

Basic Part #	Length		Index Angle	Function	Steps Per Revolution	Input Voltage	Input Current Per Phase	DC Resistance Per Phase	Inductance Per Phase	No-Load Response Rate	No-Load Slew Rate	Holding Torque		Dynamic Torque		Detent Torque		Shaft Radial Play		Shaft End Play		Motor Inertia		Weight	
	(in.)	(mm)										(deg.)	(DC)	(amps) +/- 10%	(ohms) +/- 10%	(mH) ref.	(PPS) min.	(PPS) min.	(oz.-in.) min.	(mNm) min.	(oz.-in.) min.	(mNm) min.	(oz.-in.) ref.	(mNm) ref.	(in.)
15-SHAK-31CZ	1.562	39.67	1.8	2-Phase Hybrid	200	2.84 REF.	2.000	1.42	1.16	2075 (3)	4005 (3)	19.0 (2)	134.2	12.9 @ 100 PPS (3)	91.1	1.0	7.06	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAL-32CZ	2.000	50.80	1.8	2-Phase Hybrid	200	3.28 REF.	2.000	1.64	2.39	1840 (3)	2185 (3)	34.0 (2)	240.1	23.4 @ 100 PPS (3)	165.2	1.0	7.06	0.0008	0.020	0.0005	0.013	3.5E-04	24.9	10.5	297.67
15-SHAK-33CZ	1.562	39.67	1.8	4-Phase Hybrid	200	17.0 REF.	0.477	38.0	17.00	1125 (2)	1140 (2)	16.4 (2)	115.8	11.3 @ 100 PPS (2)	79.8	1.0	7.06	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAK-34CZ	1.562	39.67	1.8	4-Phase Hybrid	200	5.24 REF.	2.000	2.62	1.18	2140 (3)	3220 (3)	19.3 (2)	151.1	12.5 @ 100 PPS (3)	88.3	1.0	7.06	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAK-11CZ	1.562	39.67	1.875	2-Phase Hybrid	192	2.84 REF.	2.000	1.42	1.08	1800 (4)	2815 (4)	16.5 (2)	116.5	12.75 @ 5 PPS (4)	90.0	1.5	10.59	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAL-13CZ	2.000	50.80	1.875	2-Phase Hybrid	192	3.28 REF.	2.000	1.64	2.10	1840 (3)	2045 (3)	30.0 (2)	211.8	18.5 @ 100 PPS (3)	130.6	1.5	10.59	0.0008	0.020	0.0005	0.013	3.5E-04	24.9	10.5	297.67
15-SHAK-16CZ	1.562	39.67	1.875	2-Phase Hybrid	192	12.000	0.364	33.0	23.00	1273 (2)	1280 (2)	13.8(2)	74.1	10 @ 100 PPS (2)	51.2	1.5	10.59	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAK-17CZ	1.562	39.67	1.875	4-Phase Hybrid	192	17.000	0.447	38.0	17.00	950 (2)	1020 (2)	15.0 (2)	74.1	12.5 @ 5 PPS (2)	88.3	1.5	10.59	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAK-19CZ	1.562	39.67	1.875	4-Phase Hybrid	192	5.240	2.000	2.62	1.13	1925 (2)	2035 (2)	18 (2)	127.1	13.5 @ 100 PPS	95.3	0.4	2.47	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHBL-35AB	2.00	50.80	1.8	2-Phase Hybrid	200	24.000	0.320	75.0	111.00	820 (3)	915 (3)	34.5 (3)	243.6	20.0 @ 100 PPS (3)	141.2	1.0	7.06	0.0008	0.020	0.0005	0.013	3.5E-04	24.9	10.5	297.67
15-SHAL-38AB	2.00	50.80	1.8	4-Phase Hybrid	200	5.000	1.000	5.0	4.10	750 (2)	785 (2)	23.0 (2)	162.4	13.0 @ 100 PPS (2)	91.8	1.0	7.06	0.0008	0.020	0.0005	0.013	3.5E-04	24.9	10.5	297.67
15-SHAL-40AB	1.562	39.67	1.8	2-Phase Hybrid	200	12.000	0.600	20.0	19.00	1225 (3)	1240 (3)	23.5 (3)	165.9	15.0 @ 100 PPS (3)	105.9	0.4	2.82	0.0005	0.127	0.001	0.025	2.1E-04	14.5	7.2	204.12
15-SHAL-41AB	2.00	50.80	1.8	4-Phase Hybrid	200	4.600	0.417	11.0	4.50	770 (2)	795 (2)	10.5 (2)	74.1	7.2 @ 100 PPS (2)	50.8	1.0	7.06	0.0008	0.020	0.0005	0.013	3.5E-04	24.9	10.5	297.67
15-SHAL-42AB	1.562	39.67	1.8	4-Phase Hybrid	200	10.000	1.000	10.0	4.75	1255(2)	1270 (2)	17.6 (2)	124.3	12.9 @ 100 PPS (2)	91.1	0.6	4.24	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
15-SHAL-43AB	1.562	39.67	1.8	2-Phase Hybrid	200	6.000	1.000	6.0	6.70	1490 (3)	1525 (3)	22 (3)	155.4	16.5 @ 100 PPS (3)	116.5	1.0	7.06	0.0008	0.020	0.0005	0.013	2.1E-04	14.5	7.2	204.12
11-SPAA-38AB	1.215	30.86	30 +/-3	2-Phase PM	12	14.000	0.164	85.5	30.20	460 (2)	485 (2)	1.8 (2)	12.7	0.27 @ 400 PPS (2)	1.9	0.3	1.84	0.0006	0.015	.001-.005	0.025-.0127	7.6E-06	0.5	2.5	70.87
11-SPAA-25AB	1.215	30.86	45 +/-4	2-Phase PM	8	20.000	0.625	32.0	14.10	680 (2)	1595 (2)	2.5 (2)	17.7	1.3 @ 400 PPS (2)	9.2	0.3	2.12	0.0006	0.015	.001-.005	0.025-.0127	1.1E-05	0.8	2.7	76.54
11-SPAA-36AB	1.215	30.86	45 +/-4	2-Phase PM	8	15.000	0.652	23.0	6.50	640 (2)	1060 (2)	3.2 (2)	22.6	1.6 @ 300 PPS (2)	11.3	0.5	3.18	0.0006	0.015	.001-.005	.025-.0127	1.3E-05	1.0	2.8	79.38
11-SPAA-37AB	1.215	30.86	45 +/-4	4-Phase PM	8	20.000	0.556	36.0	4.80	415 (5)	465 (5)	1.45 (5)	10.2	0.95 @ 5 PPS (5)	6.7	0.3	2.12	0.0006	0.015	.001-.005	.025-.0127	7.6E-06	0.5	1.5	42.52
11-SPAA-39AB	1.215	30.86	45 +/-4	4-Phase PM	8	7.500	0.469	16.0	2.56	405 (2)	435 (2)	1.7 (2)	12.0	0.8 @ 100 PPS (2)	5.6	0.3	1.77	0.0006	0.015	.001-.005	0.025-.0127	7.6E-06	0.5	2.7	76.54
11-SPAA-40AB	1.215	30.86	45 +/-4	2-Phase PM	8	14.000	0.164	85.5	29.10	420 (2)	450 (2)	1.95 (2)	13.8	0.95 @ 100 PPS (2)	6.7	0.3	2.12	0.0006	0.015	.001-.005	0.025-.0127	7.6E-06	0.5	2.5	70.87
11-SPAA-20AB	1.215	30.86	90 +/-10	2-Phase PM	4	13.500	0.142	95.0	37.90	215 (2)	350 (2)	0.72 (2)	5.1	0.36 @ 100 PPS (2)	2.8		0.00	0.0006	0.015	.001-.005	.025-.0127	6.5E-06	0.5		0.00
11-SPAA-27AB	1.215	30.86	90 +/-3	4-Phase PM	4	15.000	0.500	30.0	5.90	315 (2)	525 (2)	0.90 (2)	6.4	0.53 @ 100 PPS (2)	4.2	0.3	1.77	0.0006	0.015	.001-.005	.025-.0127	6.5E-06	0.5		0.00
11-SHBD-45AB	1.50	38.10	1.8 +/-5%	2-Phase Hybrid	200	13.8 REF.	0.300	46.0	51.30	1140 (3)	1385 (3)	9.5 (3)	67.1	5.9 (3)	41.7	0.4	2.54	0.0006	0.015	0.005	0.127	4.7E-05	3.3	3.3	93.55
11-SHBD-47AB	1.50	38.10	1.8 +/-5%	4-Phase Hybrid	200	9.6 REF.	0.300	32.0	22.40	875 (3)	1130 (3)	6.2 (3)	43.8	3.9 (3)	27.5	0.3	2.12	0.0006	0.015	0.005	0.127	5.4E-05	3.8	3.5	99.22
11-SHBD-49AB	1.50	38.10	1.8 +/-5%	4-Phase Hybrid	200	14.000	0.311	45.0	28.40	810 (3)	1225 (3)	7.8 (3)	55.1	4.3 (3)	30.4	0.3	2.12	0.0006	0.015	0.005	0.127	5.1E-05	3.6	3.5	99.22
11-SHBD-50AB	1.50	38.10	1.8 +/-5%	4-Phase Hybrid	200	4.800	0.300	16.0	5.30	1010 (3)	1115 (3)	3.4 (3)	24.0	1.9 (3)	13.4	0.5	3.53	0.0006	0.015	0.005	0.127	5.1E-05	3.6	3.2	90.72
11-SHBD-51AB	1.50	38.10	1.8 +/-5%	2-Phase Hybrid	200	5 Ref.	0.312	16.0	19.90	2010 (3)	2350 (3)	7.6 (3)	53.7	4.6 (3)	32.5	0.4	2.82	0.0006	0.015	0.005	0.127	5.1E-05	3.6	3.2	90.72
11-SHCA-52AB	0.640	16.26	1.8 +/-5%	2-Phase Hybrid	200	8.400	0.300	28.0	16.30	1775 (3)	1855 (3)	3.6 (3)	25.4	2.3 (3)	16.2	0.5	3.53	0.0006	0.015	0.005	0.127	2.8E-05	2.0	1.4	39.69
11-SHBZ-55AB	0.640	16.26	1.8 +/-5%	4-Phase Hybrid	200	14.000	0.311	45.0	14.50	1435 (3)	1616 (3)	2.8 (3)	19.8	1.7 (3)	12.0	0.4	2.82	0.0006	0.015	0.005	0.127	2.8E-05	2.0	1.5	42.52

