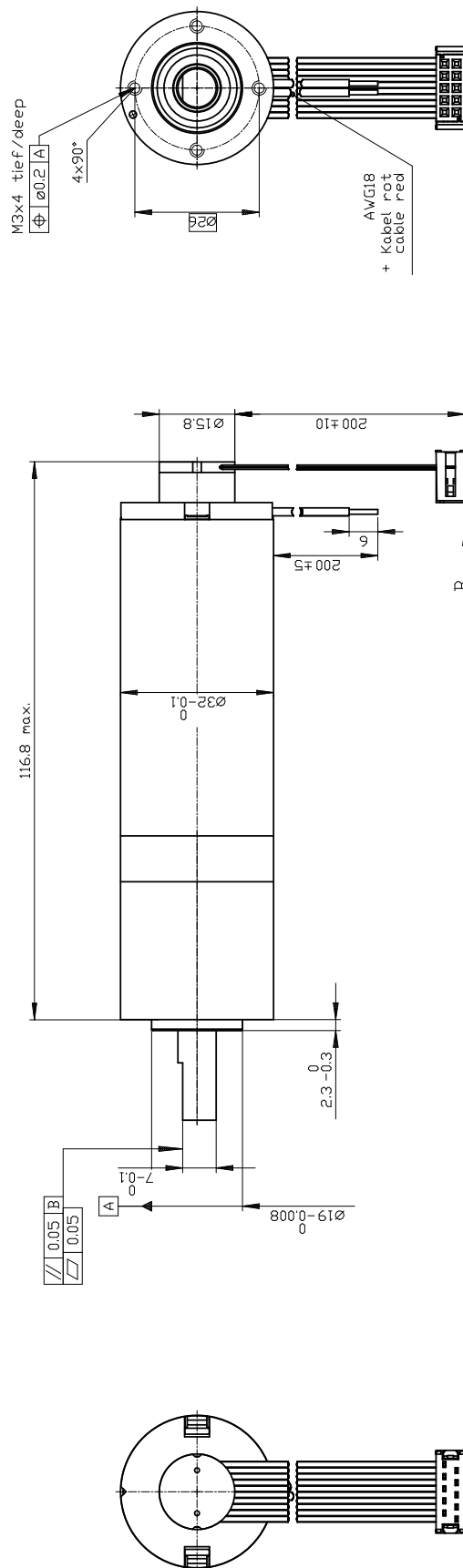
Attachments / CAD files

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.

B72DCA021FF3.stp (STP AP 214)

Motor - DCX32L GB KL 24V
Planetary gearhead - GPX32 A 35:1
Sensor - ENX16 EASY 1024IMP

Drawings are not to scale!



Stecker Typ Sensor sensor connector type 2.54mm Federleiste/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 \ channel A \
Pin 6	Kanal A channel A
Pin 7	Kanal B \ channel B \
Pin 8	Kanal B channel B
Pin 9	Kanal I \ channel I \
Pin 10	Kanal I channel I

Kabel nicht dargestellt
no cable visualisation

Summary of your selected configuration

Motor - DCX32L GB KL 24V

Planetary gearhead - GPX32 A 35:1

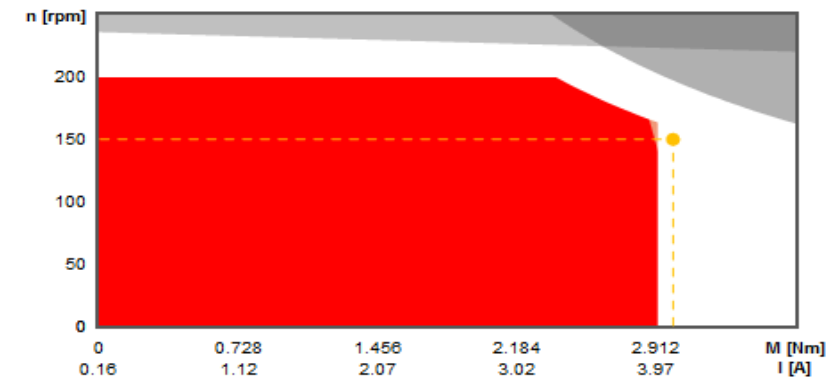
Sensor - ENX16 EASY 1024IMP






Total weight of the drive: 496 g

Functions			
Reduction	35 : 1		*
Number of stages	2		*
Commutation	Graphite brushes		
Supply voltage	Nominal voltage 24 V		*
Motor bearings	Preloaded ball bearing		
Counts per turn	1024		*
Hysteresis	Standard hysteresis (0.35°m)		
Form and Fit			
Gear shaft	with flat		
Shaft bore	without transverse bore		
Shaft length L1	21 mm		
Length of flat L2	12 mm		
Height of flat D2	7 mm		*
Position of borehole L3	6 mm		
Gear flange	Standard flange		
Amount of threads	4		*
Thread diameter	M3		
Pitch circle diameter TK	26 mm		*
Electrical connection, motor	Cable		
Connector type, motor	No connector		
Cable length L1 for motor	200 mm		
Cable type	AWG18		
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.

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%		

Values of the drive at max. available voltage

Max. motor voltage	24 V
Max. load speed	220 min ⁻¹
Continuous torque	3136 mNm
Nominal current (max. continuous current)	3.82 A

Your operating point - The required data for the load

Required voltage	15.1 V
Max. load speed	150 min ⁻¹
Effective load torque (rms)	3000 mNm
Effective load current (rms)	4.09 A

Motor - DCX32L GB KL 24V



Values at nominal voltage

Nominal voltage	24 V
No load speed	8270 rpm
No load current	164 mA
Nominal speed	7700 rpm
Nominal torque (max. continuous torque)	112 mNm
Nominal current (max. continuous current)	4.26 A
Stall torque	1980 mNm
Stall current	72.5 A
Max. efficiency	88.6 %

Characteristics

Max. output power	105 W
Terminal resistance	0.331 Ohm
Terminal inductance	0.103 mH
Torque constant	27.3 mNm/A
Speed constant	350 rpm/V
Speed/torque gradient	4.24 rpm/mNm
Mechanical time constant	3.24 ms
Rotor inertia	72.8 gcm ²

Thermal data

Thermal resistance housing-ambient	7.28 K/W
Thermal resistance winding-housing	2.3 K/W
Thermal time constant of the winding	42.2 s
Thermal time constant of the motor	837 s
Ambient temperature	-40..100 °C
Max. winding temperature	155 °C

Mechanical data

Max. permissible speed	11300 rpm
Min. axial play	0 mm
Max. axial play	0.1 mm
Radial backlash	0.02 mm
Max. axial load (dynamic)	7 N
Max. force for press fits (static)	22.6 N
Max. radial load	65.3 N

Further specifications

Number of pole pairs	1
Number of commutator segments	11
Weight	305 g
Typical noise level	47 dBA

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

Planetary gearhead - GPX32 A 35:1



Gearhead data

Reduction	35:1
Absolute reduction	4554/130
Max. transmittable power (continuous)	50 W
Max. transmittable power (intermittent)	62 W
Number of stages	2
Max. continuous torque	2.92 Nm
Max. intermittent torque	3.64 Nm
Sense of rotation, drive to output	=
Max. efficiency	80 %
Weight	185 g
Average backlash no-load	1.5 degree
Mass inertia	3.346 gcm ²
Gearhead length	36.3 mm

Technical data

Output shaft bearing	Ball bearings
Gearhead type	GPX
Max. radial backlash	0.14 mm
mm from flange	5 mm
Min. axial play	0 mm
Max. axial play	0.1 mm
Max. permissible radial load	90 N
mm from flange	5 mm
Max. axial load (dynamic)	120 N
Max. force for press fits	120 N
Recommended motor speed	7000 rpm
Max. intermittent input speed	8750 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 1024IMP



Type

Counts per turn	1024
Number of channels	3
Line Driver	RS422
Max. outer diameter	15.8 mm
Max. housing length	8.5 mm
Max. electrical speed	30000 rpm
Max. speed	30000 rpm

Technical data

Supply voltage	4.5..5.5 V
Output signal driver	Differential, EIA RS 422
Output current per cable	-20...20 mA
Signal rise time/Signal fall time	20/20 ns
Min. state duration	500 ns
Sense 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

The following controllers are available for this drive:

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



EPOS2 24/5
367676



EPOS2 P 24/5
378308



EPOS2 50/5
347717



EPOS2 70/10
375711



EPOS3 70/10 EtherCAT
411146



ESCON 50/5
409510



ESCON Module 50/5
438725



ESCON 70/10
422969



MAXPOS 50/5
447293