

Configured drive

Motor - DCX22S GB KL 24V

Part number: B7A3531C3FA5 Revision number 1

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

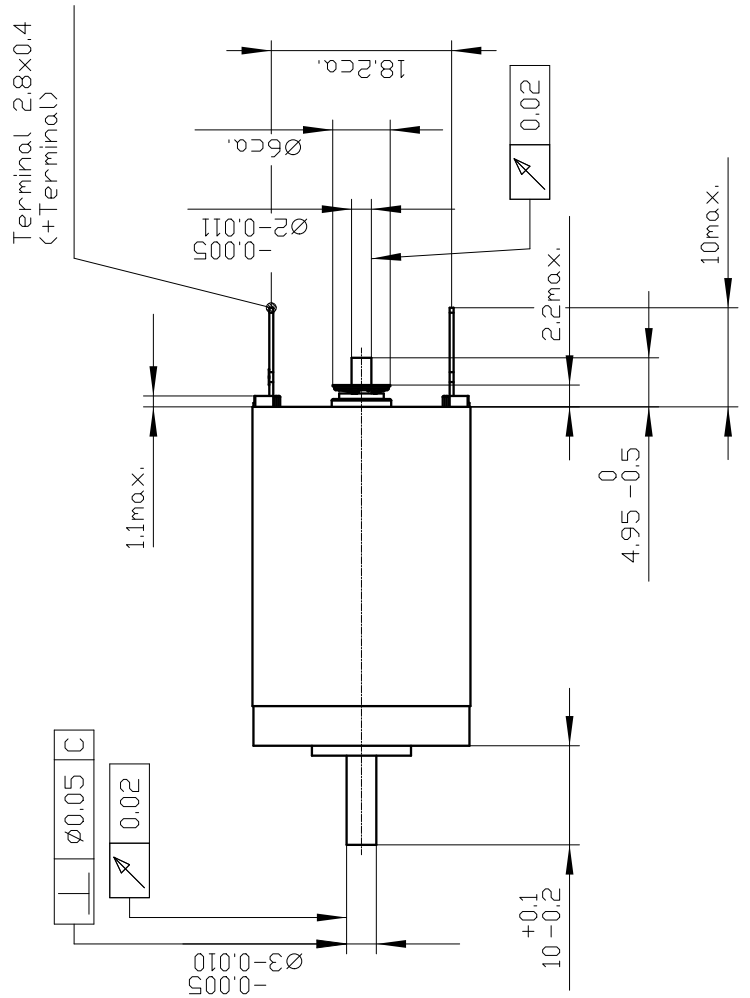
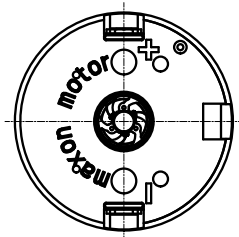
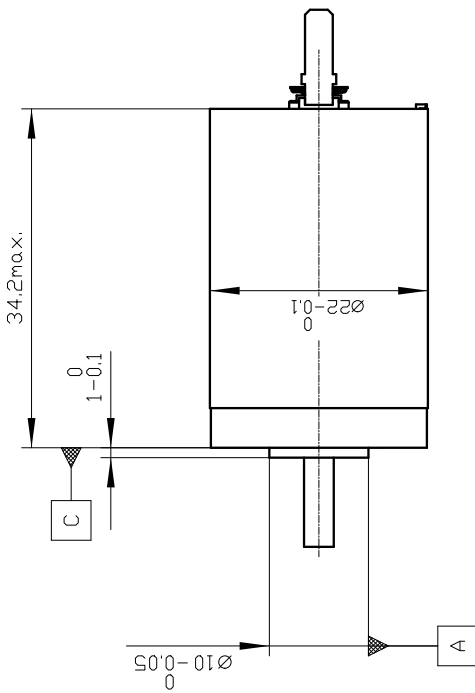
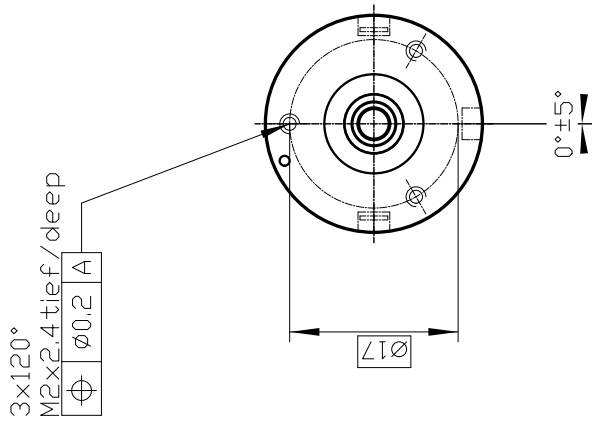
General Terms and Conditions: https://www.maxongroup.ch/maxon/view/content/terms_and_conditions_page



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.

B7A3531C3FA5.stp (STP AP 214)

Open configuration: <https://www.maxongroup.com/maxon/view/configurator/?ConfigID=B7A3531C3FA5>



Unit of measure: mm



ISO 5456-1

ISO 1101

ISO 965-1

ISO 2768-m

ISO 8015

Summary of your selected configuration

Total weight of the drive: 66 g

DCX22S GB KL 24V

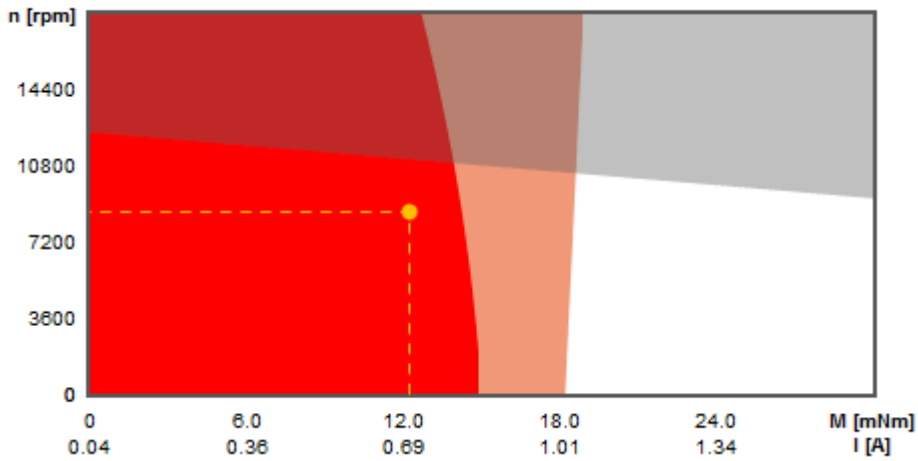
Product detail

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

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	Integ.	STD	Standard	SP	Speed
ABS	Absolute	LN	Reduced noise level	A	Standard	LZ	Reduced backlash
C	Ceramic bearing			STEC	Sterilizable, Ceramic bearing		

Drive disposition



- Continuous operation range
- Out of voltage range
- Short-term operating range
- Not recommended range
- Selected operating point
- Continuous operation range at reduced thermal resistance R_{th2} 50%

Combination details

Your entries

Available voltage	24 V
Speed	8640 min ⁻¹
Torque	12.24 mNm

Values of the drive at available voltage

Available voltage	24 V
Max. speed at given load	11120 min ⁻¹
Max. continuous torque	15.30 mNm
Max. continuous current	0.87 A

Required electrical data for your operating point

Speed	8640 min ⁻¹
Torque	12.24 mNm
Required voltage	19.21 V
Required current	0.70 A

DCX22S GB KL 24V



Product specification

Values at nominal voltage

Nominal voltage	24 V
No load speed	12400 min ⁻¹
No load current	35.9mA
Nominal speed	10800 min ⁻¹
Nominal torque (max. continuous torque)	15.3 mNm
Nominal current (max. continuous current)	0.869 A
Stall torque	120 mNm
Stall current	6.51 A
Max. efficiency	85.9 %

Characteristics

Max. output power continuous	24 W
Terminal resistance	3.69 Ω
Terminal inductance	0.231 mH
Torque constant	18.4 mNm A ⁻¹
Speed constant	520 min ⁻¹ V ⁻¹
Speed/torque gradient	104 min ⁻¹ mNm ⁻¹
Mechanical time constant	6.07ms
Rotor inertia	5.55 gcm ²

Thermal data

Thermal resistance housing-ambient	16 KW ⁻¹
Thermal resistance winding-housing	7 KW ⁻¹
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 min ⁻¹
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	66 g
Motor length	34.2 mm
Typical noise level	41 dBA (min ⁻¹)

Information about motor data: https://www.maxongroup.com/medias/CMS_Downloads/DIVERSES/12_049_EN.pdf