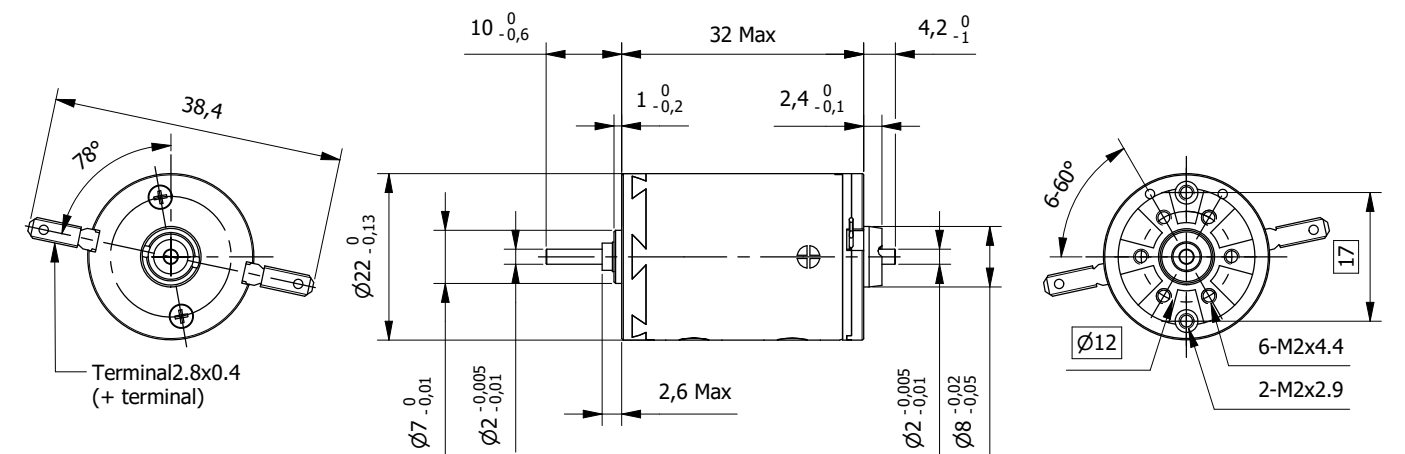


Brushed DC Coreless Motor 22DC32P-PM

Precious Metal brushes

Ø 22mm - 10,4mNm



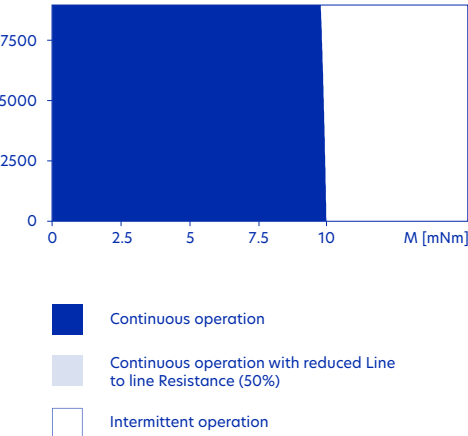
Product also available with ball bearings

Specification					
	Model	...4201	...4206	...3433	
1	Rated Voltage	V	6	12	24
2	Rated Speed	rpm	4280	4240	3440
3	Rated Torque	mNm	8,54	10,3	10,4
4	Stall Torque	mNm	39	36,9	33,3
5	Torque Constant	mNm/A	10,4	19,3	44,8
6	Motor Regulation	10 ³ /Nms	14,8	16,9	16,6
7	Rated Current	A	0,84	0,543	0,236
8	Stall Current	A	3,75	1,91	0,721
9	No-load Current	mA	20,8	11,7	4,62
10	No-load Speed	rpm	5480	5890	5090
11	Line to Line Resistance	Ω	1,6	6,28	33,3
12	Line to Line Inductance	mH	0,119	0,413	2,21
13	Rotor Inertia	gcm2	5,7	4,98	5,05
14	Max. Efficiency	%	87,5	85,2	84,9
15	Mechanical Time Constant	ms	8,44	8,36	8,39
16	Length (L)	mm	32	32	32
17	Weight	g	53,8	53,8	53,8

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +65°C
Max. Winding Temperature	+85°C
Max. Speed	9000rpm
Radial play	0,012mm
Axial play	0,05 to 0,15mm
Max. Radial force (5mm from flange)	2,8N
Max. Axial force	1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

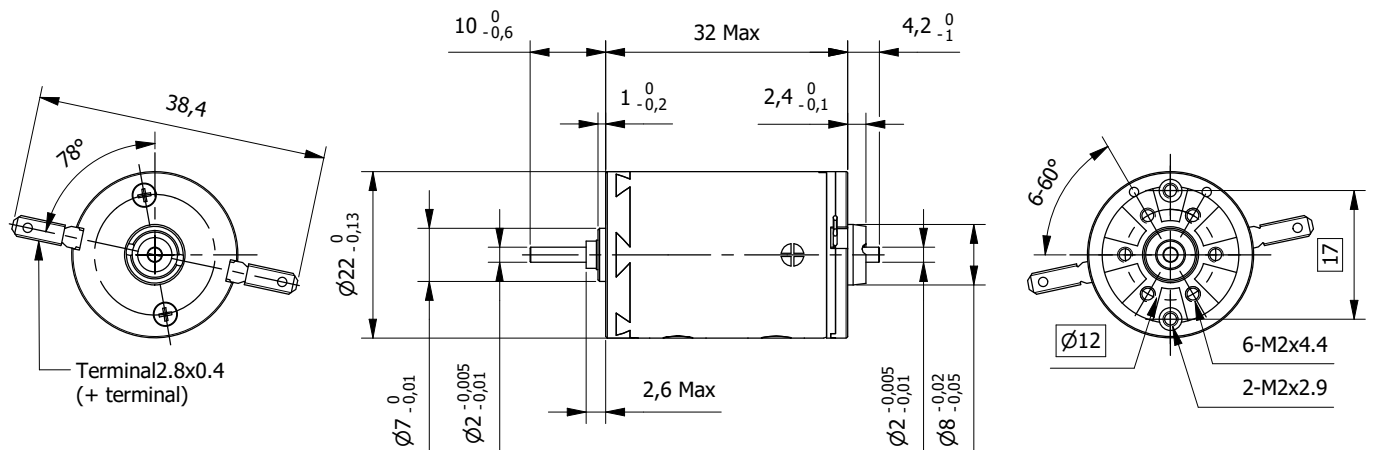
Operating range: Winding 12V



Brushed DC Coreless Motor 22DC32P-G

Graphite brushes

Ø 22mm - 12,6mNm



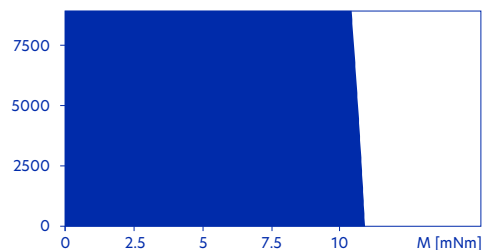
Product also available with ball bearings

Specification					
	Model	...4901	...5203	...5316	
1	Rated Voltage	V	6	12	24
2	Rated Speed	rpm	4950	5240	5350
3	Rated Torque	mNm	11,5	12,6	11,8
4	Stall Torque	mNm	42,4	49,4	44,6
5	Torque Constant	mNm/A	7,88	15,8	30,8
6	Motor Regulation	10 ³ /Nms	17,9	15,3	17,5
7	Rated Current	A	1,52	0,825	0,398
8	Stall Current	A	5,39	3,14	1,45
9	No-load Current	mA	58,8	29,5	15,1
10	No-load Speed	rpm	7030	7140	7330
11	Line to Line Resistance	Ω	1,11	3,83	16,6
12	Line to Line Inductance	mH	0,069	0,274	1,05
13	Rotor Inertia	gcm2	5,07	5,57	4,69
14	Max. Efficiency	%	76	80	80
15	Mechanical Time Constant	ms	9,09	8,57	8,2
16	Length (L)	mm	32	32	32
17	Weight	g	53,8	53,8	53,8

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +85°C
Max. Winding Temperature	+125°C
Max. Speed	9000rpm
Radial play	0,012mm
Axial play	0,05 to 0,15mm
Max. Radial force (5mm from flange)	2,8N
Max. Axial force	1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

Operating range: Winding 12V



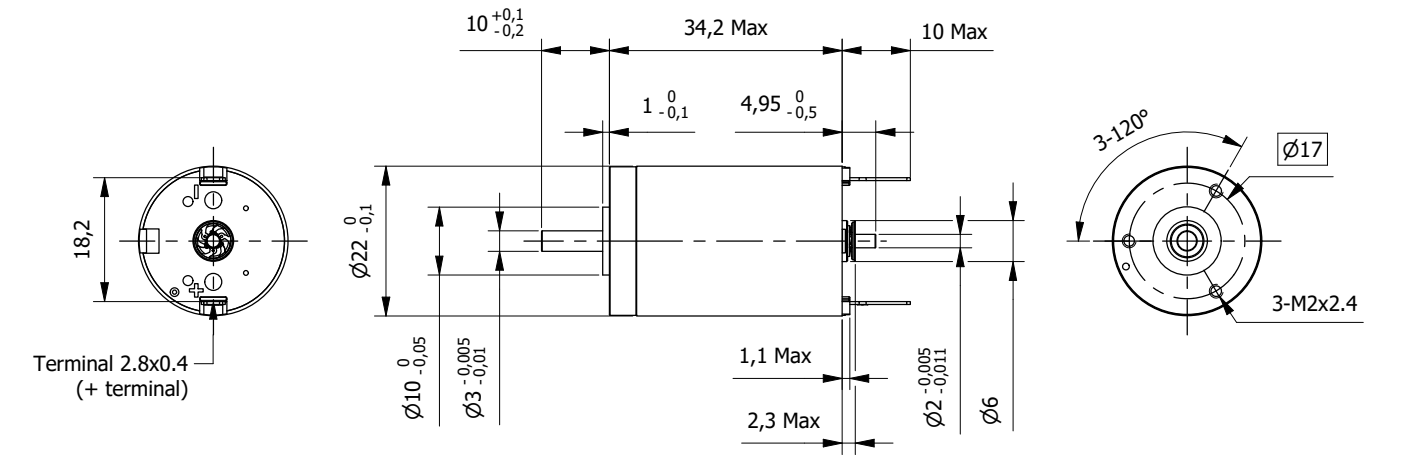
- Continuous operation
- Continuous operation with reduced Line to line Resistance (50%)
- Intermittent operation

Brushed DC Coreless Motor

Precious Metal brushes

22DC34N-PM

Ø 22mm - 14,7mNm



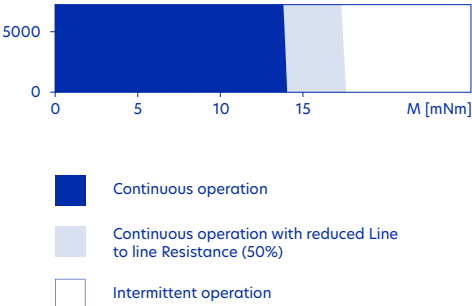
Product also available with ball bearings

Specification		Model	...4901	...4603	...4716	...4276
1	Rated Voltage	V	6	12	24	48
2	Rated Speed	rpm	4960	4670	4700	4240
3	Rated Torque	mNm	10,7	14,7	13,6	13,6
4	Stall Torque	mNm	53,7	59,7	52,7	48,6
5	Torque Constant	mNm/A	9,18	18,4	35,9	77,2
6	Motor Regulation	10 ³ /Nms	12,1	10,9	12,6	12,8
7	Rated Current	A	1,2	0,817	0,388	0,18
8	Stall Current	A	5,85	3,25	1,47	0,63
9	No-load Current	mA	39,2	19,6	10,1	4,55
10	No-load Speed	rpm	6200	6200	6340	5890
11	Line to Line Resistance	Ω	1,02	3,69	16,3	76,2
12	Line to Line Inductance	mH	0,058	0,231	0,881	4,08
13	Rotor Inertia	gcm ²	5,05	5,55	4,67	4,84
14	Max. Efficiency	%	84	85	84	84
15	Mechanical Time Constant	ms	6,14	6,07	5,93	6,19
16	Length (L)	mm	34,2	34,2	34,2	34,2
17	Weight	g	66	66	66	66

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +85°C
Max. Winding Temperature	+100°C
Max. Speed	7160rpm
Radial play	0,02mm
Axial play	0 to 0,2mm
Max. Radial force (5mm from flange)	3N
Max. Axial force	0,1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

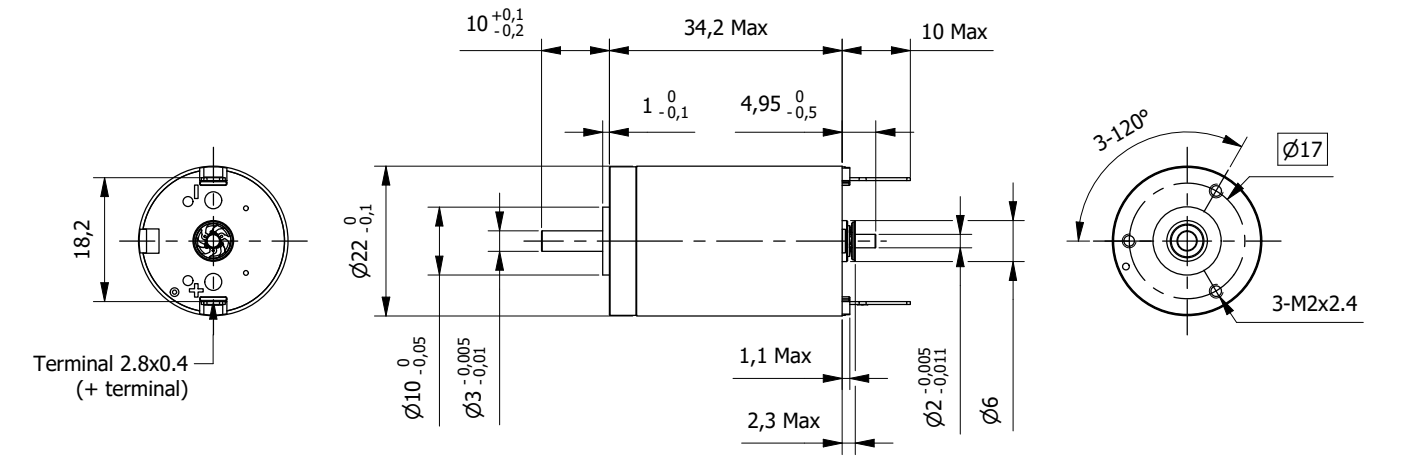
Operating range: Winding 18V



Brushed DC Coreless Motor 22DC34N-G

Graphite brushes

Ø 22mm - 15,3mNm



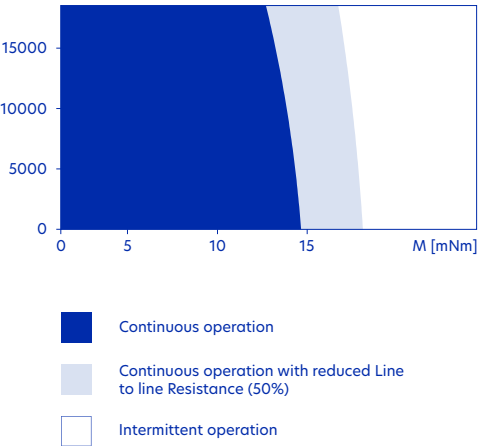
Product also available with ball bearings

Specification						
	Model		...9702	...10701	...10803	...10916
1	Rated Voltage	V	6	12	24	48
2	Rated Speed	rpm	9700	10700	10800	10900
3	Rated Torque	mNm	14,4	14,6	15,3	14
4	Stall Torque	mNm	101	108	120	104
5	Torque Constant	mNm/A	5,01	9,18	18,4	35,9
6	Motor Regulation	10 ³ /Nms	11,8	12,1	10,9	12,9
7	Rated Current	A	3	1,65	0,869	0,406
8	Stall Current	A	20,2	11,8	6,51	2,9
9	No-load Current	mA	126	71,7	35,9	18,5
10	No-load Speed	rpm	11400	12400	12400	12700
11	Line to Line Resistance	Ω	0,297	1,02	3,69	16,6
12	Line to Line Inductance	mH	0,017	0,058	0,231	0,881
13	Rotor Inertia	gcm2	5,27	5,05	5,55	4,67
14	Max. Efficiency	%	85	85	86	84
15	Mechanical Time Constant	ms	6,23	6,12	6,07	6,01
16	Length (L)	mm	34,2	34,2	34,2	34,2
17	Weight	g	66	66	66	66

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +100°C
Max. Winding Temperature	+125°C
Max. Speed	18000rpm
Radial play	0,02mm
Axial play	0 to 0,2mm
Max. Radial force (5mm from flange)	3N
Max. Axial force	0,1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

Operating range: Winding 18V

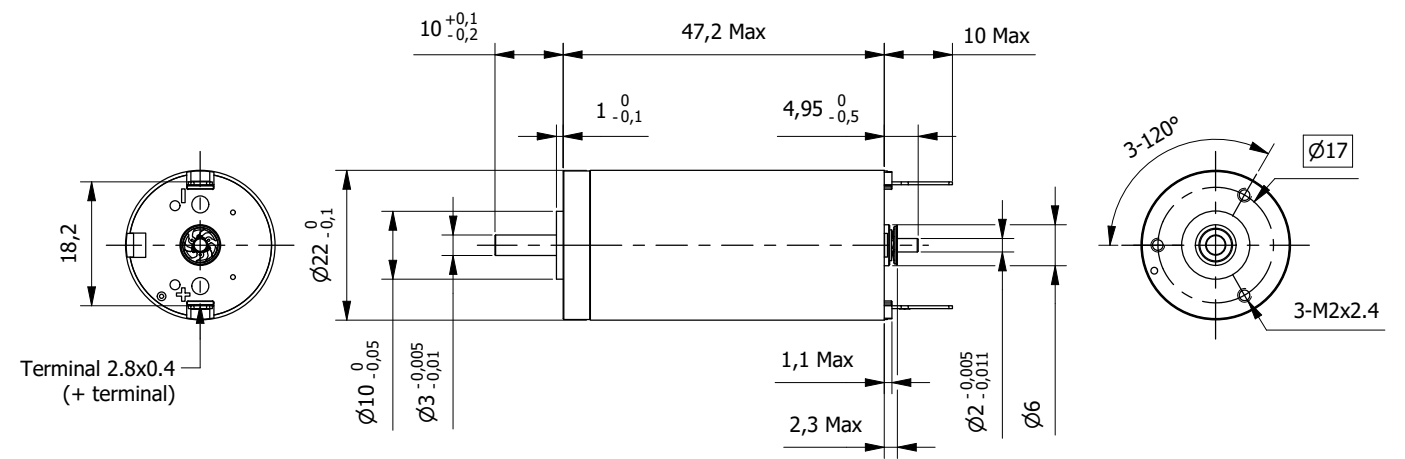


Brushed DC Coreless Motor

Precious Metal brushes

22DC47N-PM

Ø 22mm - 29,5mNm



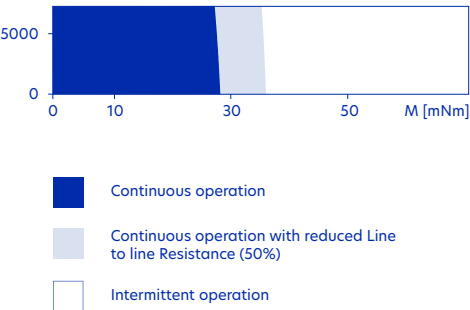
Product also available with ball bearings

Specification		Model	...5303	...4001	...4007	...4129
1	Rated Voltage	V	6	12	24	48
2	Rated Speed	rpm	5380	4000	4070	4180
3	Rated Torque	mNm	14,1	29,5	29,2	27,8
4	Stall Torque	mNm	170	150	150	140
5	Torque Constant	mNm/A	9,73	22,9	45,2	87,6
6	Motor Regulation	10 ³ /Nms	3,6	3,5	3,5	3,9
7	Rated Current	A	1,5	1,3	0,655	0,322
8	Stall Current	A	17,5	6,54	3,31	1,6
9	No-load Current	mA	51	20	10,2	5,36
10	No-load Speed	rpm	5870	4980	5060	5220
11	Line to Line Resistance	Ω	0,343	1,84	7,25	29,9
12	Line to Line Inductance	mH	0,035	0,192	0,746	2,8
13	Rotor Inertia	gcm ²	9,06	9	8,85	8,12
14	Max. Efficiency	%	89	89	89	89
15	Mechanical Time Constant	ms	3,28	3,14	3,14	3,17
16	Length (L)	mm	47,2	47,2	47,2	47,2
17	Weight	g	95	95	95	95

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +85°C
Max. Winding Temperature	+100°C
Max. Speed	7160rpm
Radial play	0,02mm
Axial play	0 to 0,2mm
Max. Radial force (5mm from flange)	3N
Max. Axial force	0,1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

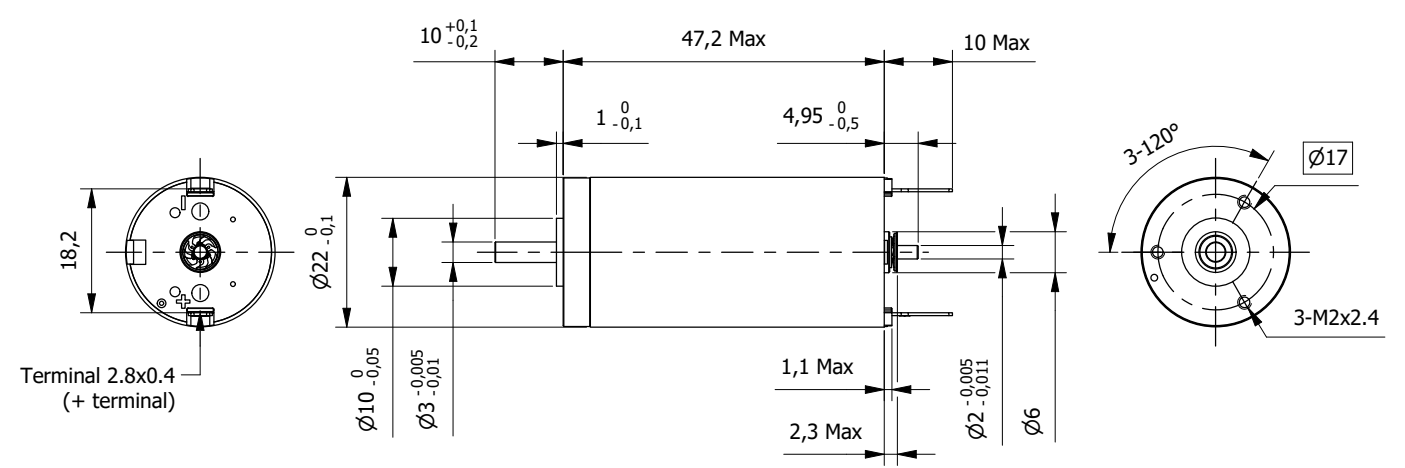
Operating range: Winding 18V



Brushed DC Coreless Motor 22DC47N-G

Graphite brushes

Ø 22mm - 30,5mNm



Product also available with ball bearings

Specification					
	Model	...11401	...10703	...9007	
1	Rated Voltage	V	9	12	48
2	Rated Speed	rpm	11400	10700	9020
3	Rated Torque	mNm	27	30,5	30,3
4	Stall Torque	mNm	371	348	294
5	Torque Constant	mNm/A	6,95	9,73	45,2
6	Motor Regulation	10 ³ /Nms	3,5	3,5	3,6
7	Rated Current	A	4	3,21	0,687
8	Stall Current	A	53,4	35,8	6,5
9	No-load Current	mA	118	81,8	16,2
10	No-load Speed	rpm	12300	11700	10100
11	Line to Line Resistance	Ω	0,168	0,335	7,39
12	Line to Line Inductance	mH	0,018	0,035	0,746
13	Rotor Inertia	gcm2	9,37	9,06	8,85
14	Max. Efficiency	%	90	91	90
15	Mechanical Time Constant	ms	3,27	3,21	3,2
16	Length (L)	mm	47,2	47,2	47,2
17	Weight	g	95	95	95

Characteristics	
Item	
Ambient Temperature Sleeve bearings	-30°C to +100°C
Max. Winding Temperature	+125°C
Max. Speed	18000rpm
Radial play	0,02mm
Axial play	0 to 0,2mm
Max. Radial force (5mm from flange)	3N
Max. Axial force	0,1N
Max. Force for Press fit	80N

Standard Combination	
Gearbox	
22GPS	
* other options on request	

Operating range: Winding 18V

