



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



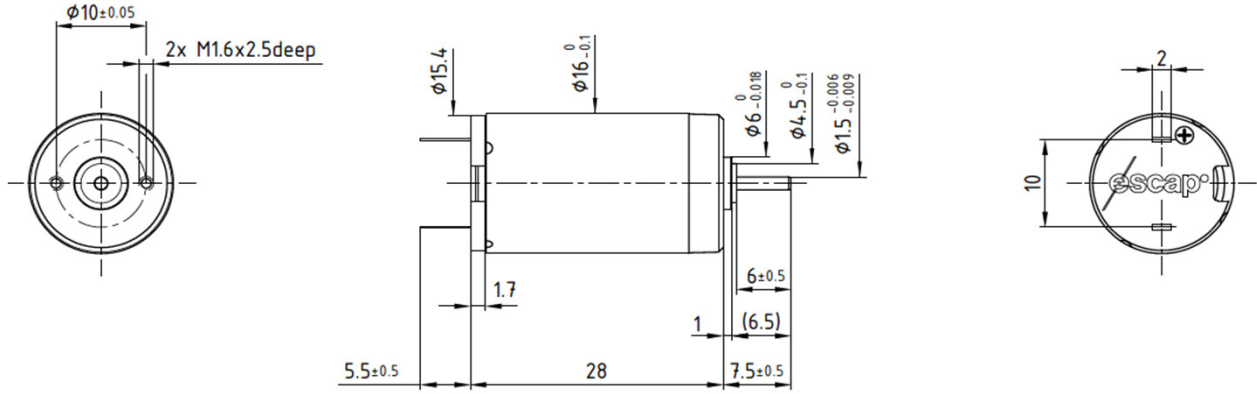
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Dimensions in mm

16N28 ** .201**

Electrical Data	****	111P	207P	210E	208E	209E	207E	106	205E		
1 Nominal Voltage	V	3	4.8	7.5	9	9	12	16	18	Volt	
2 No-Load Speed	n_0	9,460	7,980	9,690	8,810	9,690	10,800	10,180	9,640	rpm	
3 No-Load Current	I_0	28.0	11.9	13.3	8.4	8.4	7.7	6.3	4.9	mA	
4 Terminal Resistance	R	2.4	10.0	14.6	28.0	20.6	40.5	68.5	109.0	W	
5 Output Power	P_{2max}	2.3	2.1	2.9	2.4	3.0	2.4	2.7	2.3	W	
6 Stall Torque	mNm	3.7 (0.53)	2.7 (0.39)	3.7 (0.53)	3.1 (0.44)	3.8 (0.54)	3.1 (0.44)	3.4 (0.49)	2.9 (0.42)	mNm (oz-in)	
7 Efficiency	η_{max}	72	71	70	70	74	70	70	69	%	
8 Max Continuous Speed	$n_{e,max}$	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	rpm	
9 Max Continuous Torque	$M_{e,max}$	2.9 (0.39)	2.7 (0.39)	2.9 (0.42)	2.7 (0.39)	2.9 (0.42)	2.4 (0.34)	2.7 (0.39)	2.5 (0.36)	mNm (oz-in)	
10 Max Continuous Current	$I_{e,max}$	1.01	0.49	0.41	0.29	0.34	0.24	0.19	0.15	A	
11 Back-EMF Constant	K_E	0.31	0.59	0.75	0.99	0.91	1.08	1.53	1.81	mV/rpm	
12 Torque Constant	K_M	2.96	5.60	7.20	9.50	8.70	10.30	14.60	17.30	mNm/A	
13 Motor Regulation	R/k^2	270.0	320.0	280.0	310.00	270.00	380.00	320.00	360.00	$10^3/Nms$	
14 Friction Torque	T_F	0.08 (0.02)	0.07 (0.01)	0.1 (0.02)	0.08 (0.02)	0.07 (0.01)	0.08 (0.02)	0.09 (0.02)	0.08 (0.02)	mNm (oz-in)	
15 Rotor Inductance	L	0.08	0.28	0.50	0.80	0.70	0.90	2.00	3.10	mH	
16 Mechanical Time Constant	t_m	19.4	16.3	21.6	19.5	14.9	19.4	17.0	19.8	ms	
17 Rotor Inertia	J	0.72	0.51	0.77	0.63	0.55	0.51	0.53	0.55	g.cm ²	
General Data											
18 Thermal Resistance (rotor/body)	R_{th1} / R_{th2}					7/35					°C/W
19 Thermal Time Constant (rotor/stator)	t_{w1}/t_{w2}					6/380					S
20 Operating Temperature Range:	motor					-30°C to 85°C (-22°F to 185°F)				°C (°F)	
	rotor					100°C (212°F)				°C (°F)	
21 Shaft Load Max.:	With sleeve bearings										
(5mm from bearing)	-radial					1.5 (5.4)					N (oz)
	-axial					100 (359.6)					N (oz)
22 Shaft Play:	-radial					<0.03 (0.0012)					mm (inch)
	-axial					0.15 (0.0059)					mm (inch)
23 Weight	g					24 (0.85)					g (oz)

Execution Table			
Gearbox	Single Shaft	F16	MR2
B16	235	235	278
BA16	235	235	278
R16	201	201	Upon Request

