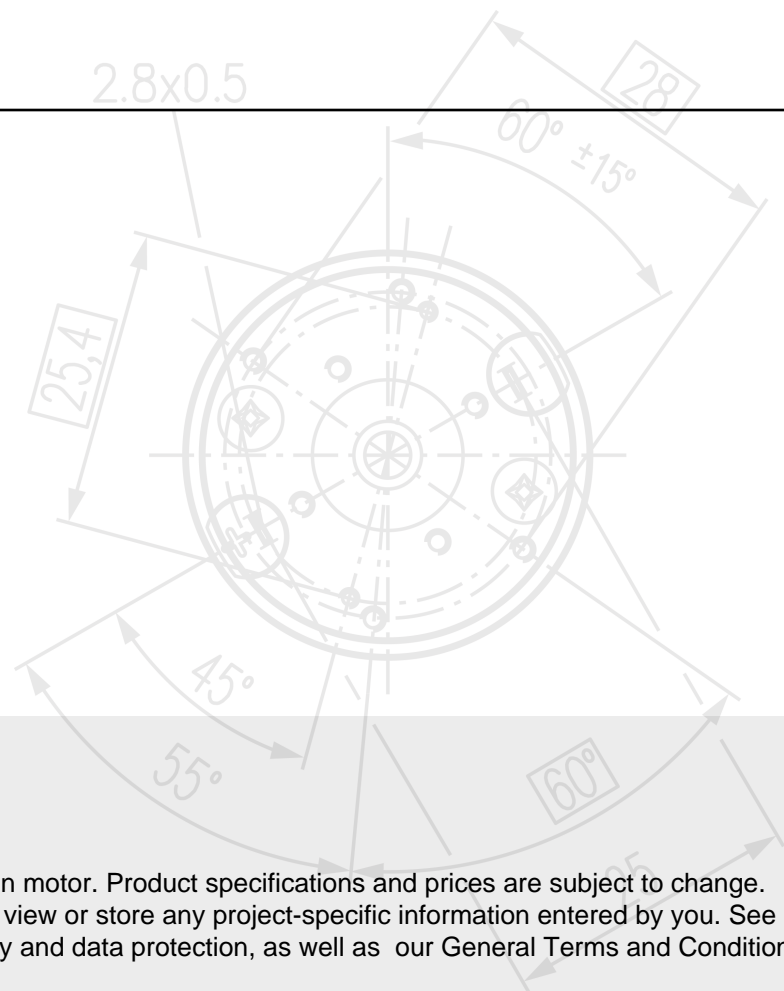

Your Project:

Your project

Contents



- Overview
 - Product specifications
 - Price information incl. scaling
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About this Document:

This document is not a binding offer by maxon motor. Product specifications and prices are subject to change. We protect your confidential data. We do not view or store any project-specific information entered by you. See here for more information about confidentiality and data protection, as well as our General Terms and Conditions.

Combination

Drive solution	Technical data	Unit price	Quantity	Total price
gear				
	Planetary Gearhead GP 10 K Ø10 mm, 0.005 - 0.1 Nm, Plastic Version Part No.: 110312	Outer diameter: 10 mm Reduction: 1024 : 1 Max. continuous torque: 0.1 Nm CHF 72.40		
motor				
	RE 10 Ø 10 mm, Precious Metal Brushes, 0.75 Watt Part No.: 118388	Outer diameter: 10 mm Type power: 0.75 W Nominal voltage: 7.2 V No load speed: 11400 rpm Nominal torque (max. continuous torque): 0.784 mNm Certificate of Conformity: No CHF 57.60		
		Subtotal (mounted)	1	CHF 130.00

Control & Accessories

controller				
	EPOS2 24/2, digital positioning controller, 2 A, 9 - 24 VDC Part No.: 390438	Certificate of Conformity: No CHF 359.00	1	CHF 359.00
		Subtotal		CHF 489.00

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Total cart	CHF 489.00
Price of Certificate of Conformity	CHF 0.00
VAT for certificate of conformity (8.0%)	CHF 0.00
Packing charges	CHF 5.00
Expected shipping costs	CHF 50.00
Import duties	CHF 0.00
VAT (8%)	CHF 43.52

Total sum CHF 587.52

Orders are processed and shipped from Switzerland.
For deliveries outside of Switzerland and Germany, please note that your country may charge import duties, taxes and fees. These fees may vary from country to country and therefore we are unable to provide detailed information about these fees.

EPOS2 24/2, digital positioning controller, 2 A, 9 - 24 VDC

Part No. 390438

Details

**Price scales**

1-4	CHF 359.00
5-19	CHF 316.20
20-49	CHF 271.70
from 50	On request

Prices excluding VAT and Shipping

Product specifications**Product**

Weight	27 g
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Motor

DC motors up to	48 W
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Sensor

Without sensor (DC motors)	Yes
Digital incremental encoder (2-channel, differential)	Yes
Digital incremental encoder (3-channel, differential)	Yes

Operating modes

Current controller	Yes
Speed controller (closed loop)	Yes
Position controller	Yes

Electrical data

Operating voltage Vcc (min.)	9 V
Operating voltage Vcc (max.)	24 V
Max. output voltage (factor * Vcc)	0.9
Max. output current Imax	4 A
Max. time of peak output current Imax	1 s
Continuous output current Icont	2 A
PWM clock frequency of power stage	100 kHz
Sampling rate PI current controller	10 kHz
Sampling rate PI speed controller	1 kHz
Sampling rate PID positioning controller	1 kHz
Max. efficiency	90 %
Max. speed (DC)	100000 rpm
Built-in motor choke per phase	47 µH

Inputs

Encoder signals	A, A, B, B, I, I\
Max. encoder input frequency	5 MHz
Digital inputs	6
Functionality of digital inputs	limit switch, reference switch, general purpose, enable, quickstop, step/direction set value, master encoder, position marker
Analog inputs	2

Resolution, range, circuit	12-bit, 0...+5V
Functionality of analog inputs	set value, general purpose
DIP switch	6
Functionality of the DIP switch	CAN Node-ID, Autobitrate, CAN-Bus Termination

Outputs

Digital outputs	2
Functionality of digital outputs	holding brake, general purpose, position compare, ready

Voltage outputs

Encoder supply voltage	+5 VDC, max. 100 mA
Auxiliary output voltage	+5 VDC, max. 10 mA

Interface

RS232	Yes
USB 2.0 (full speed)	Yes
CAN	Yes
CANopen	Slave
CANopen application layer	DS-301
CANopen frameworks	DSP-305
CANopen profiles motion control	DSP-402
Gateway function RS232-to-CAN	Yes
Gateway function USB-to-CAN	Yes

Display

Status indicator "Ready"	green LED
Status indicator "Error"	red LED

Protective functions

Protective functions	current limit, overcurrent, excess temperature, undervoltage, overvoltage, voltage transients, short-circuits in the motor cable
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Ambient conditions

Temperature – Operation (min.)	-10 °C
Temperature – Operation (max.)	55 °C
Temperature – Extended Range	+55...+74°C, Derating: -0.105 A/°C
Temperature – Storage (min.)	-40 °C
Temperature – Storage (max.)	85 °C
Humidity (non-condensing) (min.)	5 %
Humidity (non-condensing) (max.)	90 %

Mechanical data

Weight	27 g
Dimension (length)	55 mm
Dimension (width)	40 mm
Dimension (height)	15.6 mm
Mounting	Flange for M2.5 screws

Software

Installation program	EPOS Setup
Graphical User Interface	EPOS Studio
Operating system	Windows 10, 8, 7, Windows XP SP3
Windows DLL for PC	32-/64-bit

PC master	IXXAT, Vector, National Instruments, Kvaser, NI-XNET
Programming examples	MS Visual C#, MS Visual C++, MS Visual Basic, MS Visual Basic.NET, Borland C++, Borland Delphi, NI LabView, NI LabWindows/CVI
Linux Shared Object Library	X86 32-/64-bit, ARMv7
Programming example	Eclipse C++/QT
IEC 61131-3 library for CAN Master	Beckhof, Siemens/Helmholz, VIPA
maxon library for NI SoftMotion	National Instruments Compact Rio

Functions

CANopen Profile Position Mode	Yes
CANopen Profile Velocity Mode	Yes
CANopen Homing Mode	Yes
Position Mode	Yes
Interpolated Position Mode (PVT)	Yes
Velocity mode	Yes
Current mode	Yes
Master Encoder Mode	Yes
Step/Direction Mode	Yes
Analog set value	Yes
Path generator with sinusoidal/trapezoidal profiles	Yes
Position Control Feed Forward	Yes
Velocity Control (Feed Forward)	Yes
Position Marker / Touch Probe	Yes
Quickstop	Yes
Enable	Yes
Position Compare	Yes
Control of holding brakes	Yes
Advanced automatic control settings	Yes

RE 10 Ø 10 mm, Precious Metal Brushes, 0.75 Watt

Part No. 118388

Details

**Price scales**

1-4	CHF 57.60
5-19	CHF 50.90
20-49	CHF 43.00
from 50	On request

Prices excluding VAT and Shipping

Product specifications**Values at nominal voltage**

Nominal voltage	7.2 V
No load speed	11400 rpm
No load current	6.04 mA
Nominal speed	3340 rpm
Nominal torque (max. continuous torque)	0.784 mNm
Nominal current (max. continuous current)	0.143 A
Stall torque	1.12 mNm
Stall current	0.198 A
Max. efficiency	68 %

Characteristics

Terminal resistance	36.4 Ω
Terminal inductance	0.325 mH
Torque constant	5.68 mNm/A
Speed constant	1680 rpm/V
Speed / torque gradient	10800 rpm/mNm
Mechanical time constant	7.93 ms
Rotor inertia	0.0706 gcm ²

Thermal data

Thermal resistance housing-ambient	45.5 K/W
Thermal resistance winding-housing	19.5 K/W
Thermal time constant winding	3.16 s
Thermal time constant motor	108 s
Ambient temperature	-20...+65 °C
Max. winding temperature	+85 °C

Mechanical data

Bearing type	sleeve bearing
Max. speed	19000 rpm
Axial play	0.05 - 0.15 mm
Radial play	0.012 mm
Max. axial load (dynamic)	0.15 N
Max. force for press fits (static)	15 N
Max. radial load	0.4 N, 4 mm from flange

Other specifications

Number of pole pairs	1
Number of commutator segments	7
Number of autoclave cycles	0

Product

Weight	7 g
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Planetary Gearhead GP 10 K Ø10 mm, 0.005 - 0.1 Nm, Plastic Version

Part No. 110312



Details

Price scales

1-4	CHF 72.40
5-19	CHF 60.80
20-49	CHF 52.00
from 50	On request

Prices excluding VAT and Shipping

Product specifications**General information**

Gearhead type	GP
Outer diameter	10 mm
Version	Plastic version

Gearhead Data

Reduction	1024 : 1
Absolute reduction	1024/1
Max. motor shaft diameter	1.2 mm
Number of stages	5
Max. continuous torque	0.1 Nm
Max. intermittent torque	0.1 Nm
Direction of rotation, drive to output	=
Max. efficiency	55 %
Average backlash no load	2.8 °
Mass inertia	0.003 gcm ²
Gearhead length (L1)	26.6 mm
Max. transmittable power (continuous)	0.082 W
Max. transmittable power (intermittent)	0.082 W

Technical Data

Radial play	max. 0.14 mm, 5 mm from flange
Axial play	0.02 - 0.1 mm
Max. radial load	1 N, 5 mm from flange
Max. axial load (dynamic)	2 N
Max. force for press fits	10 N
Max. continuous input speed	8000 rpm
Max. intermittent input speed	8000 rpm
Recommended temperature range	-15...+80 °C
Number of autoclave cycles	0

Product

Weight	4 g
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Notes:

Your notes to the project

Your maxon support contact

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