

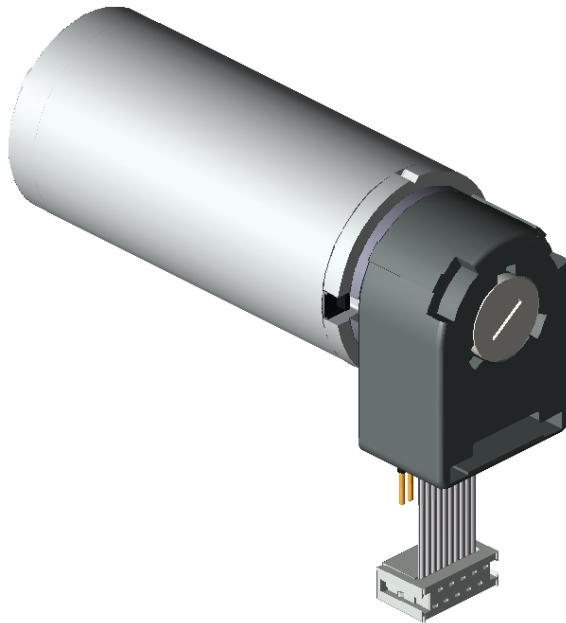
## Configured drive

Motor - DCX35L GB KL 24V  
Sensor - ENC 30 HEDL 5540 500IMP

**Part number: B78BD16BA583** Revision number 1

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)



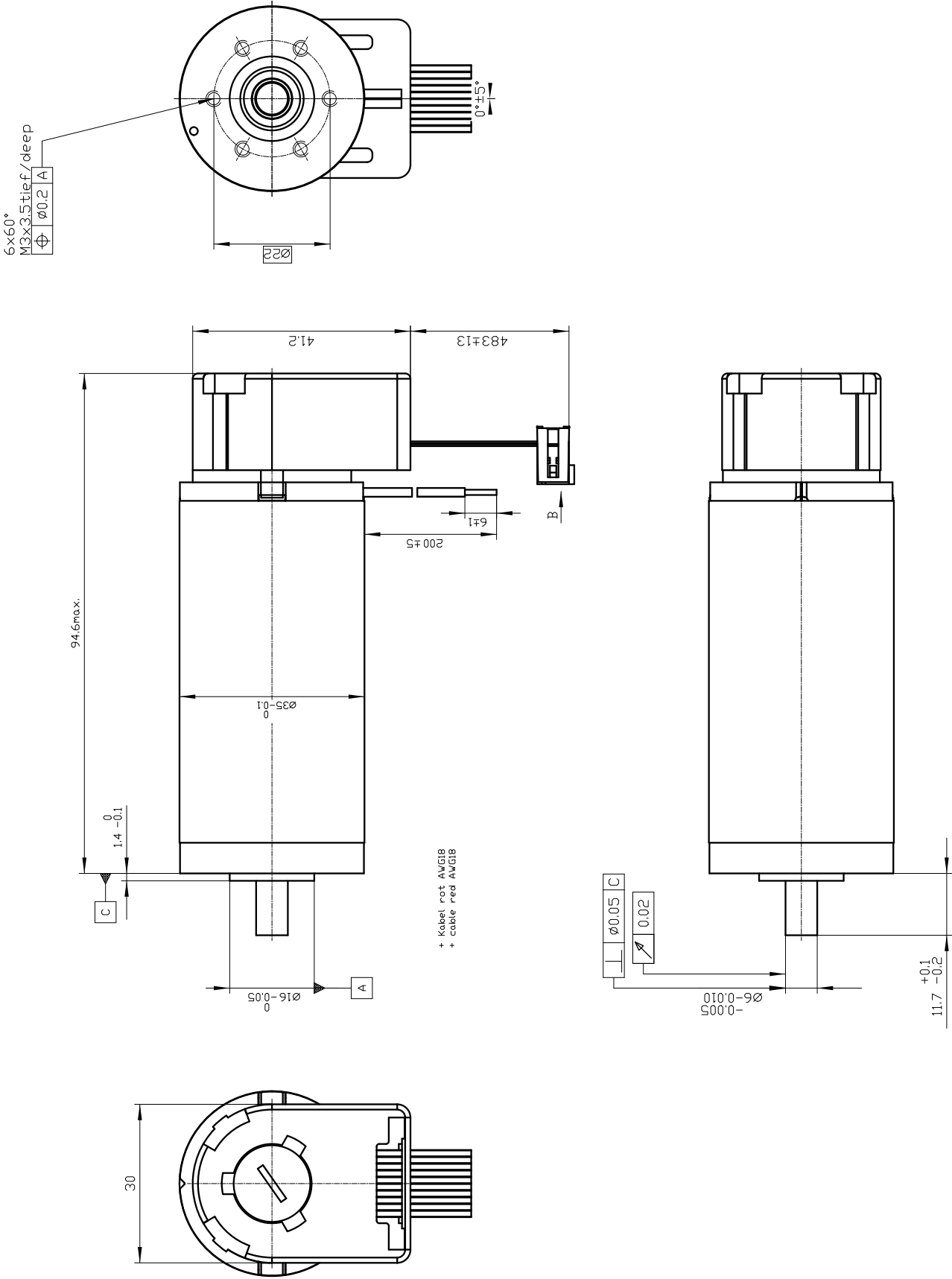
To open the integrated CAD file, please save this document and open it in Acrobat Reader. The STEP file is available after a double-click on the pin icon.

B78BD16BA583.stp (STP AP 214)

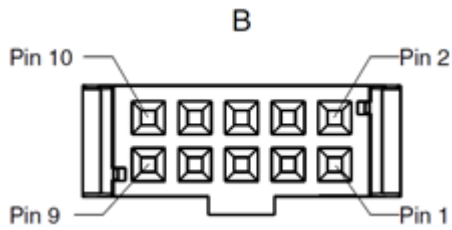
Open configuration: <http://www.maxonmotorusa.com/maxon/view/configurator/?ConfigID=B78BD16BA583>

Motor - DCX35L GB KL 24V  
Sensor - ENC 30 HEDL 5540 500IMP  
Drawing not to scale!

ISO 5456-1   
Axial play motor: 0...0.1mm



Kabel nicht dargestellt/ no cable visualisation



# Connector type, encoder

## 2.54mm 10-pol

Pin 1	No connection
Pin 2	VCC
Pin 3	GND
Pin 4	No connection
Pin 5	Channel A \
Pin 6	Channel A
Pin 7	Channel B \
Pin 8	Channel B
Pin 9	Channel I \ (Index)
Pin 10	Channel I (Index)

## Summary of your selected configuration

Total weight of the drive: 447 g

### DCX35L GB KL 24V

#### Product detail

Commutation	Graphite brushes
Nominal voltage	24 V
Motor bearings	Preloaded ball bearing

#### Electrical connection, motor

Electrical connection, motor	Cable
Cable length	200 mm

### ENC 30 HEDL 5540 500IMP

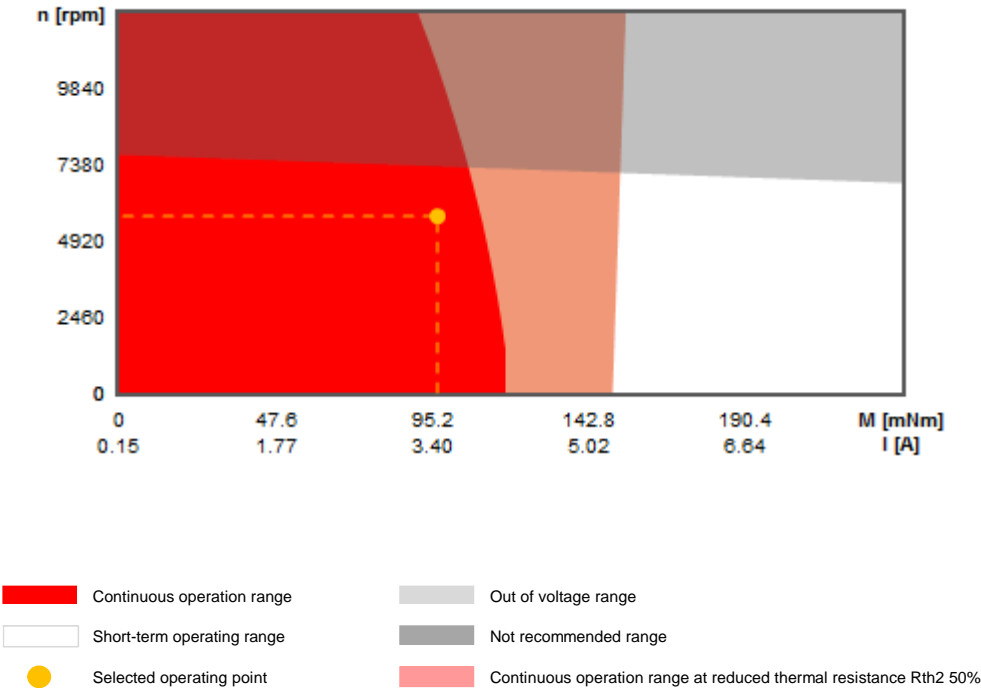
#### Product detail

Counts per turn	500
Cable type	Flachband TPE

**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		

Drive disposition



Combination details

Your entries		
	Available voltage	24 V
	Speed	5728 min <sup>-1</sup>
	Torque	96.8 mNm

Values of the drive at available voltage		
	Available voltage	24 V
	Max. speed at given load	7272 min <sup>-1</sup>
	Max. continuous torque	121.0096.8 mNm
	Max. continuous current	4.26 A

Required electrical data for your operating point		
	Speed	5728 min <sup>-1</sup>
	Torque	96.8 mNm
	Required voltage	19.01 V
	Required current	3.44 A

## DCX35L GB KL 24V



## Product specification

## Values at nominal voltage

Nominal voltage	24 V
No load speed	7720 min <sup>-1</sup>
No load current	146mA
Nominal speed	7160 min <sup>-1</sup>
Nominal torque (max. continuous torque)	121 mNm
Nominal current (max. continuous current)	4.26 A
Stall torque	2030 mNm
Stall current	69.3 A
Max. efficiency	88.9 %

## Characteristics

Max. output power continuous	117 W
Terminal resistance	0.346 Ω
Terminal inductance	0.121 mH
Torque constant	29.3 mNm A <sup>-1</sup>
Speed constant	326 min <sup>-1</sup> V <sup>-1</sup>
Speed/torque gradient	3.86 min <sup>-1</sup> mNm <sup>-1</sup>
Mechanical time constant	3.91ms
Rotor inertia	96.6 gcm <sup>2</sup>

## Thermal data

Thermal resistance housing-ambient	6.98 KW <sup>-1</sup>
Thermal resistance winding-housing	2.1 KW <sup>-1</sup>
Thermal time constant of the winding	43 s
Thermal time constant of the motor	1030 s
Ambient temperature	-40...100 °C
Max. winding temperature	155 °C

## Mechanical data

Max. permissible speed	12300 min <sup>-1</sup>
Axial play	0...0.1 mm
Preload	7 N
Radial backlash	0.02 mm
Max. axial load (dynamic)	7 N
Max. force for press fits (static)	22.6 N

Static, supported shaft	2510 N
Max. radial load 5 mm from flange	65.3 N
Measurement from the flange	5 mm

**Further specifications**

Number of pole pairs	1
Number of commutator segments	11
Motor weight	411.5 g
Motor length	74 mm
Typical noise level	48 dBA ( min <sup>-1</sup> )

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)



## ENC 30 HEDL 5540 500IMP



## Product specification

## Sensor data

Counts per turn	500
Number of channels	3
Line Driver	AM26C31QD
Max. electrical speed	12000 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	180/40 ns
Min. state duration	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	60 mA
Max. moment of inertia of code wheel	0.6 gcm <sup>2</sup>
Operating temperature range	-40...100 C°
Number of autoclave cycles	0