

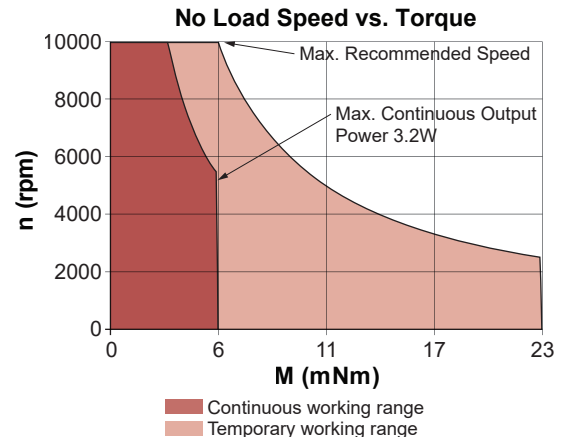
Dimensions in inches [mm]

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	$\eta_{max}$	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 <sup>2</sup>	71.3	96.3	95.05	99.96	10 <sup>3</sup> /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	$\tau_m$	7.8	7.7	7.2	7.2	ms
17 Rotor Inertia	J	1.10	0.80	0.76	0.72	g-cm <sup>2</sup>

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)		°C (°F)
	rotor			100°C (212°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)
24 Commutation Segment	-	9		segment

Execution Table

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



► Motor shaft rotates CW when seen from motor front face when +ve and -ve supply is given to respective terminals.