

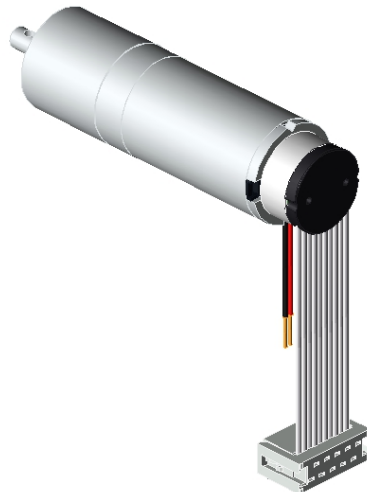
## Configured drive

Motor - DCX19S EB KL 24V  
Planetary gearhead - GPX19 LZ 35:1  
Sensor - ENX16 EASY 256IMP


**Part number: B78B2481C37C** Revision number 2

Orders are processed and shipped from Switzerland within 11 working days.

General Terms and Conditions: [https://www.maxonmotor.ch/maxon/view/content/terms\\_and\\_conditions\\_page](https://www.maxonmotor.ch/maxon/view/content/terms_and_conditions_page)



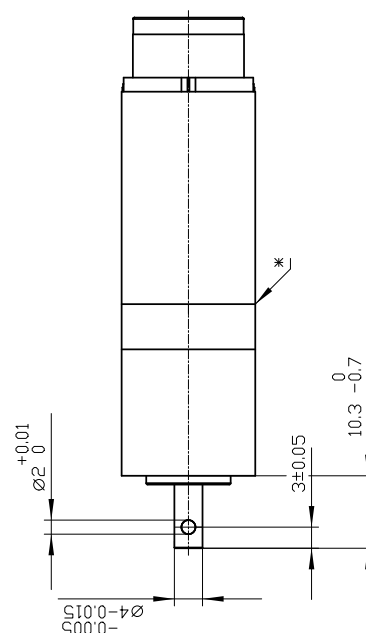
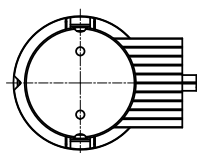
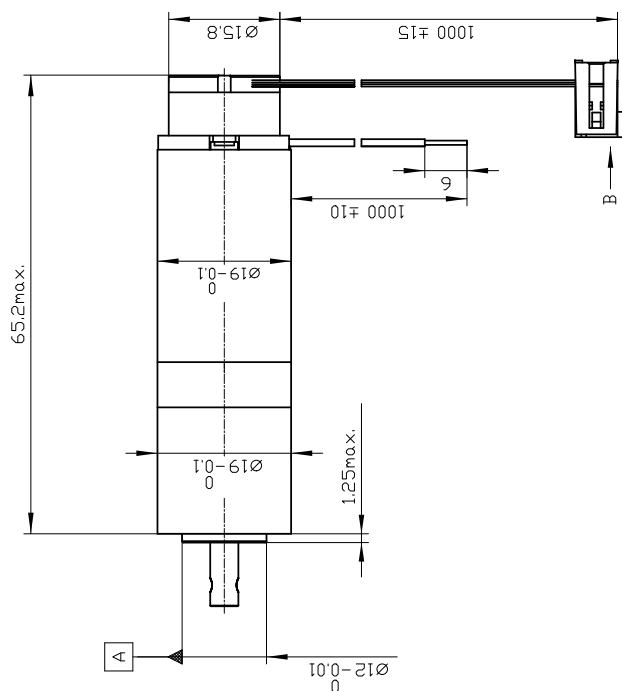
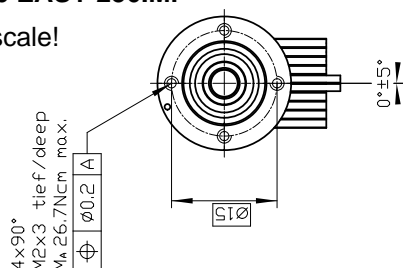
To open the integrated CAD file, please save this document and open it in Acrobat Reader. The STEP file is available after a double-click on the pin icon.

 B78B2481C37C.stp (STP AP 214)

Open configuration: [?ConfigID=B78B2481C37C](https://www.maxonmotor.ch/maxon/view/content/terms_and_conditions_page?ConfigID=B78B2481C37C)

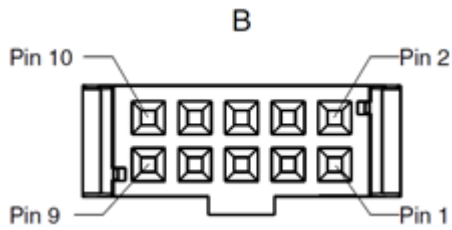
Drawing not to scale!

**driven by precision**



Kabel nicht dargestellt/ no cable visualisation

Axiapspiel Getriebe: 0,,0.1  
 Axial play gerahead: 0,,0.1  
 \* Durchmesser über Schweissnaht 19,2 max.  
 \* Diameter at welds 19,2 max.  
 + Kabel rot / + cablered AWG22



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**Connector type, encoder**

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**2.54mm 10-pol**

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Pin 1	NC
Pin 2	VCC
Pin 3	GND
Pin 4	NC
Pin 5	Channel A \
Pin 6	Channel A
Pin 7	Channel B \
Pin 8	Channel B
Pin 9	Channel I \
Pin 10	Channel I

## Summary of your selected configuration

Total weight of the drive: 95 g

### DCX19S EB KL 24V

#### Power

Commutation	Precious metal brushes
Nominal voltage	24 V
Motor bearings	Preloaded ball bearing
Spark suppression (CLL)	without CLL

#### Electrical connection, motor

Electrical connection, motor	Cable
Cable length	1000 mm

#### Labeling

Labeling	Your own text
Your text	8751736 Rev -

### GPX19 LZ 35:1

#### Power

Gearhead type	Reduced backlash
Reduction	35:1
Number of stages	2

#### Gear shaft

Gear shaft	Configurable shaft
Shaft shape	straight
Shaft length	10.3 mm
Shaft bore	with cross hole
Position of borehole	3 mm

#### Gear flange

Gear flange	Configurable flange
Amount of threads	4

### ENX16 EASY 256IMP

#### Power

Counts per turn	256
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Electrical connection, sensor	
Electrical connection, sensor	Configurable
Cable length	1000 mm

**Legend for part designation**

EB	Precious metal brushes	GB	Graphite brushes	CLL	Spark suppression	BL	Brushless
A	Hall sensors	B	Sensorless	KL	Ball bearings	SL	Sintered bearings
GPX	Planetary gearhead	ENX	Encoder	ENC	Encoder	IMP	Pulses
ST	Number of stages	HP	High Power	S/M/L	Short/medium/long	HS	High Speed
STE	Sterilizable	INT	Integrated	STD	Standard	SP	Speed
ABS	Absolute	LN	Reduced noise level	A	Standard	LZ	Reduced backlash
C	Ceramic bearing			STEC	Sterilizable, Ceramic bearing		

## DCX19S EB KL 24V



## Product specification

## Values at nominal voltage

Nominal voltage	24 V
No load speed	6350 min <sup>-1</sup>
No load current	13.2mA
Nominal speed	4480 min <sup>-1</sup>
Nominal torque (max. continuous torque)	11 mNm
Nominal current (max. continuous current)	0.319 A
Stall torque	37.5 mNm
Stall current	1.05 A
Max. efficiency	79.2 %

## Characteristics

Max. output power continuous	7.8 W
Terminal resistance	22.8 Ω
Terminal inductance	1.32 mH
Torque constant	35.6 mNm A <sup>-1</sup>
Speed constant	268 min <sup>-1</sup> V <sup>-1</sup>
Speed/torque gradient	172 min <sup>-1</sup> mNm <sup>-1</sup>
Mechanical time constant	4.89ms
Rotor inertia	2.72 gcm <sup>2</sup>

## Thermal data

Thermal resistance housing-ambient	17.6 KW <sup>-1</sup>
Thermal resistance winding-housing	6.5 KW <sup>-1</sup>
Thermal time constant of the winding	11.5 s
Thermal time constant of the motor	312 s
Ambient temperature	-40...85 °C
Max. winding temperature	100 °C

## Mechanical data

Max. permissible speed	7500 min <sup>-1</sup>
Axial play	0...0.1 mm
Preload	2.5 N
Radial backlash	0.02 mm
Max. axial load (dynamic)	2.5 N
Max. force for press fits (static)	30 N

Static, supported shaft	440 N
Max. radial load 5 mm from flange	16 N
Measurement from the flange	5 mm

**Further specifications**

Number of pole pairs	1
Number of commutator segments	9
Motor weight	55.3 g
Motor length	33.75 mm
Typical noise level	48 dBA

Information about motor data: [http://www.maxonmotor.com/medias/CMS\\_Downloads/DIVERSES/12\\_049\\_EN.pdf](http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_049_EN.pdf)



## GPX19 LZ 35:1



## Product specification

## Gearhead data

Reduction	35:1
Absolute reduction	4554/130
Number of stages	2
Max. continuous torque	0.45 Nm
Max. intermittent torque	0.55 Nm
Direction of rotation, drive to output	=
Max. efficiency	80 %
Average backlash no-load	0.8 °
Mass inertia	0.227 gmc <sup>2</sup>
Max. transmittable power (continuous)	6.5 W
Max. short-time transferable output	8.1 W

## Technical data

Output shaft bearing	Wälzlager
Max. radial play, 5 mm from flange	max. 0.1 mm
Axial play	0...0.1 mm
Max. permissible radial load, 5 mm from flange	80 N
Max. permissible axial load	40N
Max. permissible force for press fits	100 N
Max. continuous input speed	12000 min <sup>-1</sup>
Max. intermittent input speed	15000 min <sup>-1</sup>
Recommended temperature range	-40..100 °C

Information about gearhead data: [http://www.maxonmotor.com/medias/CMS\\_Downloads/DIVERSES/12\\_203\\_EN.pdf](http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_203_EN.pdf)

## ENX16 EASY 256IMP



## Product specification

## Sensor data

Counts per turn	256
Number of channels	3
Line Driver	RS422
Max. electrical speed	90000 min <sup>-1</sup>
Max. mechanical speed	30000 min <sup>-1</sup>

## Technical data

Supply voltage Vcc	5 V 10 %
Output signal	INC
Output signal driver	Differential / EIA RS 422
Output current per channel	-20...20 mA
State length	45...135 °el
Signal rise time/Signal fall time	20/20 ns
Min. state duration	125 ns
Direction of rotation	A before B CW
Index position	A low & B low
Index synchronously to AB	Yes
Index pulse width	90 °el
Typical current draw at standstill	23 mA
Max. moment of inertia of code wheel	0.05 gcm <sup>2</sup>
Operating temperature range	-40...100 C°
Number of autoclave cycles	0

Datasheet: [http://www.maxonmotor.com/medias/CMS\\_Downloads/DIVERSES/ENXEASY\\_EN.pdf](http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/ENXEASY_EN.pdf)