

## 1220ZWWN

### Inner Rotor Without Sensor

Applications: Precision driving field in medical equipment, industrial automation, etc.

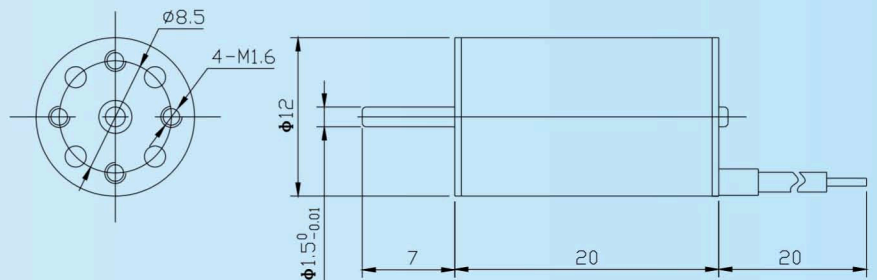
#### Characteristics

			-3-7.4	-2-6.0	-1-5.0
1	Voltage	V	7.4	6	5
2	Terminal resistance	$\Omega$	3.8	3.4	2
3	No-load speed	rpm	23000	17200	17500
4	No-load current	A	0.1	0.15	0.18
5	Nominal torque	mNm	2.2	2.0	2.1
6	Nominal speed	rpm	13800	10000	11000
7	Nominal current	A	0.8	0.8	1.1
8	Max. output power	W	3.3	2.2	2.5
9	Max. efficiency	%	62	50	51
10	Back-EMF constant	mV/rpm	0.3	0.3	0.3
11	Torque constant	mNm/A	2.9	3.0	2.5
12	KV Value	rpm/V	3100	2900	3500
13	Speed/torque gradient	rpm/mNm	3800	3700	3030
14	Rotor inertia	gcm <sup>2</sup>	0.17	0.17	0.17
15	Weight	g	9.5	9.5	9.5
16	Thermal resistance housing-ambient	K/W	31	31	31
17	Thermal resistance winding-housing	K/W	32	32	32
18	Thermal time constant motor	s	190	190	190
19	Thermal time constant winding	s	1.5	1.5	1.5
20	Operating temperature range	$^{\circ}\text{C}$	-40~+100	-40~+100	-40~+100
21	Max. winding temperature	$^{\circ}\text{C}$	155	155	155
22	Axial play	mm	0.012	0.012	0.012
23	Radial play	mm	0.008	0.008	0.008
24	Axial load dynamic	N	1	1	1
25	Axial load static	N	25	25	25
26	Radial load at 3 mm from mounting face	N	6.3	6.3	6.3
27	No. of pole pairs		1	1	1
28	Bearings		2 ball bearings		
29	Commutation		Sensorless		
30	Protection class		IP 20		

#### Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Bearing type
- Encoder
- Driver

#### Outline Drawing



UNIT:mm