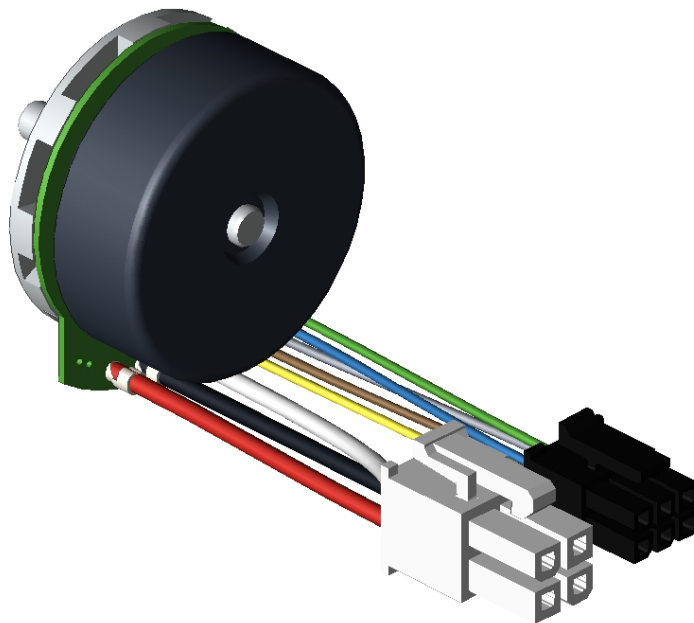


## Configured drive


Motor - ECXFL32S KL A STD 24V

**Part number: B81626DFEF55** Revision number 1

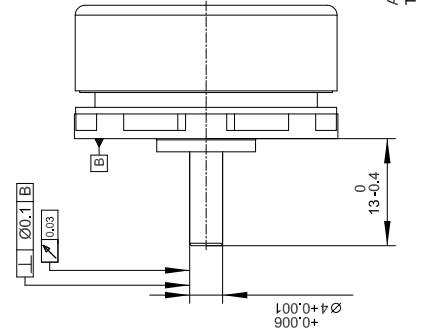
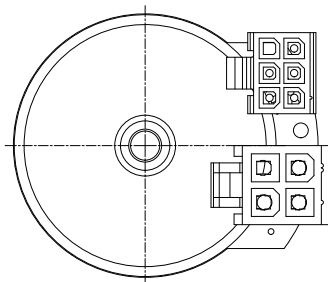
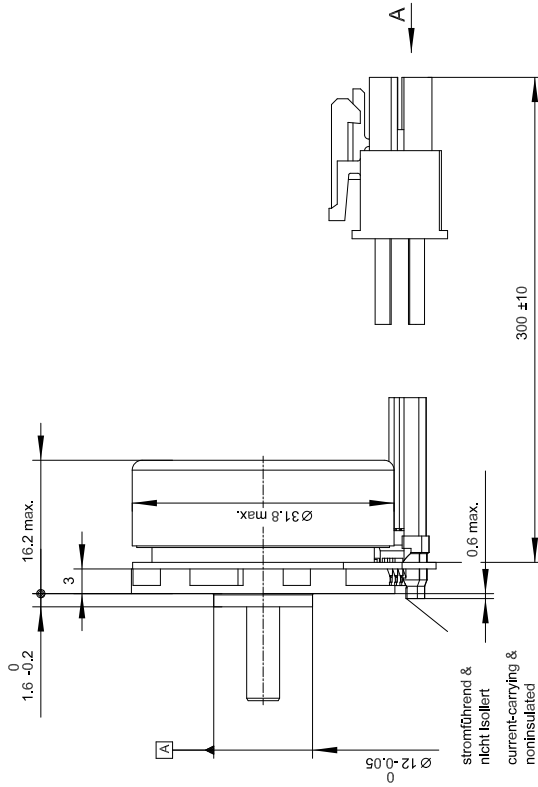
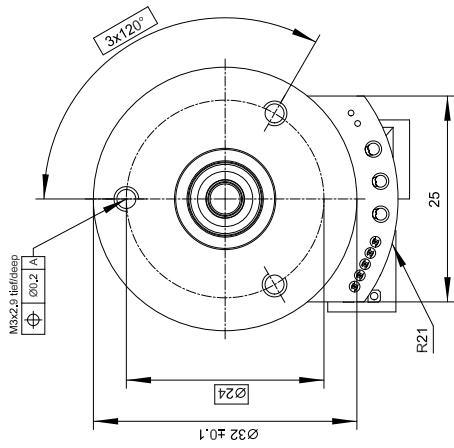
General Terms and Conditions [https://www.maxongroup.ch/maxon/view/content/terms\\_and\\_conditions\\_page](https://www.maxongroup.ch/maxon/view/content/terms_and_conditions_page)



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.

 B81626DFEF55.stp (STP AP 214)

Open configuration: <https://www.maxongroup.com/maxon/view/configurator/?ConfigID=B81626DFEF55>



Unit of measure: mm



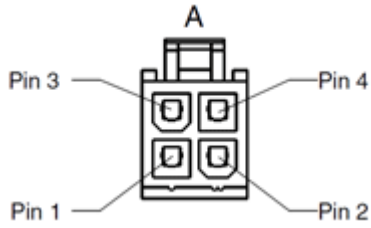
ISO 5456-1

ISO 1101

ISO 965-1

ISO 2768-m

ISO 8015




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**Connector type, motor**

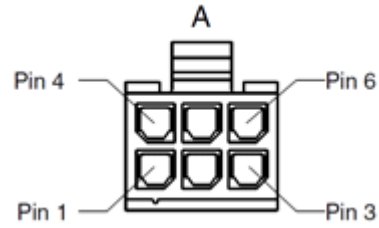
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Molex 39-01-2040

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Pin 1	Motor 1	Red
Pin 2	Motor 2	Black
Pin 3	Motor 3	White
Pin 4	NC	

Cable type: AWG20




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**Connector type, motor**

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Molex 43025-0600

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Pin 1	Hall-Sensor 1	Yellow
Pin 2	Hall-Sensor 2	Brown
Pin 3	Hall-Sensor 3	Gray
Pin 4	GND	Blue
Pin 5	+2.7...24 V DC	Green
Pin 6	NC	

Cable type: AWG28

## Summary of your selected configuration

Total weight of the drive: 71 g

### ECXFL32S KL A STD 24V

#### Product detail

Commutation	A
Nominal voltage	24
Motor bearings	Preloaded ball bearing
Version	STD

#### Elec. connection, motor

Electrical connection, motor	Cable with connector
Connector type, motor	Molex 39-01-2040

Legend for part designation

EC-Motor:

A	Hall sensor version
B	Sensorless version
BL	Brushless
C	Integrated electronics
ECX	EC-motor (brushless)
FL	FLAT (type series name)
HP	High Power
HTQ	High Torque
HTQF	High Torque, fan-ventilated
KL	Ball bearings
M/L/XL	Medium / Long / Extra long
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)

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

## ECXFL32S KL A STD 24V

### Product specification

#### Values at nominal voltage

Nominal voltage	24 V
No load speed	12200 min <sup>-1</sup>
No load current	97.2 mA
Nominal speed	8030 min <sup>-1</sup>
Nominal torque (max. continuous torque)	40.3 mNm
Nominal current (max. continuous current)	1.8 A
Stall torque calculated without saturation effect	110 mNm
Stall current	15.9 A
Max. efficiency	84.894 %

#### Characteristics

Max. output power continuous	W
Terminal resistance phase-to-phase	1.51 Ω
Terminal inductance phase-to-phase	1.12 mH
Torque constant	18.3 mNm A <sup>-1</sup>
Speed constant	521 min <sup>-1</sup> V <sup>-1</sup>
Speed/torque gradient	42.8 min <sup>-1</sup> mNm <sup>-1</sup>
Mechanical time constant	14.6 ms
Rotor inertia	32.6 gcm <sup>2</sup>

#### Thermal data

Thermal resistance housing-ambient	4.07 KW <sup>-1</sup>
Thermal resistance winding-housing	4.74 KW <sup>-1</sup>
Thermal time constant of the winding	13.1 s
Thermal time constant of the motor	128 s
Ambient temperature	-40...100 °C
Max. winding temperature	125 °C

#### Mechanical data

Max. permissible speed	14000 min <sup>-1</sup>
Axial play	0...0.14 mm
Preload	4 N
Direction of force	Pull
Radial backlash	0 mm
Max. axial load (dynamic)	4 N
Max. force for press fits (static)	45 N
Static, supported shaft	1000 N
Max. radial load 5 mm from flange	12 N
Measurement from the flange	5 mm

#### Further specifications

Number of pole pairs	6
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Number of phases	3
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More information on the motor: <https://www.maxongroup.com/maxon/view/product/ECXA32SZF10R6IL1Y376A?download=show>