

14205E247-R2 *

14X05 MOTOR SIZE DATA (25 deg C)

$P = 57.2 \text{ watts}$

MOTOR MODEL

$T_c = 31 \text{ oz-in}$

PARAMETER	SYMBOL	UNITS	14X01	14X02	14X03	14X04	14X05	14X06
* 1 Motor Constant	KH	oz-in/root W					9.97	
* 2 Peak Torque (Stall)	TP	oz-in					225	
3 No Load Speed	SO	rpm					3056	
4 Motor Friction Torque	TF	oz-in					2.0	
5 Viscous Damping Factor	D	oz-in/krpm					0.19	
6 Damping Constant	KD	oz-in/krpm					73.5	
7 Electrical Time Constant	TE	ms					1.63	
8 Mechanical Time Constant	TM	ms					6.27	
9 Thermal Time Constant	TH	min					29.4	
10 Thermal Impedance	RTH	deg C/W					7.30	
11 Maximum Winding Temperature	MX	deg C max					155	
12 Motor Inertia	JM	oz-in-s ²					4.4E-03	
13 Motor Weight	WM	oz					39.5	
14 Motor Length, 14X0X	L1	in max					4.453	

14X05 MOTOR WINDING DATA (25 deg C)

WINDING CODE

This winding ↓

PARAMETER	SYMBOL	UNITS	14X01	14X02	14X03	14X04	14X05	14X06	14X07	14X08
15 Voltage	E	V	6.00	7.58	9.55	12.0	15.1	19.1	24.0	30.3
16 Torque Constant	KT	oz-in/A			3.94	5.25	6.56	8.31	10.5	13.1
17 Back EMF Constant	KE	V/krpm			2.91	3.88	4.85	6.15	7.76	9.71
18 Terminal Resistance	RT	ohm			0.19	0.30	0.45	0.71	1.11	1.73
19 Inductance	L	mH			0.25	0.45	0.71	1.13	1.81	2.83
20 No Load Current	IO	A			0.67	0.49	0.40	0.31	0.25	0.20
* 21 Peak Current (Stall)	IP	A			50.2	40.1	33.3	27.0	21.6	17.5

14X05 MOTOR WINDING DATA (25 deg C)

WINDING CODE

PARAMETER	SYMBOL	UNITS	14X01	14X02	14X03	14X04	14X05	14X06
22 Voltage	E	V	38.2	48.0				
23 Torque Constant	KT	oz-in/A	16.6	21.0	26.7	33.3	42.0	
24 Back EMF Constant	KE	V/krpm	12.3	15.5	19.7	24.6	31.1	
25 Terminal Resistance	RT	ohm	2.75	4.36	6.97	10.9	17.4	
26 Inductance	L	mH	4.54	7.24	11.7	18.2	29.0	
27 No Load Current	IO	A	0.16	0.12				
* 28 Peak Current (Stall)	IP	A	13.9	11.0				

* Theoretical values supplied for reference only. See pages 2 and 3, section III, in "Servo Motor Application Notes".

- Symbolizes lowercase Tau.

@ Symbolizes uppercase Theta.

* This motor with a 2 channel, 1000 CPR encoder.