



Dimensions in mm.

Electrical Data	Symbol	17N78 1				Unit
		216E	210E	208E	207E	
1 Nominal Voltage	V	6	12	18	24	Volt
2 No-Load Speed	n_0	8,480	8,460	8,460	8,900	rpm
3 No-Load Current	I_0	16.0	7.7	4.9	3.5	mA
4 Terminal Resistance	R	3.2	17.3	38.4	65.0	Ω
5 Output Power	P_{2max}	3.6	3.1	3.2	3.1	W
6 Stall Torque	mNm	12.5 (1.78)	9.3 (1.32)	9.4 (1.34)	9.4 (1.34)	mNm (oz-in)
7 Efficiency	η_{max}	82	80	81	81	%
8 Max Continuous Speed	$n_{e max}$	10,000	10,000	10,000	10,000	rpm
9 Max Continuous Torque	$M_{e max}$	5.7 (0.81)	4.8 (0.68)	4.9 (0.7)	4.8 (0.68)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	0.86	0.37	0.25	0.19	A
11 Back-EMF Constant	k_E	0.70	1.40	2.10	2.67	mV/rpm
12 Torque Constant	k_M	6.70	13.40	20.10	25.50	mNm/A
13 Motor Regulation	R/k^2	71.3	96.3	95.05	99.96	10 ³ /Nms
14 Friction Torque	T_F	0.1 (0.02)	0.1 (0.02)	0.1 (0.02)	0.09 (0.02)	mNm (oz-in)
15 Rotor Inductance	L	0.11	0.40	0.90	1.41	mH
16 Mechanical Time Constant	τ_m	7.8	7.7	7.2	7.2	ms
17 Rotor Inertia	J	1.10	0.80	0.76	0.72	g-cm ²

General Data					
18 Thermal Resistance (rotor/body)	R_{th1}/R_{th2}	10/30		°C/W	
19 Thermal Time Constant (rotor/stator)	t_{W1}/t_{W2}	7/400		S	
20 Operating Temperature Range:	motor	-30°C to 85°C (-22°F to 185°F) 100°C (212°F)		°C (°F)	
	rotor			°C (°F)	
21 Shaft Load Max.: (5 mm. from bearing)	-radial -axial	With sleeve bearings			
				1.5 (5.4)	N (oz)
				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	27 (0.96)		g (oz)	

Execution Table

Gearbox	Single Shaft	F16	MR2
B16	5	5	Upon Request
BA16	5	5	Upon Request
R16	1	1	Upon Request

