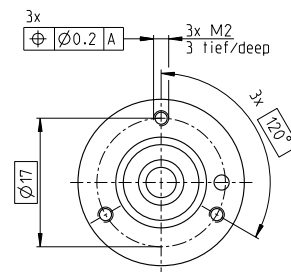
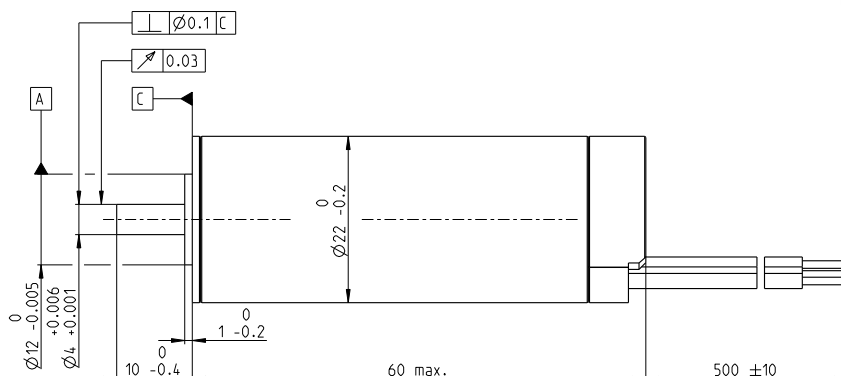


ECX PRIME 22 L Ø22 mm, brushless, BLDC motor

Sterilizable, ceramic bearings

Key Data: 100/133 W, 69.1 mNm, 30 000 rpm



M 1:1

Motor data

1.	Nominal voltage	V	12	18	24	36
2.	No load speed	rpm	13600	14500	13600	13600
3.	No load current	mA	369	274	185	123
4.	Nominal speed	rpm	12400	13500	12600	12700
5.	Nominal torque	mNm	69.1	68.5	68.6	68.1
6.	Nominal current (max. continuous current)	A	8.51	6.04	4.23	2.8
7.	Stall torque	mNm	862	1080	1070	1110
8.	Stall current	A	102	91.2	63.4	43.8
9.	Max. efficiency	%	89	90	90	90
10.	Terminal resistance	Ω	0.117	0.197	0.378	0.822
11.	Terminal inductance	mH	0.0065	0.0127	0.026	0.0585
12.	Torque constant	mNm/A	8.42	11.8	16.8	25.3
13.	Speed constant	rpm/V	1130	810	567	378
14.	Speed/torque gradient	rpm/mNm	15.8	13.6	12.7	12.3
15.	Mechanical time constant	ms	1.9	1.63	1.53	1.48
16.	Rotor inertia	gcm ²	11.5	11.5	11.5	11.5

Thermal data

17.	Thermal resistance housing-ambient	K/W	11.1
18.	Thermal resistance winding-housing	K/W	0.57
19.	Thermal time constant winding	s	3.96
20.	Thermal time constant motor	s	849
21.	Ambient temperature	°C	-40...+135
22.	Max. winding temperature	°C	155

Operating range

n [rpm] winding 24 V



Sterilization information

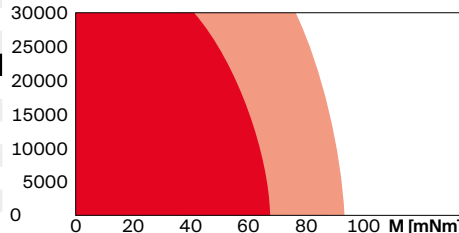
Number of sterilization cycles: typically 1000

Sterilization with steam

Temperature +134°C ±4°C
Compression pressure up to 2.3 bar
Rel. humidity 100%
Cycle length 18 min.

Mechanical data ball bearings

23.	Max. speed	rpm	30 000
24.	Axial play	mm	0..0.14
	Preload	N	4.0
	Direction of force	push	
25.	Radial play	preloaded	
26.	Max. axial load (dynamic)	N	4.0
27.	Max. force for press fits (static)	N	110
	(static, shaft supported)	N	5300
28.	Max. radial load [mm from flange]	N	16 [5]



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- ☐ Short term operation

Other specifications

29.	Number of pole pairs	2
30.	Number of phases	3
31.	Weight of motor	g 153
32.	Typical noise level [rpm]	dBA 60 [20 000]

Connection motor (Cable AWG 20)

red Motor winding 1
black Motor winding 2
white Motor winding 3

Connection sensors (Cable AWG 26)

yellow Hall sensor 1
brown Hall sensor 2
grey Hall sensor 3
blue GND
orange V_{Hall} 3...24 VDC

Wiring diagram for Hall sensors see p. 67

Connection NTC (Cable AWG 26)

purple NTC
purple NTC
Resistance 25°C: 10 kOhm ±1%, beta (25–85°C): 3490 K

Modular system

Gear Stages
393_GPX 22 HP STE 1-3

Details on catalog page 44

Motor Control

547_DEC Module 50/5
551_ESCON Module 50/5
552_ESCON Module 50/8 HE
553_ESCON 50/5
553_ESCON 70/10
557_ESCON2 Micro 60/5
558_ESCON2 Module 60/12
559_ESCON2 Compact 60/12

Configuration

Flange back: end cap/flange with thread holes
Shaft front/back: length/diameter
Electric connection: cable length/connection alignment