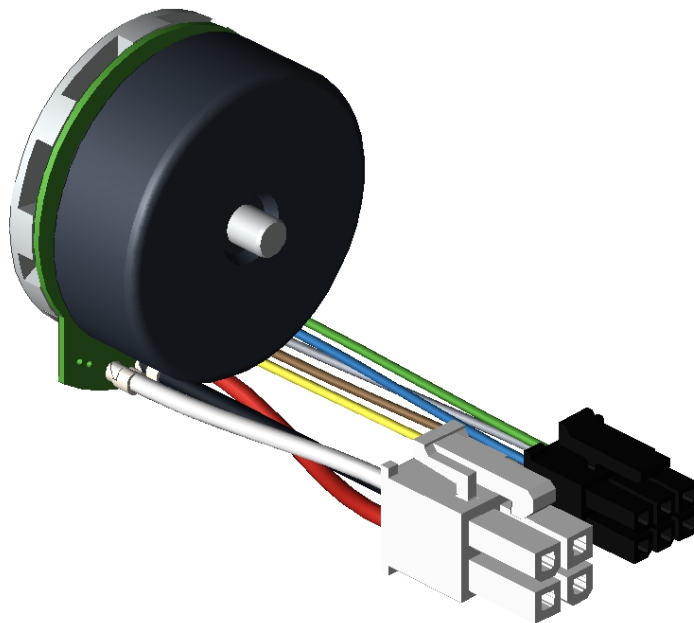


## Configured drive

Motor - ECXFL32S KL A STD 12V

**Part number: B82C750E39C1** Revision number 1

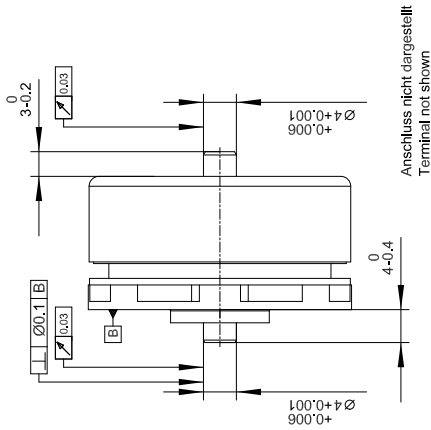
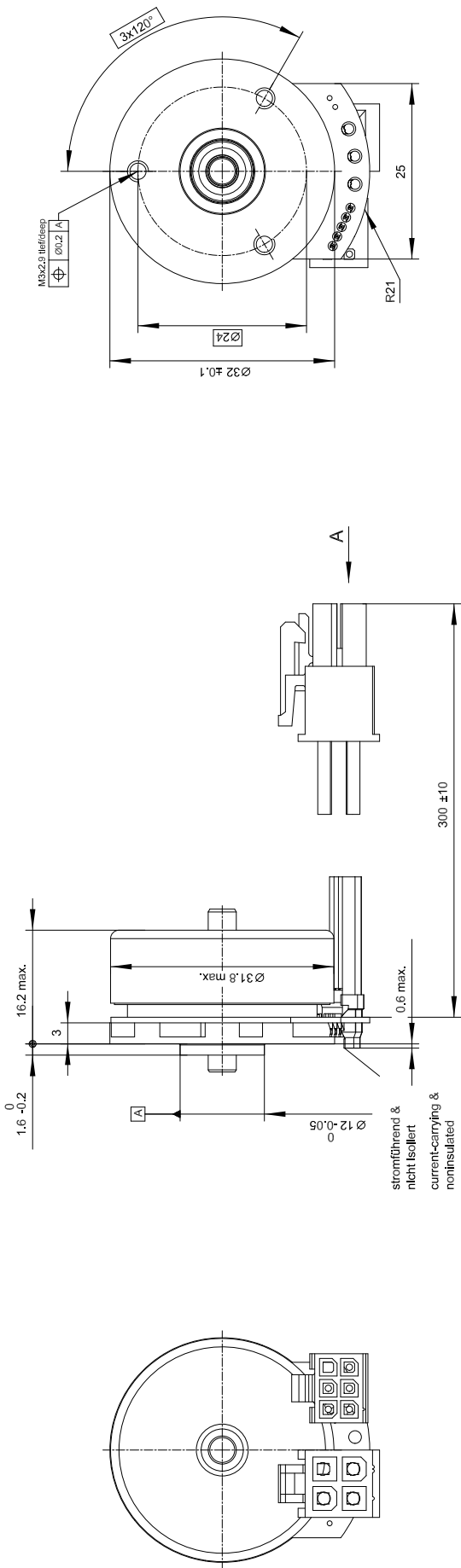
General Terms and Conditions [https://www.maxongroup.ch/maxon/view/content/terms\\_and\\_conditions\\_page](https://www.maxongroup.ch/maxon/view/content/terms_and_conditions_page)

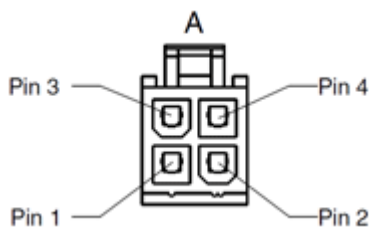


To open the integrated CAD file, please save this document and open it in Acrobat Reader. The STEP file is available after a double-click on the pin icon.

B82C750E39C1.stp (STP AP 214)

Open configuration: <https://www.maxongroup.us/maxon/view/configurator/?ConfigID=B82C750E39C1>



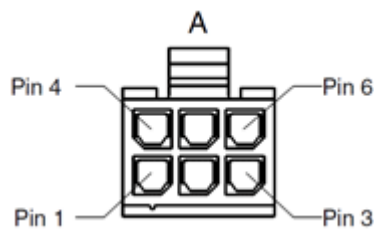


Connector type, motor

Molex 39-01-2040

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

Cable type: AWG20



Connector type, motor

Molex 43025-0600

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: 71.9 g

ECXFL32S KL A STD 12V		
Product detail		
Commutation		A
Nominal voltage		12
Motor bearings		Preloaded ball bearing
Version		STD
Shaft, front		
Shaft, front		Configurable shaft
Shaft length		4
Shaft, rear		
Shaft, rear		Configurable shaft
Shaft length		3
Elec. connection, motor		
Electrical connection, motor		Cable with connector
Connector type, motor		Molex 39-01-2040

Legend for part designation

EC-Motor:		DC-Motor:		IDX Drive/Motor:	
A	Hall sensor version	CLL	Capacitor long life (spark suppression)	AB	Integrated brake
B	Sensorless version	DC-max	DC motors (brushed)	CO	CANOpen interface
BL	Brushless	DCX	DC motors (brushed)	ENC	Encoder
C	Integrated electronics	EB	Precious metal brushes	ET	EtherCAT interface
ECX	EC-motor (brushless)	GB	Graphite brushes	IDX	Drive System
FL	FLAT (type series name)	KL	Ball bearings	IO	I/O interface
HP	High Power	S/M/L	Short / Medium / Long	P	Positioning-control
HTQ	High Torque	SL	Sintered sleeve bearings	S	Speed-control
HTQF	High Torque, fan-ventilated			S/M/L	Short / Medium / Long
KL	Ball bearings				
M/L/XL	Medium / Long / Extra long				
PR	PRIME (type series name)				
SP	SPEED (type series name)				
STD	Standard				
STE	Sterilizable				
STEC	Sterilizable, ceramic bearing				
TQ	TORQUE (type series name)				
Gearhead		Encoder/Sensor:			
A	Standard version	ABS	Absolute		
C	Ceramic version	BiSSC	Bidirectional serial synchronous (protocol)		
GPX	Planetary gearhead	COMM	Commutation signals		
HP	High Power	EASY	(type series name)		
LN	Reduced noise level	EMT	(type series name)		
LZ	Reduced backlash	ENX	Encoder		
SP	SPEED (type series name)	FFC	Flexible flat cable		
ST	Number of stages	GAMA	(type series name)		
STE	Sterilizable	IMP	Pulses		
STES	Sterilizable, with sealing	INT	integrated		
UP	Ultra Performance	MAG	(type series name)		
		QUAD	(type series name)		
		RIO	(type series name)		
		SSI	Synchronous serial Interface (protocol)		
		XT	Extended version		

## ECXFL32S KL A STD 12V

### Product specification

#### Values at nominal voltage

Nominal voltage	12 V
No load speed	11000 min <sup>-1</sup>
No load current	181 mA
Nominal speed	7170 min <sup>-1</sup>
Nominal torque (max. continuous torque)	34.1 mNm
Nominal current (max. continuous current)	3.08 A
Stall torque calculated without saturation effect	104 mNm
Stall current	24.4 A
Max. efficiency	75.068 %

#### Characteristics

Max. output power continuous	W
Terminal resistance phase-to-phase	0.491 Ω
Terminal inductance phase-to-phase	0.345 mH
Torque constant	10.2 mNm A <sup>-1</sup>
Speed constant	937 min <sup>-1</sup> V <sup>-1</sup>
Speed/torque gradient	45.2 min <sup>-1</sup> mNm <sup>-1</sup>
Mechanical time constant	15.4 ms
Rotor inertia	32.6 gcm <sup>2</sup>

#### Thermal data

Thermal resistance housing-ambient	4.28 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	135 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/ECXA32SZF10R6IL1Y330A?download=show>