

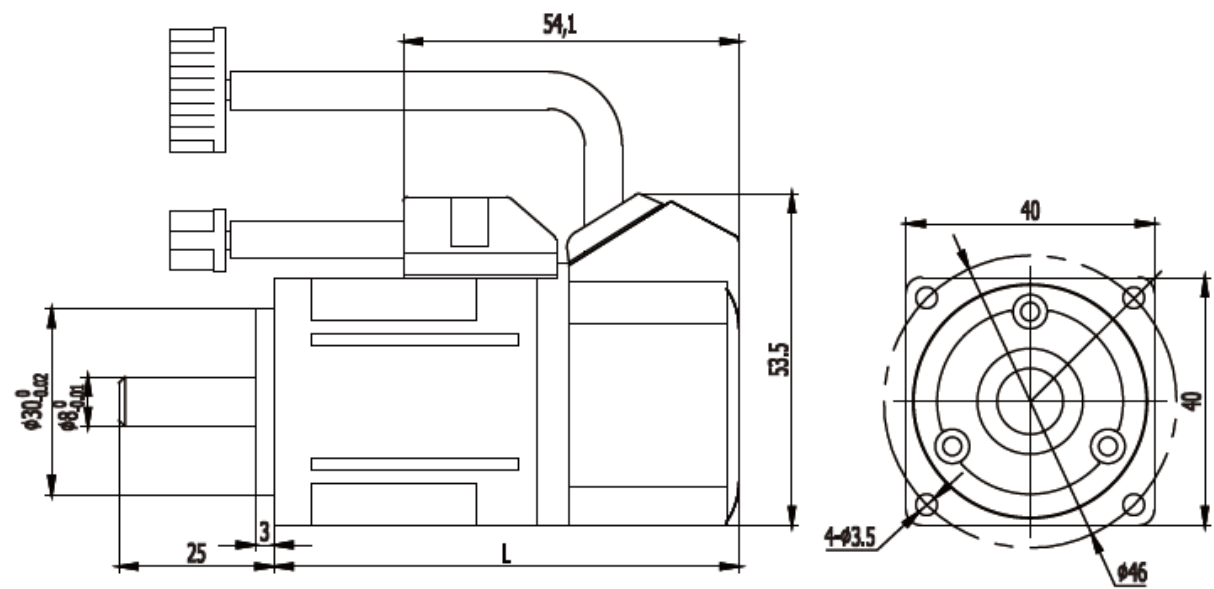
SERVO MOTORS

PRODUCT MANUALS



40 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

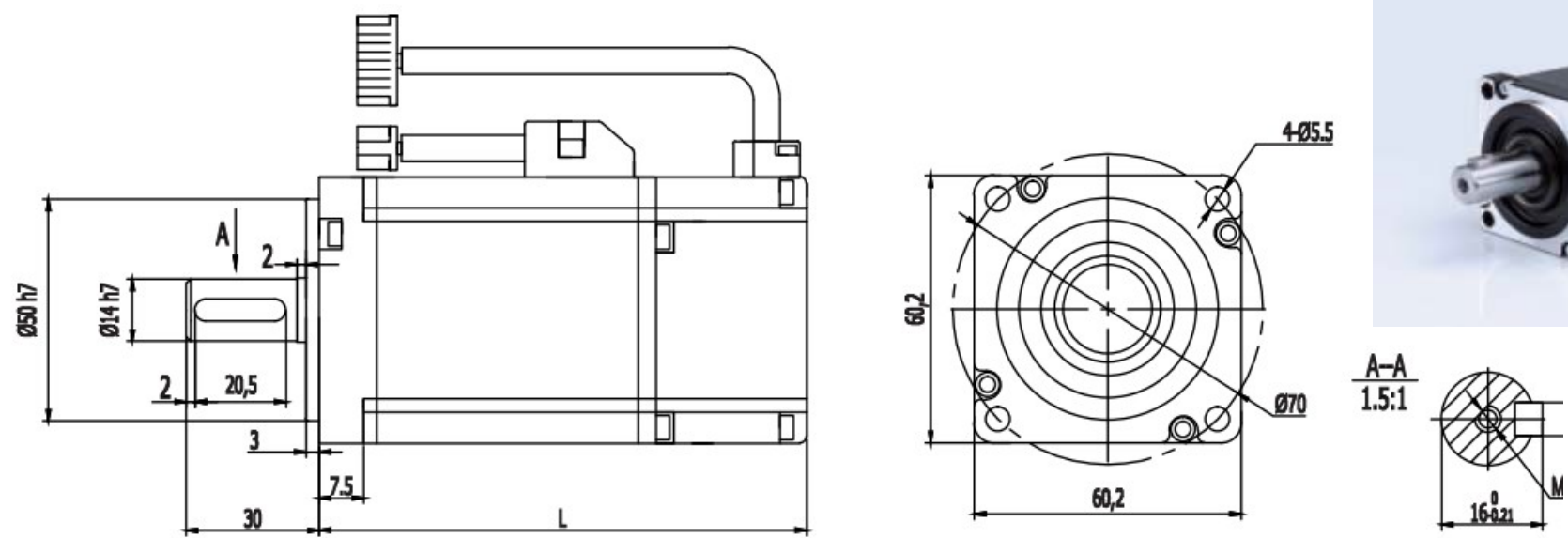


SPECIFICATIONS

Motor Model	ATO40ST-M0013048	ATO40ST-M00130220	ATO40ST-M0033048	ATO40ST-M00330220
Rated Power (W)	50	50	100	100
Rated Voltage (V)	48	220	48	220
Rated Current (A)	1.1	0.4	2.5	0.6
Rated Speed (RPM)	3000	3000	3000	3000
Rated Torque (N.m)	0.16	0.16	0.32	0.32
Peak Torque (N.m)	0.48	0.32	0.95	0.64
Voltage Constant (V/1000r/min)	9.2	36.8	8.2	32.8
Torque Coefficient (N.m/A)	0.145	0.4	0.128	0.53
Torque Inertia (Kg.M ²)	0.025x10 ⁻⁴	0.025x10 ⁻⁴	0.051x10 ⁻⁴	0.051x10 ⁻⁴
Line-Line Resistance (Ω)	6.75	108	2.2	34
Line-Line Inductance (mH)	7.5	108	3	40
Electrical Time-Constant (ms)	1.11	1	1.36	1.18
Weight (Kg)	0.32	0.32	0.47	0.47
Encode Line Number (PPR)	2500			
Insulation Class	Class B			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	75		90	
Motor Length With Permanent Magnet Brake (L)	109		124	

60 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

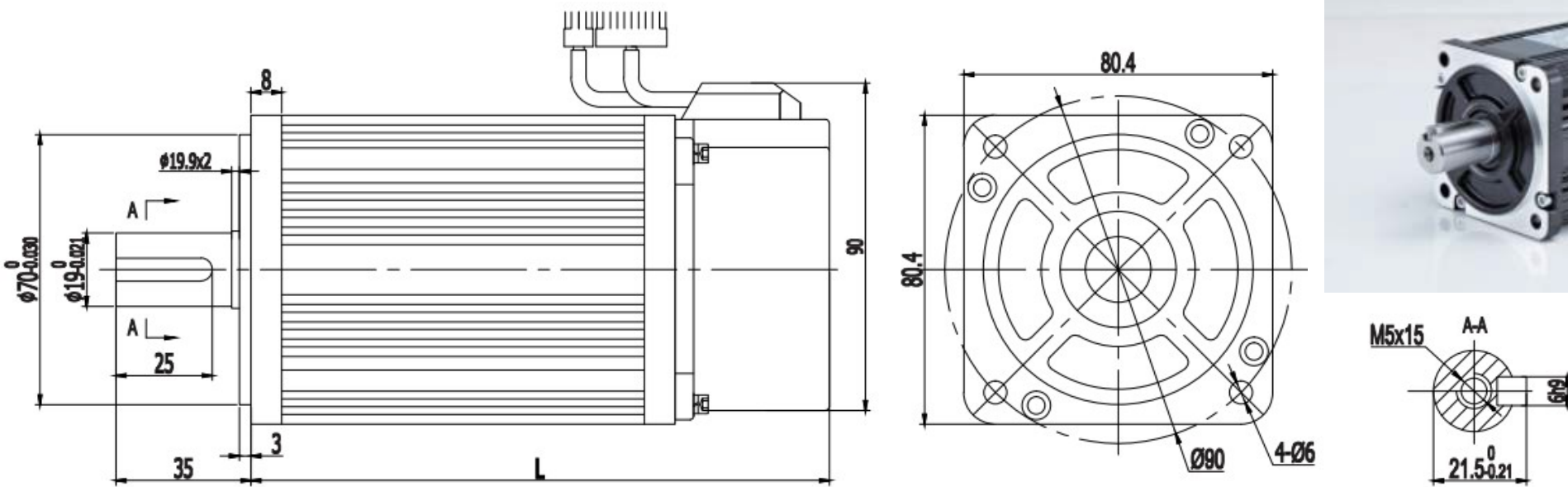


SPECIFICATIONS

Motor Model	ATO60CST-M00630	ATO60CST-M01330	ATO60CST-M01930
Rated Power (W)	200	400	600
Rated Voltage (V)	220	220	220
Rated Current (A)	1.2	2.8	3.5
Rated Speed (RPM)	3000	3000	3000
Rated Torque (N.m)	0.637	1.27	1.91
Peak Torque (N.m)	1.91	3.9	5.73
Voltage Constant (V/1000r/min)	30.9	29.6	34
Torque Coefficient (N.m/A)	0.53	0.45	0.55
Torque Inertia (Kg.M²)	0.175x10 ⁻⁴	0.29x10 ⁻⁴	0.39x10 ⁻⁴
Line-Line Resistance (Ω)	6.18	2.35	1.93
Line-Line Inductance (mH)	29.3	14.5	10.7
Electrical Time-Constant (ms)	4.74	6.17	5.5
Weight (Kg)	1.16	1.6	2.07
Encode Line Number (PPR)	2500		
Insulation Class	Class F		
Safety Class	IP65		
Temperature	-20℃ ~ +40℃		
Humidity	<90%RH, (no dewing)		
Motor Length Without Brake (L)	116	141	169
Motor Length With Permanent Magnet Brake (L)	164	189	217

80 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

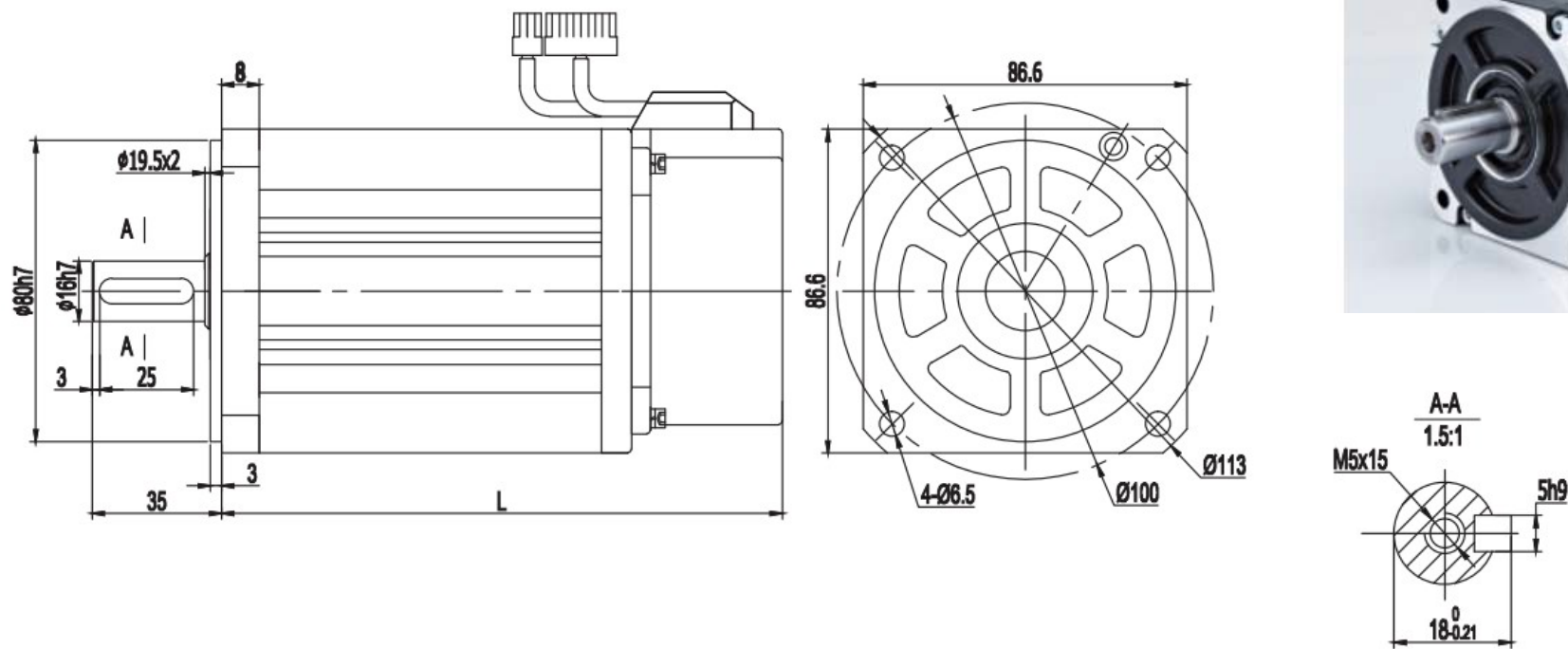


SPECIFICATIONS

Motor Model	ATO80ST-M01330	ATO80ST-M02430	ATO80ST-M00330	ATO80ST-M04025
Rated Power (kW)	0.4	0.75	0.73	1.0
Rated Voltage (V)	220	220	220	220
Rated Current (A)	2	3	3	4.4
Rated Speed (RPM)	3000	3000	2000	2500
Rated Torque (N.m)	1.27	2.39	3.5	4
Peak Torque (N.m)	3.8	7.1	10.5	12
Peak Current (A)	6	9	9	13.2
Voltage Constant (V/1000r/min)	40	48	71	56
Torque Coefficient (N.m/A)	0.64	0.8	1.17	0.9
Torque Inertia (Kg.M ²)	1.05x10 ⁻⁴	1.82x10 ⁻⁴	2.63x10 ⁻⁴	2.97x10 ⁻⁴
Line-Line Resistance (Ω)	4.44	2.88	3.65	1.83
Line-Line Inductance (mH)	7.93	6.4	8.8	4.72
Electrical Time-Constant (ms)	1.66	2.22	2.4	2.58
Weight (Kg)	1.78	2.9	3.9	4.1
Encode Line Number (PPR)	2500			
Insulation Class	Class F			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	124	151	179	191
Motor Length With Permanent Magnet Brake (L)	178	205	233	245

90 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

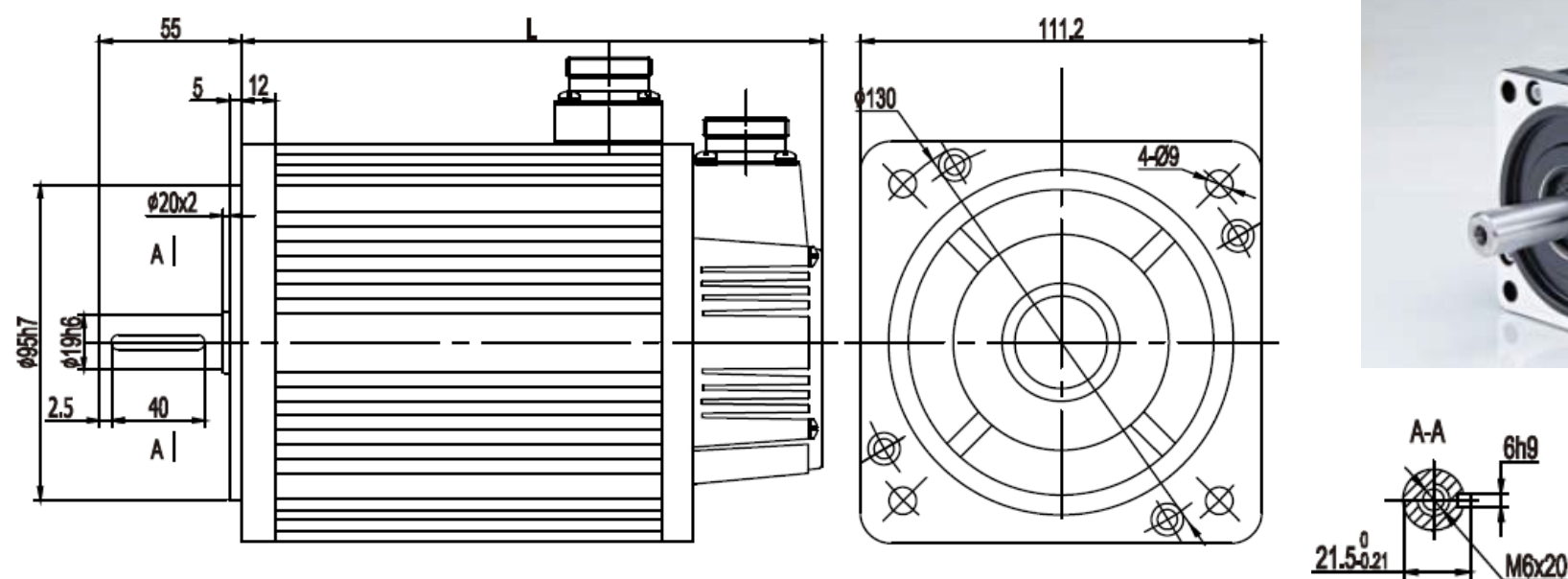


SPECIFICATIONS

Motor Model	ATO90ST-M02430	ATO90ST-M03520	ATO90ST-M04025
Rated Power (kW)	0.75	0.73	1.0
Rated Voltage (V)	220	220	220
Rated Current (A)	3	3	4
Rated Speed (RPM)	3000	2000	2500
Rated Torque (N.m)	2.4	3.5	4
Peak Torque (N.m)	7.1	10.5	12
Peak Current (A)	9	9	12
Voltage Constant (V/1000r/min)	51	67	60
Torque Coefficient (N.m/A)	0.8	1.2	1.0
Torque Inertia (Kg.M²)	2.45x10 ⁻⁴	3.4x10 ⁻⁴	3.7x10 ⁻⁴
Line-Line Resistance (Ω)	3.2	4.06	2.69
Line-Line Inductance (mH)	7.0	9.7	6.21
Electrical Time-Constant (ms)	2.2	2.39	2.3
Weight (Kg)	3.1	3.9	4.2
Encode Line Number (PPR)	2500		
Insulation Class	Class F		
Safety Class	IP65		
Temperature	-20℃ ~ +40℃		
Humidity	<90%RH, (no dewing)		
Motor Length Without Brake (L)	150	172	182
Motor Length With Permanent Magnet Brake (L)	207	229	239

110 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

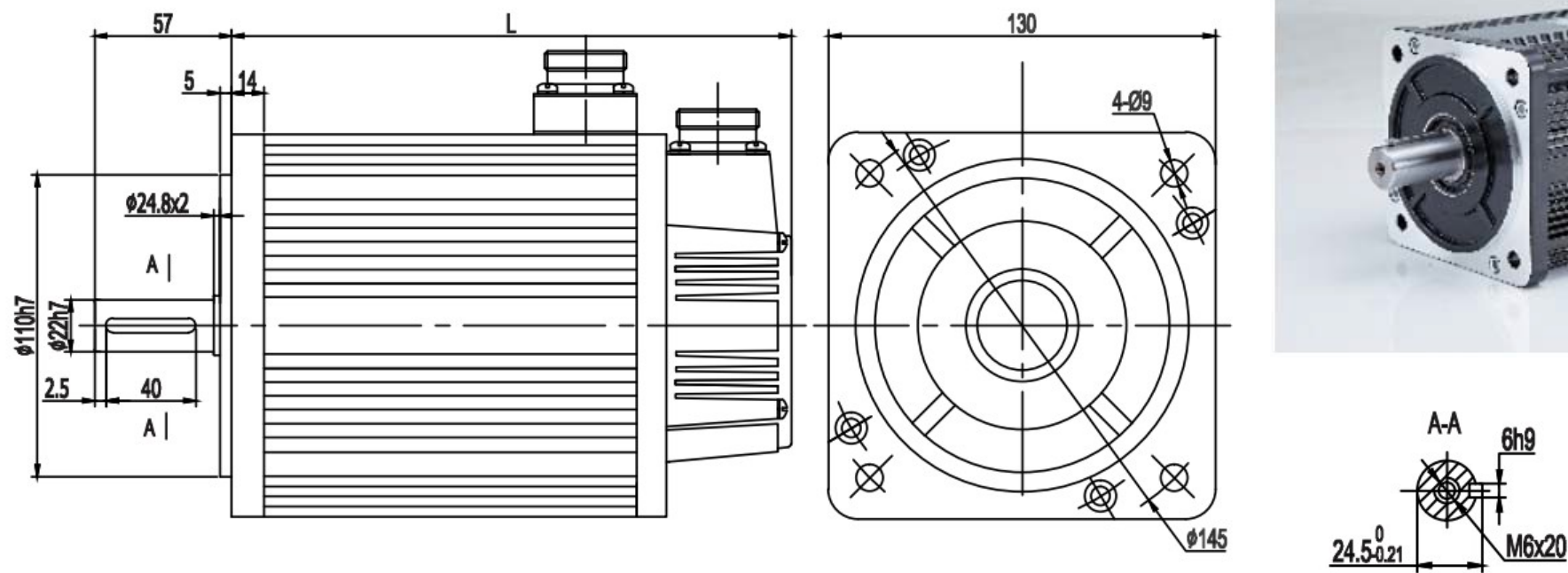


SPECIFICATIONS

Motor Model	ATO110ST-M04020	ATO110ST-M04030	ATO110ST-M05030	ATO110ST-M06030
Rated Power (kW)	0.8	1.2	1.5	1.8
Rated Voltage (V)	220	220	220	220
Rated Current (A)	3.5	5.0	6.0	6.0
Rated Speed (RPM)	2000	3000	3000	3000
Rated Torque (N.m)	4	4	5	6
Peak Torque (N.m)	12	12	15	18
Voltage Constant (V/1000r/min)	79	54	62	60
Torque Coefficient (N.m/A)	1.14	0.8	0.83	1.0
Torque Inertia (Kg.M ²)	0.54x10 ⁻³	0.54x10 ⁻³	0.63x10 ⁻³	0.76x10 ⁻³
Line-Line Resistance (Ω)	2.41	1.09	1.03	0.81
Line-Line Inductance (mH)	7.3	3.3	3.43	2.59
Electrical Time-Constant (ms)	3	3	3.33	3.2
Weight (Kg)	6	6	6.8	7.9
Encode Line Number (PPR)	2500			
Insulation Class	Class F			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	189	189	204	219
Motor Length With Permanent Magnet Brake (L)	245	245	260	275

130 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

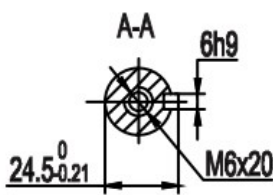
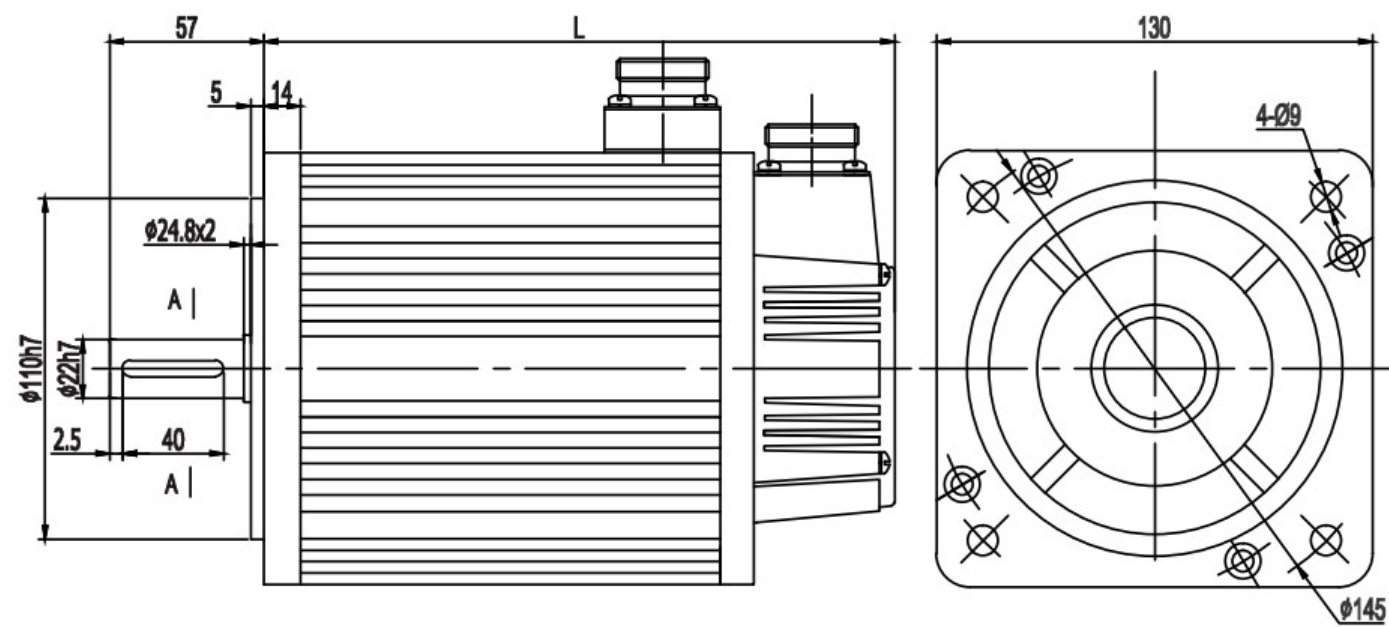


SPECIFICATIONS

Motor Model	ATO130ST-M04025	ATO130ST-M05025	ATO130ST-M06025	ATO130ST-M07725
Rated Power (kW)	1.0	1.3	1.5	2.0
Rated Voltage (V)	220	220	220	220
Rated Current (A)	4.0	5.0	6.0	7.5
Rated Speed (RPM)	2500	2500	2500	2500
Rated Torque (N.m)	4	5	6	7.7
Peak Torque (N.m)	12	15	18	22
Voltage Constant (V/1000r/min)	72	68	65	68
Torque Coefficient (N.m/A)	1.0	1.0	1.0	1.03
Torque Inertia (Kg.M ²)	0.85x10 ⁻³	1.06x10 ⁻³	1.26x10 ⁻³	1.53x10 ⁻³
Line-Line Resistance (Ω)	2.76	1.84	1.21	1.01
Line-Line Inductance (mH)	6.42	4.9	3.87	2.94
Electrical Time-Constant (ms)	2.32	2.66	3.26	2.91
Weight (Kg)	6.2	6.6	7.4	8.3
Encode Line Number (PPR)	2500			
Insulation Class	Class F			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	166	171	179	192
Motor Length With Permanent Magnet Brake (L)	236	241	249	262

130 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

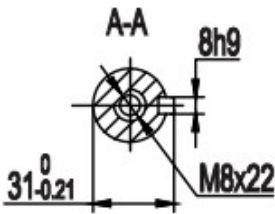
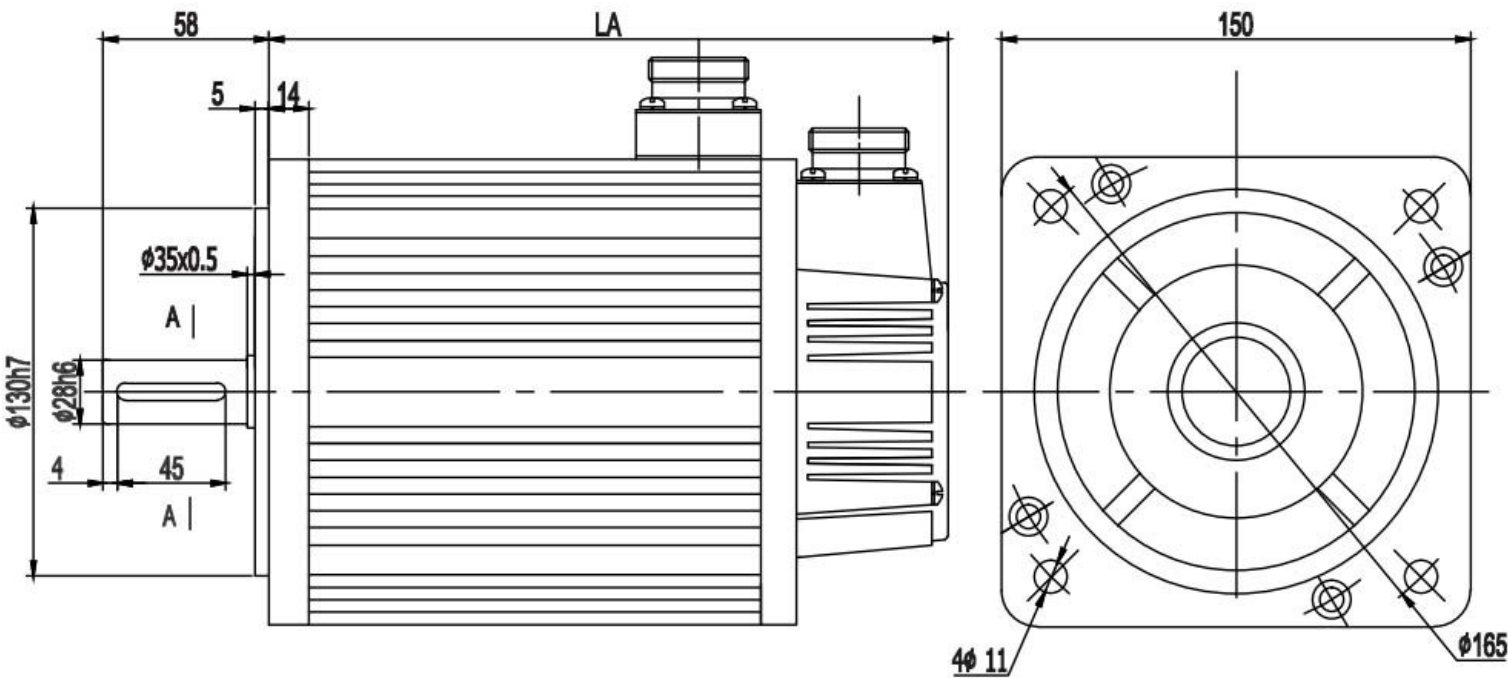


SPECIFICATIONS

Motor Model	ATO130ST-M10015	ATO130ST-M10025	ATO130ST-M15015	ATO130ST-M15025
Rated Power (kW)	1.5	2.6	2.3	3.8
Rated Voltage (V)	220	220	220	220
Rated Current (A)	6.0	10.0	9.5	13.5
Rated Speed (RPM)	1500	2500	1500	2500
Rated Torque (N.m)	10	10	15	15
Peak Torque (N.m)	25	25	30	30
Voltage Constant (V/1000r/min)	103	70	114	67
Torque Coefficient (N.m/A)	1.67	1.0	1.58	1.11
Torque Inertia (Kg.M ²)	1.94x10 ⁻³	1.94x10 ⁻³	2.77x10 ⁻³	2.77x10 ⁻³
Line-Line Resistance (Ω)	1.5	0.73	1.1	0.49
Line-Line Inductance (mH)	4.37	2.45	4.45	2.94
Electrical Time-Constant (ms)	2.91	3.36	4.05	3.43
Weight (Kg)	10.2	9.8	12.6	11.7
Encode Line Number (PPR)	2500			
Insulation Class	Class F			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	213	209	241	231
Motor Length With Permanent Magnet Brake (L)	283	279	311	301

150 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

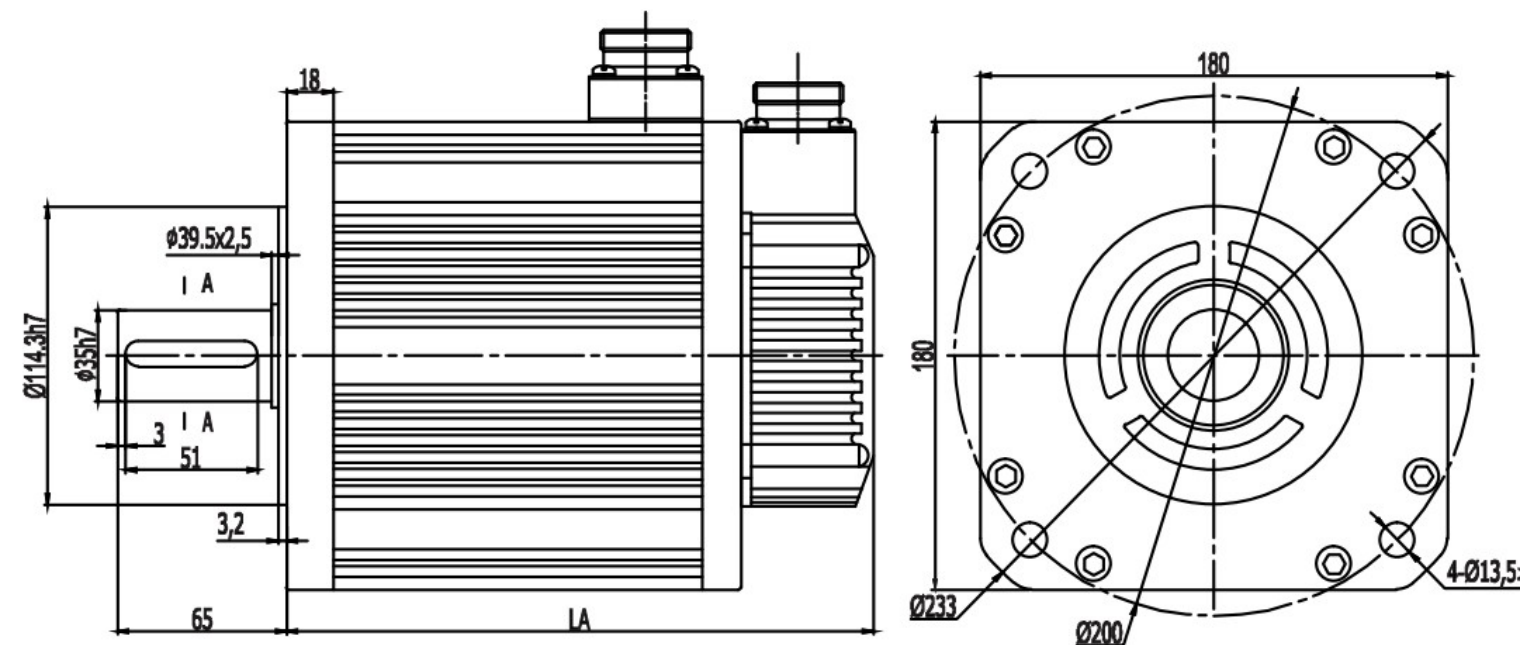


SPECIFICATIONS

Motor Model	ATO150ST-M15020	ATO150ST-M18020	ATO150ST-M23020	ATO150ST-M27020
Rated Power (kW)	3.0	3.6	4.7	5.5
Rated Voltage (V)	220	220	220	220
Rated Current (A)	14	17	21	27
Rated Speed (RPM)	2000	2000	2000	2000
Rated Torque (N.m)	15	18	23	27
Peak Torque (N.m)	30	36	46	54
Voltage Constant (V/1000r/min)	70	71	72	64
Torque Coefficient (N.m/A)	1.07	1.05	1.09	1.0
Torque Inertia (Kg.M ²)	3.88x10 ⁻³	4.6x10 ⁻³	5.8x10 ⁻³	6.8x10 ⁻³
Line-Line Resistance (Ω)	0.34	0.255	0.2	0.125
Line-Line Inductance (mH)	1.55	1.3	1.06	0.7
Electrical Time-Constant (ms)	4.56	5.1	5.3	5.6
Weight (Kg)	15	17	20.4	22.7
Encode Line Number (PPR)	2500			
Insulation Class	Class F			
Safety Class	IP65			
Temperature	-20℃ ~ +40℃			
Humidity	<90%RH, (no dewing)			
Motor Length Without Brake (L)	230	248	278	302
Motor Length With Permanent Magnet Brake (L)	303	321	351	375

180 SERIES SERVO MOTORS

DIMENSION: UNIT=mm

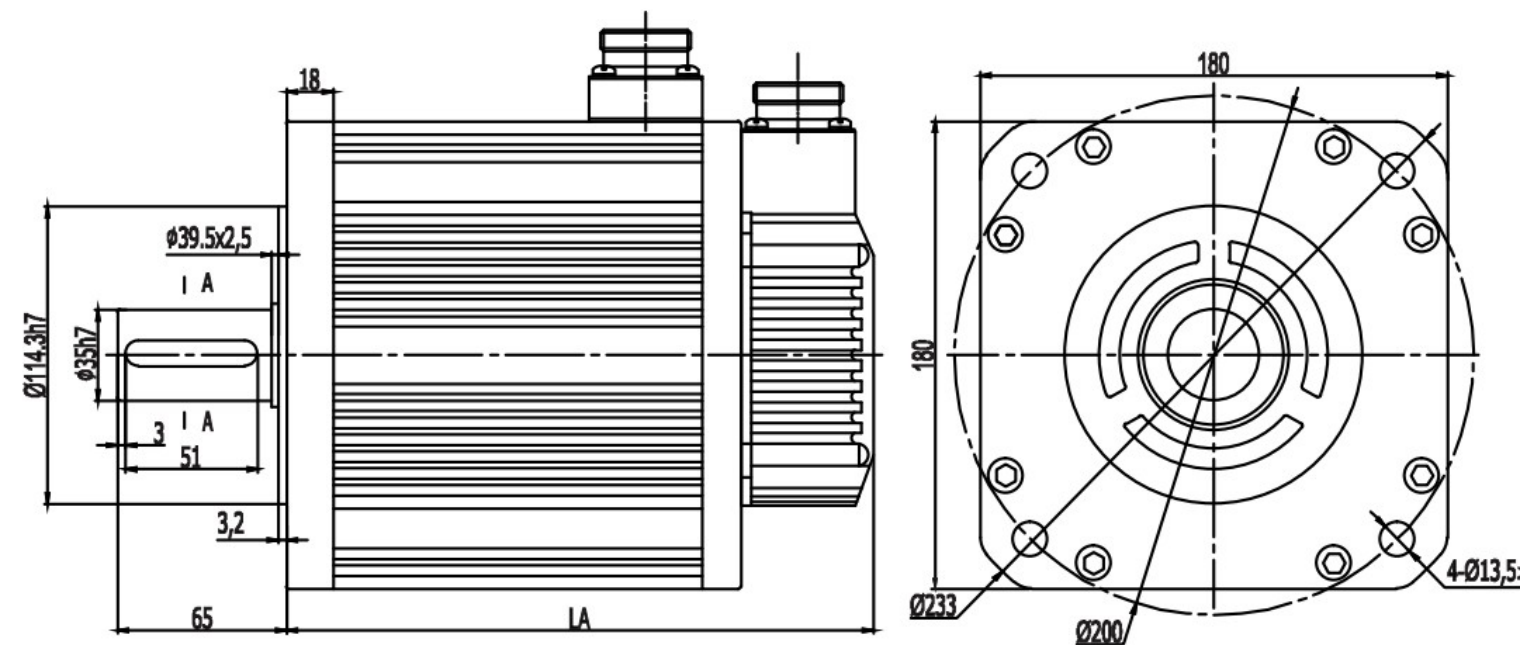


SPECIFICATIONS

Motor Model	ATO180ST-M17215		ATO180ST-M19015		ATO180ST-M21520		ATO180ST-M27010	
Rated Power (kW)	2.7		3.0		4.5		2.9	
Rated Voltage (V)	220	380	220	380	220	380	220	380
Rated Current (A)	10.5	6.5	12	7.5	16	9.5	12	7.5
Rated Speed (RPM)	1500		1500		2000		1000	
Rated Torque (N.m)	17.2		19		21.5		27	
Peak Torque (N.m)	43		47		53		67	
Voltage Constant (V/1000r/min)	112	167	97	170	84	140	138	224
Torque Coefficient (N.m/A)	1.64	2.65	1.58	2.5	1.34	2.26	2.25	3.6
Torque Inertia (Kg.M²)	6.5x10 ⁻³		7.0x10 ⁻³		7.96x10 ⁻³		9.64x10 ⁻³	
Line-Line Resistance (Ω)	0.7	1.47	0.4	1.23	0.24	0.71	0.48	1.37
Line-Line Inductance (mH)	3.5	7.8	2.42	1.3	1.45	4	3.26	8.6
Electrical Time-Constant (ms)	5	5.3	6	5.93	6	5.6	6.79	6.27
Weight (Kg)	19.5		20.5		22.2		25.5	
Encode Line Number (PPR)	2500							
Insulation Class	Class F							
Safety Class	IP65							
Temperature	-20℃ ~ +40℃							
Humidity	<90%RH, (no dewing)							
Motor Length Without Brake (L)	226		232		243		262	
Motor Length With Permanent Magnet Brake (L)	308		314		325		344	

180 SERIES SERVO MOTORS

DIMENSION: UNIT=mm



SPECIFICATIONS

Motor Model	ATO180ST-M27015		ATO180ST-M35010		ATO180ST-M35015		ATO180ST-M48015	
Rated Power (kW)	4.3		3.7		5.5		7.5	
Rated Voltage (V)	220	380	220	380	220	380	220	380
Rated Current (A)	16	10	16	10	24	12	30	20
Rated Speed (RPM)	1500		1000		1500		1500	
Rated Torque (N.m)	27		35		35		48	
Peak Torque (N.m)	67		70		70		96	
Voltage Constant (V/1000r/min)	103	172	134	223	90	181	94	156
Torque Coefficient (N.m/A)	1.69	2.7	2.2	3.5	1.45	2.9	1.5	2.4
Torque Inertia (Kg.M²)	9.64x10 ⁻³		12.25x10 ⁻³		12.25x10 ⁻³		16.72x10 ⁻³	
Line-Line Resistance (Ω)	0.28	0.796	0.31	0.93	0.14	0.62	0.104	0.273
Line-Line Inductance (mH)	1.74	4.83	3.28	9.1	1.0	4	0.77	2.14
Electrical Time-Constant (ms)	6.2	6	10.58	9.78	7.14	6.45	7.4	7.8
Weight (Kg)	25.5		30.5		30.5		40	
Encode Line Number (PPR)	2500							
Insulation Class	Class F							
Safety Class	IP65							
Temperature	-20℃ ~ +40℃							
Humidity	<90%RH, (no dewing)							
Motor Length Without Brake (L)	262		292		292		346	
Motor Length With Permanent Magnet Brake (L)	344		382		382		436	