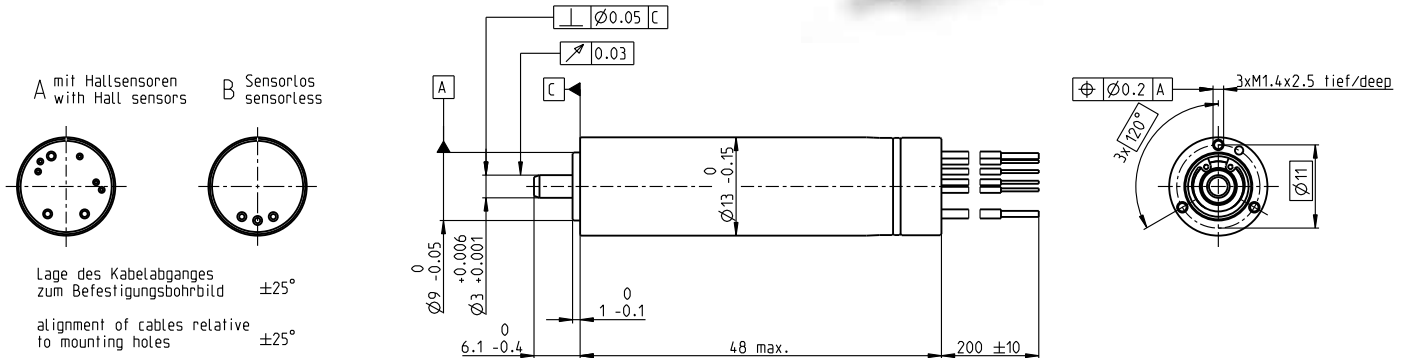


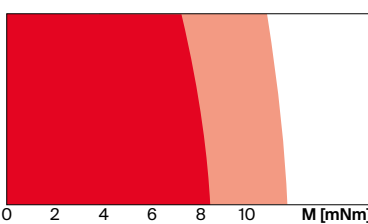
ECX SPEED 13 L Ø13 mm, brushless, BLDC motor

High Power

Key data: 50/54 W, 8.5 mNm, 70 000 rpm



M 1:1

Motor data						
1.	Nominal voltage	V	18	24	36	48
2.	No load speed	rpm	67300	65800	67300	61700
3.	No load current	mA	113	82.2	56.6	37.4
4.	Nominal speed	rpm	63000	61700	63300	57700
5.	Nominal torque	mNm	8.28	8.57	8.27	8.5
6.	Nominal current (max. continuous current)	A	3.33	2.52	1.66	1.17
7.	Stall torque	mNm	151	163	163	152
8.	Stall current	A	59.1	46.8	31.9	20.5
9.	Max. efficiency	%	91.5	91.9	91.8	91.7
10.	Terminal resistance	Ω	0.304	0.512	1.13	2.34
11.	Terminal inductance	mH	0.0166	0.0309	0.0664	0.141
12.	Torque constant	mNm/A	2.55	3.48	5.1	7.42
13.	Speed constant	rpm/V	3750	2750	1870	1290
14.	Speed/torque gradient	rpm/mNm	447	405	414	406
15.	Mechanical time constant	ms	1.63	1.48	1.51	1.48
16.	Rotor inertia	gcm ²	0.349	0.349	0.349	0.349
Thermal data			Operating range			
17.	Thermal resistance housing-ambient	K/W	19.5	n [rpm] winding 36 V  80000 60000 40000 20000 0 0 2 4 6 8 10 M [mNm]		
18.	Thermal resistance winding-housing	K/W	1.6			
19.	Thermal time constant winding	s	1.68			
20.	Thermal time constant motor	s	329			
21.	Ambient temperature	°C	-20...+100			
22.	Max. winding temperature	°C	155			
Mechanical data ball bearings						
23.	Max. speed	rpm	70 000			
24.	Axial play	mm	0..0.28			
	Preload	N	1.5			
	Direction of force		pull			
25.	Radial play		preloaded			
26.	Max. axial load (dynamic)	N	1.5			
27.	Max. force for press fits (static)	N	50			
	(static, shaft supported)	N	1500			
28.	Max. radial load [mm from flange]	N	6 [5]			
Other specifications			Modular system		Details on catalog page 44	
29.	Number of pole pairs	1	Gear	Stages [opt.]	Sensor	Motor Control
30.	Number of phases	3	377_GPX 13 SPEED	1-3	for motor type A:	547_DEC Module 50/5
31.	Weight of motor	g	378_GPX 14 A/C	1-2 [3-4]	513_ENX 13 EASY INT	551_ESCON 36/3 EC
32.	Typical noise level [rpm]	dBA	379_GPX 14 LN/LZ	1-2 [3-4]	for motor type B:	551_ESCON Module 50/4 EC-S
			380_GPX 14 HP	2-3 [4]	513_ENX 13 EASY INT Abs.	551_ESCON Module 50/5
			381_GPX 16 A/C	3-4		553_ESCON 50/5
			382_GPX 16 LN/LZ	3-4		557_ESCON2 Micro 60/5
			383_GPX 16 HP	4		563_EPOS4 Micro 24/5
						564_EPOS4 Module 50/5
						565_EPOS4 Compact 24/5 3-axes
						567_EPOS4 Compact 50/5
						569_EPOS4 50/5
						570_EPOS4 Disk 60/8
Connection A and B, motor (Cable AWG A: 26, B: 22)			Configuration			
red	Motor winding 1		Flange front: thread holes/center thread			
black	Motor winding 2		Flange back: metal ring/external thread			
white	Motor winding 3		Shaft front: length/diameter			
			Electric connection: cable length/pin connection/connector			
			Appropriate connectors and connecting cables are available for the configuration of the pin connection together with the external thread: see catalog, Accessories section.			
			Output signals: CMOS compatible push-pull stage. No pull-up resistor required. Hall signals are generated by an EASY INT sensor. In combination with the ENX EASY INT, the orange (V _{CC}) and blue (GND) connections are not used.			