



		Samples available	
Units		212-405	
Design and Accessories			
1	Commutation	Precious Metal Brush	
2	No. of Output Shafts	1	
3	Unit Weight	g	9.3
4	Body Diameter	mm	12
5	Body Length	mm	24
6	Rotation Direction		CW
7	Bearing Type		Sintered Bronze
Physical Characteristics			
8	Shaft Diameter	mm	3
9	Shaft Length	mm	8
10	Shaft Orientation		Inline
11	Motor Construction		Iron Core
Operational Characteristics			
12	Typical Max. Mech. Noise	dB(A)	60
13	Rated Operating Voltage	V	12
14	Rated Load	mN-m	20
15	Rated Load Speed	rpm	137
16	N/L Speed	rpm	230
17	Max. Start Voltage	V	1.4
18	Max. N/L Current	mA	36
19	Max. Operating Voltage	V	12
20	Max. Rated Load Current	mA	161
21	Min. Insulation Resistance	MOhm	1
22	Max. Start Current	mA	265
23	Typical Rated Load Power Consumption	mW	1,370
24	Typical N/L Current	mA	30
25	Typical Peak Efficiency	%	22
26	Typical Peak Eff. Torque	mN-m	22
27	Typical Peak Eff. Speed	rpm	166
28	Typical Peak Eff. Current	mA	139
29	Typical Peak Eff. Power Out	mW	374

30	Typical Start Current	mA	265
31	Typical Max. Output Power	mW	434
32	Typical Stall Torque	mN·m	39

Gear Characteristics

33	Gear Ratio	:1	99
34	Gearhead Type		Spur

Winding Characteristics

35	Typical Terminal Resistance	Ohm	29
36	Typical Terminal Inductance	uH	4,100

Environmental Characteristics

37	Max. Operating Temp.	°C	50
38	Min. Operating Temp.	°C	-10
39	Max. Storage & Transportation Temp.	°C	80
40	Min. Storage & Transportation Temp.	°C	-40

Packaging

41	No. Units per Carton	pcs	500
42	Carton Type		Boxed Trays

Motor Body Characteristics

43	No. of Poles		
44	Shaft Axial Float	mm	
45	Max. Axial Compression	N	
46	Max. Radial Load	mN	

Performance

