

Configured drive

Motor - DCX19S EB KL 24V

Part number: B7E6A0523DD5 Revision number 1

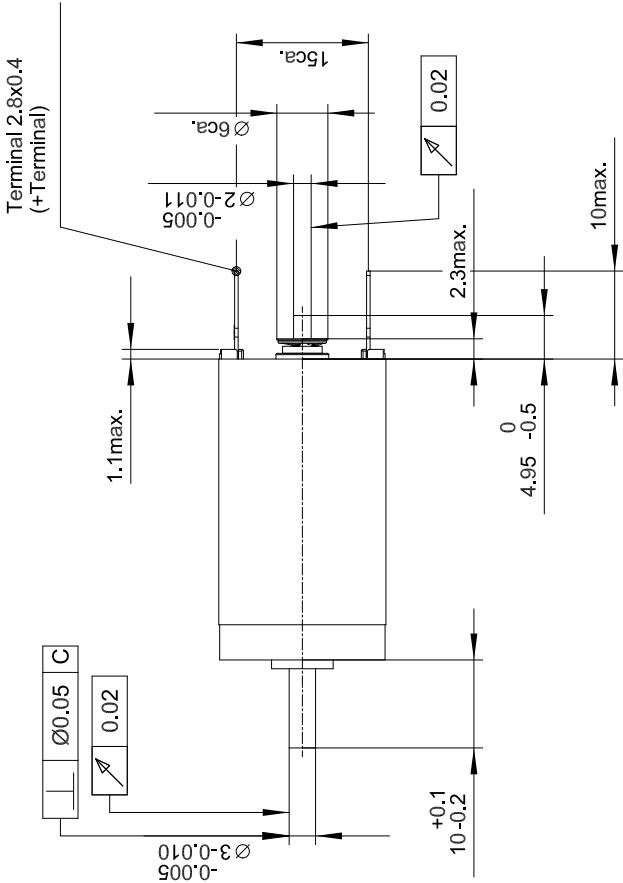
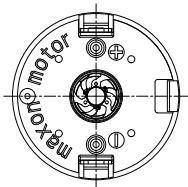
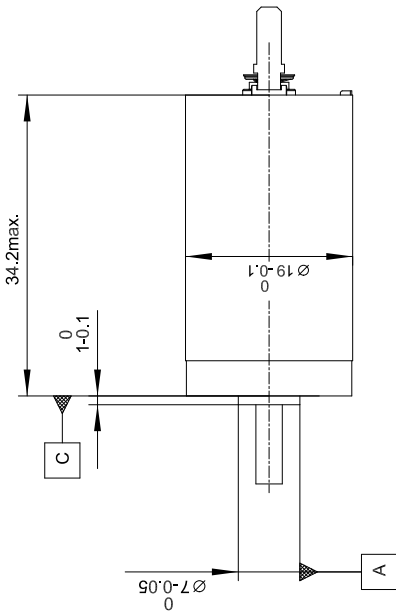
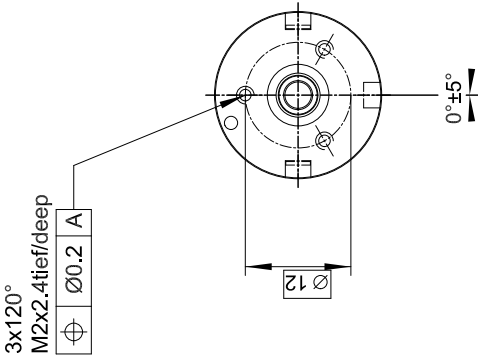
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To open the integrated CAD file, please save this document and open it in Acrobat Reader. The STEP file is available after a double-click on the pin icon.

B7E6A0523DD5.stp (STP AP 214)

Open configuration: <https://www.maxongroup.com/maxon/view/configurator/?ConfigID=B7E6A0523DD5>



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: 50 g

DCX19S EB KL 24V		
Product detail		
Commutation		Precious metal brushes
Nominal voltage		24 V
Motor bearings		Preloaded ball bearing
Spark suppression (CLL)		with CLL

Legend for part designation

EC-Motor:

A	Hall sensor version
B	Sensorless version
BL	Brushless
ECX	EC-motor (brushless)
FL	FLAT (type series name)
HP	High Power
HTQ	High Torque
HTQF	High Torque, fan-ventilated
KL	Ball bearings
PR	PRIME (type series name)
SP	SPEED (type series name)
SQ	SQUARE (type series name)
STD	Standard
STE	Sterilizable
STEC	Sterilizable, ceramic bearing
TQ	TORQUE (type series name)
M/L/XL	Medium / Long / Extra long

DC-Motor:

CLL	Capacitor long life (spark suppression)
DC-max	DC motors (brushed)
DCX	DC motors (brushed)
EB	Precious metal brushes
GB	Graphite brushes
KL	Ball bearings
S/M/L	Short / Medium / Long
SL	Sintered sleeve bearings

IDX Drive /Motor:

AB	Integrated brake
CO	CANopen interface
ENC	Encoder
ET	EtherCAT interface
IDX	Drive System
IO	I/O interface
P	Positioning-control
S	Speed-control
S/M/L	Short / Medium / Long

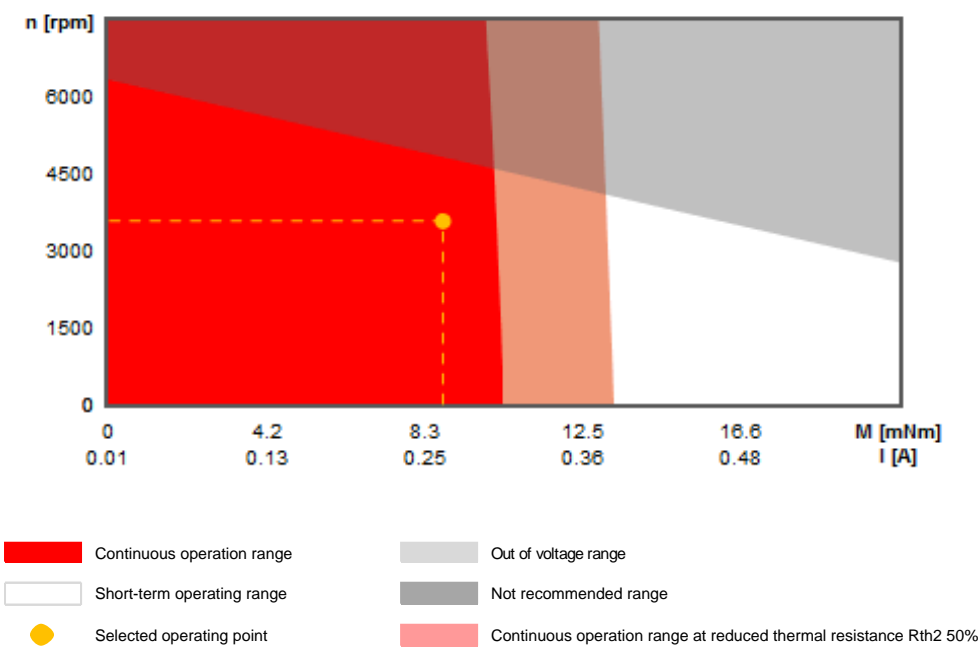
Gearhead

A	Standard version
C	Ceramic version
GPX	Planetary gearhead
HP	High Power
LN	Reduced noise level
LZ	Reduced backlash
SP	SPEED (type series name)
ST	Number of stages
STE	Sterilizable
STES	Sterilizable, with sealing
UP	Ultra Performance

Encoder/Sensor:

ABS	Absolute
BISSC	Bidirectional serial synchronous (protocol)
COMM	Commutation signals
EASY	(type series name)
EMT	(type series name)
ENX	Encoder
FFC	Flexible flat cable
GAMA	(type series name)
IMP	Pulses
INT	integrated
MAG	(type series name)
QUAD	(type series name)
RIO	(type series name)
SSI	Synchronous serial Interface (protocol)
XT	Extended version

Drive disposition



Combination details

Your entries

Available voltage	24 V
Speed	3584 min ¹
Torque	8.8 mNm

Values of the drive at available voltage

Available voltage	24 V
Max. speed at given load	4854 min ¹
Max. continuous torque	11.00 mNm
Max. continuous current	0.32 A

Required electrical data for your operating point

Speed	3584 min ¹
Torque	8.8 mNm
Required voltage	19.26 V
Required current	0.26 A

DCX19S EB KL 24V



Product specification

Values at nominal voltage

Nominal voltage	24 V
No load speed	6350 min ⁻¹
No load current	13.2mA
Nominal speed	4480 min ⁻¹
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 ⁻¹
Speed constant	268 min ⁻¹ V ⁻¹
Speed/torque gradient	172 min ⁻¹ mNm ⁻¹
Mechanical time constant	4.89ms
Rotor inertia	2.72 gcm ²

Thermal data

Thermal resistance housing-ambient	17.6 KW ⁻¹
Thermal resistance winding-housing	6.5 KW ⁻¹
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 ⁻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	50 g
Motor length	34.2 mm
Typical noise level	48 dBA (6000 min ¹)

More information on the motor: <https://www.maxongroup.com/maxon/view/product/DCX19S01EBKL672?download=show>