



Lead color	Function
Blue	Phase A
Brown	Phase B
Violet	Phase C
Red	4.5 to 24 vdc
Yellow	Hall 1
Orange	Hall 2
White	Hall 3
Black	Supply RTN

.6070-56 UNS-2A	
MAJOR DIAMETER (THEORETICAL)	.6070
THREADS PER INCH	56
THREAD ANGLE	{60°}
PITCH DIAMETER	.5945/.5916
MINOR DIAMETER	.5868/.5800

[\*] denotes millimeters.  
 Specification subject to change without notice

Motor length and winding options

Electrical Data	Symbols	B0610		B0614		B0616		Units
		-N024A-R00	-N024B-R00	-N024A-R00	-N024B-R00	-N024A-R00	-N024B-R00	
1 Nominal Voltage	$U_N$	24		24		24		Volt
2 Max No-Load Current	$I_{nl}$	375	250	480	315	525	345	mA
3 No-Load Speed	$W_{nl}$	50,360	25,680	58,720	26,100	51,840	25,920	rpm
4 Resistance - Phase to Phase	R	0.48	1.69	0.27	1.03	0.31	0.95	$\Omega$
5 Continuous Stall Torque	$T_{cs}$	15.2 (2.15)	16.0 (2.27)	19.1 (2.7)	22.1 (3.13)	21.4 (3.03)	24.3 (3.44)	mNm (oz-in)
6 Continuous Stall Current	$I_{cs}$	3.44	1.82	5.01	2.59	4.97	2.83	A
7 Peak Torque for 1s	$T_{pk}$	232.9 (32.9)	128.7 (18.2)	335.5 (47.5)	205.6 (29.1)	345.4 (48.9)	224.6 (31.8)	mNm (oz-in)
8 Peak Current	$I_{pk}$	50.3	13.9	84.1	22.9	76.6	24.9	A
9 Back EMF Constant	$K_e$	0.490	0.970	0.420	0.940	0.470	0.940	v/1000 rpm
10 Torque Constant	$K_t$	4.63 (0.66)	9.26 (1.31)	3.99 (0.57)	8.98 (1.27)	4.51 (0.64)	9.02 (1.28)	mNm/A (oz.-in/A)
11 Motor regulation $R/K_t^2$	-	22.2	19.7	17.0	12.8	15.2	11.7	$10^3/Nms$
12 Motor regulation $K_t/R_{\phi}$	-	6.7	7.1	7.7	8.8	8.1	9.3	mNm/W $^{1/2}$
13 Inductance - Phase to Phase	L	0.070	0.290	0.040	0.180	0.040	0.140	mH @1KHz
<b>General Data</b>								
14 Thermal Resistance (winding to ambient)	$R_{th}$	15.4		12.5		11.4		$^{\circ}C/W$
15 Thermal Time Constant	$\tau_w$	896		954		1010		s
16 Mechanical Time Constant	$\tau_m$	1.95	1.74	2.16	1.61	2.09	1.62	ms
17 Electrical time constant	$\tau_e$	0.16	0.17	0.13	0.17	0.12	0.15	ms
18 Rotor Inertia	J	8.85 (12.5)		12.56 (17.8)		13.9 (19.7)		$kgm^2 \cdot 10^{-8}$ (oz-in-sec $^2 \cdot 10^{-6}$ )
19 Max winding temperature	-			155 (311)				$^{\circ}C$ ( $^{\circ}F$ )
20 Shaft Load max.: radial (static)	-			111 (25)				N (lb)
axial (static)	-			89(20)				N (lb)
21 Mass	M	65.6 (2.32)		80.54 (2.84)		87.73 (3.09)		g (oz)
22 Length L	L	45.5 (1.792)		56.2 (2.21)		60.3 (2.37)		mm (in)
23 Tolerances	-	Tolerances on all values $\pm 10\%$ unless otherwise specified.						

Notes

- Three phase motor with Wye connections
- Gearbox option: Size 6 Planetary
- Autoclavable versions available
- Hall sensors: supply voltage 4.5V - 24V
- Above parameters specified for 25 Deg C ambient temperature
- Sensorless option available on request
- Typical housing material 303 SS
- Typical shaft material 17-4 PH
- Motor is RoHS Compliant

