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BEST CNC TECHNOLOGY IN  
**AC SERVO MOTORS**  
MILLING-TURNING-SERVO-REDUCER

**TOMATECH**  
**PERFECT**  
CNC INDUSTRIAL EQUIPMENTS

THE MOST COMPLETE INDUSTRIAL CNC EQUIPMENTS ON THE MARKET

## Servo Motor naming:

60      --MST --      013      30      T

Flange:

Torque:

Speed:

T: brake

Unit mm

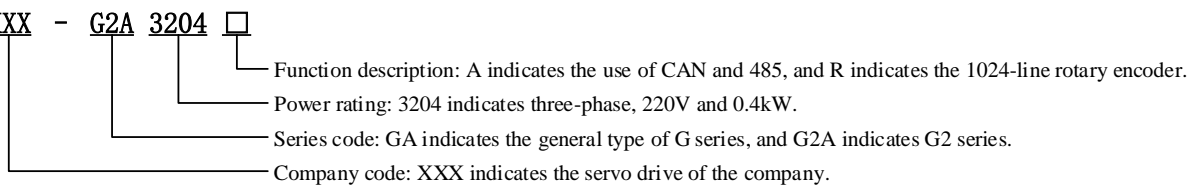
unit 0.1nm

unit 100rpm

## Servo driver naming:

Naming of G2 series servo drives:

XXX - G2A 3204 □



Model	Description
TMK-GA3207B	For 400W~750W Motor
TMK-GA3210B	For 1KW~1.5KW Motor
TMK-GA3215B	For 1.5KW,Current 7A
TMK-GA3215BF	For 1KW~1.5KW
TMK-GA3220B	For 2.3KW~3KW
TMK-GA3230B	For 3KW~3.8KW

## 40 Series Motors



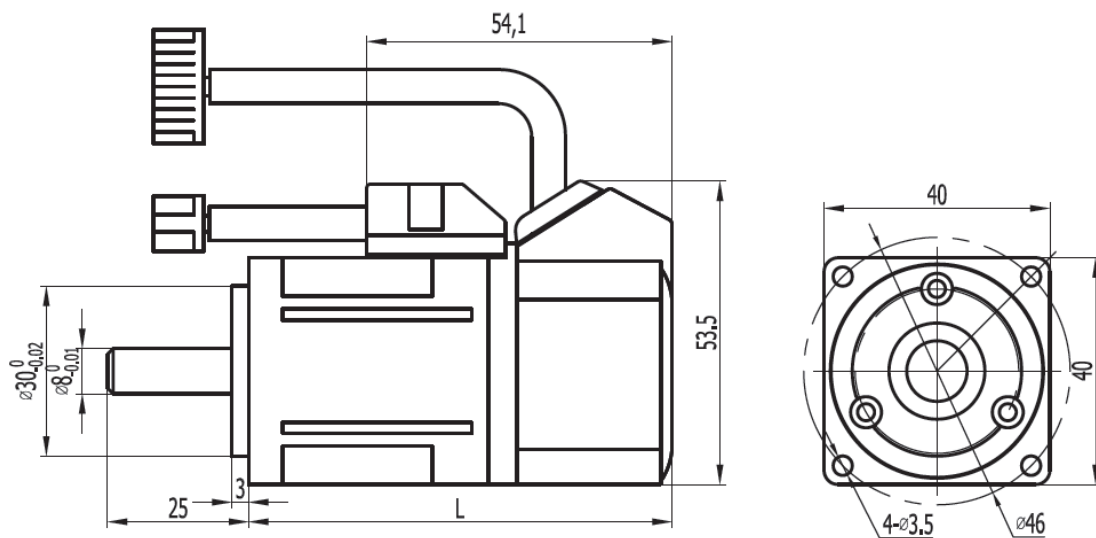
### Specifications:

Model	40ST-M00130				40ST-M00330											
Matched driver	TMK-GA3207B															
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												
Holding torque(nm)	0.16	0.16	0.32	0.32												
Peak torque(nm)	0.48	0.32	0.95	0.64												
Voltage constant(v/1000*rpm)	9.2	36.8	8.2	32.8												
Torque coefficient(N.m/A)	0.145	0.4	0.128	0.53												
Rotor inertia(Kg.m <sup>2</sup> )	0.025x10 <sup>-4</sup>	0.025x10 <sup>-4</sup>	0.051x10 <sup>-4</sup>	0.051x10 <sup>-4</sup>												
Line-Line Resistance(Q)	6.75	108	2.2	34												
Line-Line Inductance(mH)	7.5	108	3	40												
Electric time-constant (Ms)	1.11	1.0	1.36	1.18												
Weight(Kg)	0.32	0.32	0.47	0.47												
Encoder line number(PPR)	2500															
Isolation class	Class B															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)			V (Yellow)			W (Blue)			PE (Yellow/Green)					
	Plug No.	1			2			3			4					
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1

## Installation :

1. Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
2. Striving to make the best of its shaft to prevent vibration and bearing damage.

Model	40ST-M00130	40ST-M00330
L (without brake)	75	90
L (with brake)	109	124
Matched Driver	TMK-GA3207B	TMK-GA3207B
Cable for option	(Pulse cable)Controller to driver	3-10M for option
	(Encoder cable)Encoder to driver	3-10M for option
	(Power cable)Motor to driver	



**60B Series**



**Specifications:**

Model	60BST-M00630		60BST-M01330													
Matched driver	TMK-GA3207B		TMK-GA3207B													
Rated power(W)	200		400													
Rated voltage(V)	220		220													
Rated current(A)	1.55		2.6													
Rated speed(rpm)	3000		3000													
Holding torque(nm)	0.637		1.27													
Peak torque(nm)	1.91		3.9													
Voltage constant(v/1000*rpm)	28		30													
Torque coefficient(N.m/A)	0.41		0.49													
Rotor inertia(Kg.m <sup>2</sup> )	0.169x10 <sup>-4</sup>		0.277x10 <sup>-4</sup>													
Line-Line Resistance(Q)	5.51		3.06													
Line-Line Inductance(mH)	22.48		13.2													
Electric time-constant (Ms)	4.08		4.31													
Weight(Kg)	1.12		1.5													
Encoder line number(PPR)	2500															
Isolation class	Class B															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)	V (Yellow)	W (Blue)	PE (Yellow/Green)											
	Plug No.	1	2	3	4											
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE

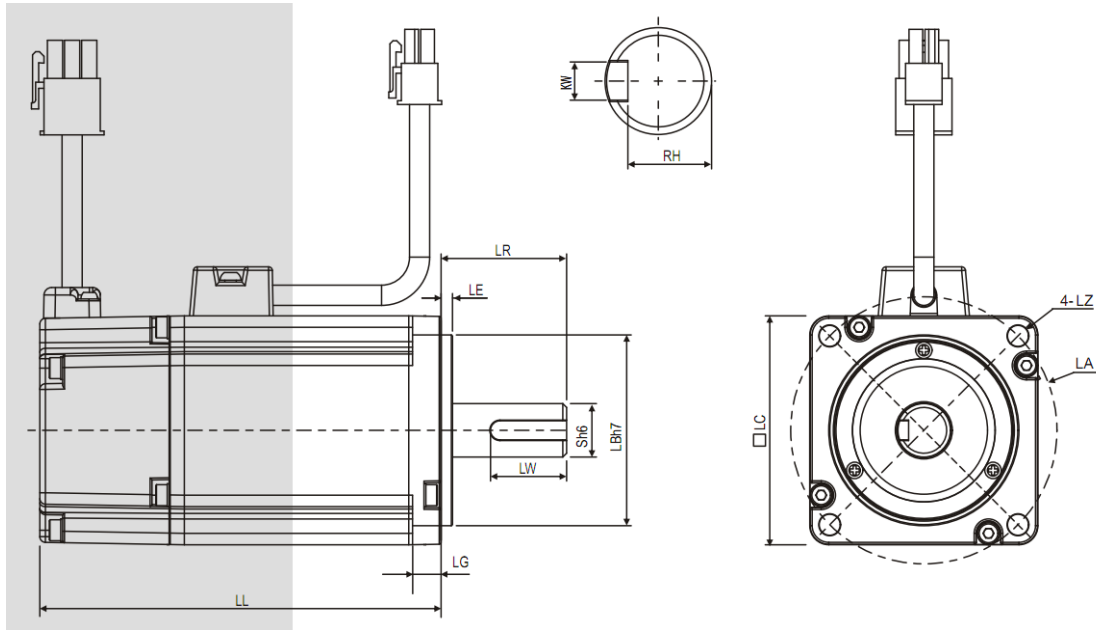
	Pin No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Plug(7pin)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		

### Installation :

- 1.Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
- 2.Striving to make the best of its shaft to prevent vibration and bearing damage.

### Installation dimension:

Specification	60BST-M00630	60BST-M01330
LA	Φ70	Φ70
LB	Φ50	Φ50
LC	60.2	60.2
LE	3	3
LG	8.5	8.5
LR	30	30
LL	107	132.3
LW	20	20
LZ	Φ5.5	Φ5.5
KW	5	5
RH	11	11
S	Φ14	Φ14
Cable for option	(Pulse cable)Controller to driver	3-10M for option
	(Encoder cable)Encoder to driver	3-10M for option
	(Power cable)Motor to driver	



**60 C series**



Model	60CST-M00630	60CST-M01330	60CST-M01930
Matched driver	TMK-GA3207B	TMK-GA3207B	TMK-GA3210B
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
Holding torque(nm)	0.637	1.27	1.91
Peak torque(nm)	1.91	3.9	5.73
Voltage constant(v/1000*rpm)	30.9	29.6	34
Torque coefficient(N.m/A)	0.53	0.45	0.55
Rotor inertia(Kg.m <sup>2</sup> )	0.175x10 <sup>-4</sup>	0.29x10 <sup>-4</sup>	0.39x10 <sup>-4</sup>
Line-Line Resistance(Q)	6.18	2.35	1.93
Line-Line	29.3	14.5	10.7

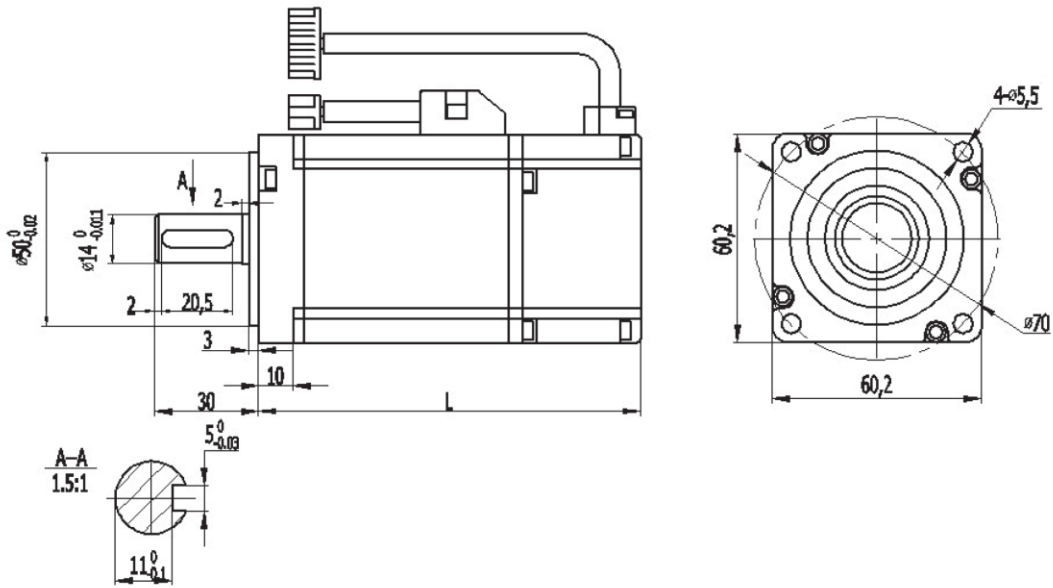
Inductance(mH)																
Electric time-constant (Ms)	4.74		6.17		5.5											
Weight(Kg)	1.16		1.6		2.07											
Encoder line number(PPR)	2500															
Isolation class	Class B															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)		V (Yellow)		W (Blue)	PE (Yellow/Green)									
	Plug No.	1		2		3	4									
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Plug(7pin)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		

## Installation :

- 1.Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
3. Striving to make the best of its shaft to prevent vibration and bearing damage.

Model	60CST-M00630	60CST-M01330	60CST-M01930
L (without brake)	116	141	169
L (with brake)	164	189	217
Matched Driver	TMK-GA3207B	TMK-GA3207B	TMK-GA3207B
Cable for option	(Pulse cable)Controller to driver		3-10M for option
	(Encoder cable)Encoder to driver		3-10M for option
	(Power cable)Motor to driver		





### 80 Series



### Specification:

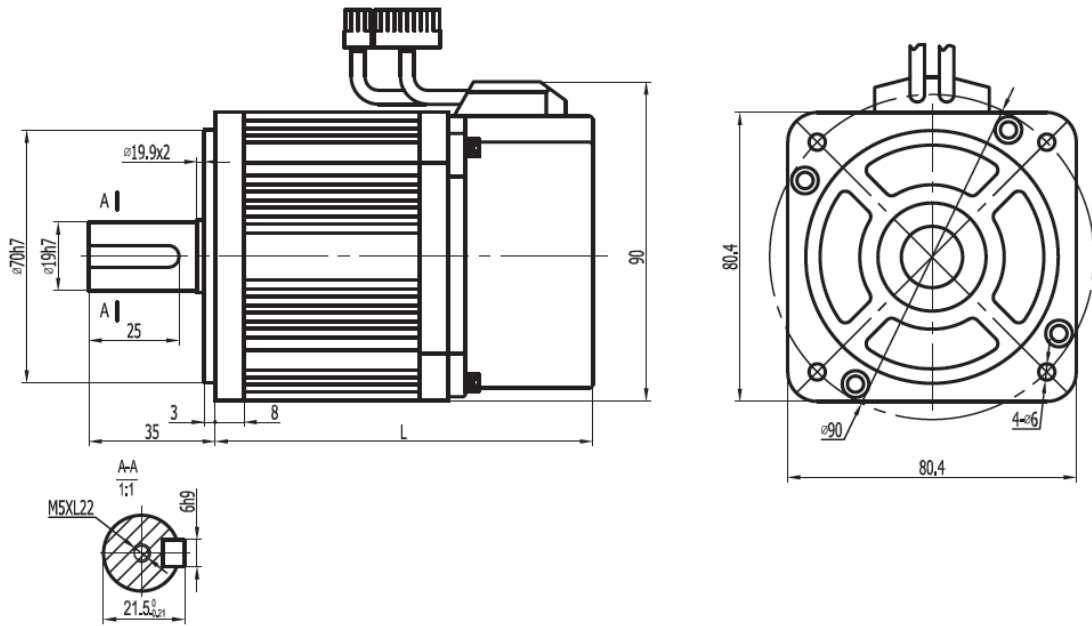
Model	80ST-M01330	80ST-M02430	80ST-M03520	80ST-M04025
Matched driver	TMK-GA3207B	TMK-GA3210B	TMK-GA3210B	TMK-GA3210B
Rated power(W)	0.4	0.75	0.73	1.0
Rated voltage(V)	220	220	220	220
Rated current(A)	2	3	3	4.4
Rated speed(rpm)	3000	3000	2000	2500
Holding torque(nm)	1.27	2.39	3.5	4
Peak torque(nm)	3.8	7.1	10.5	12
Voltage constant(v/1000*rpm)	6	9	9	13.2
Torque	40	48	71	56

coefficient(N.m/A)																		
Rotor inertia(Kg.m <sup>2</sup> )		0.64				0.8				1.17				0.9				
Line-Line Resistance(Q)		1.05x10 <sup>-4</sup>				1.82x10 <sup>-4</sup>				2.63x10 <sup>-4</sup>				2.97x10 <sup>-4</sup>				
Line-Line Inductance(mH)		4.44				2.88				3.65				1.83				
Electric time-constant (Ms)		7.93				6.4				8.8				4.72				
Weight(Kg)		1.66				2.22				2.4				2.58				
Encoder line number(PPR)		2500																
Isolation class		Class B																
Safety class		IP65																
Using environment		Temperature: -20 <sup>0</sup> ~+40 °C Humidity Below 90%RH No dewing																
Motor power plug	Lead wire	U (Red)				V (Yellow)				W (Blue)				PE (Yellow/Green)				
	Plug No.	1				2				3				4				
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE		
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1		
Absolute encoder Plug(7pin)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE				
	Pin No.	2		3		4		5		6		7		1				

## Installation :

- 1.Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
4. Striving to make the best of its shaft to prevent vibration and bearing damage.

Model	L Without Brake	L With permanent brake	L With electromagnetic brake
80ST-M01330	124	178	164
80ST-M02430	151	205	191
80ST-M03520	179	233	219
80ST-M04025	191	245	231
Cable for option	(Pulse cable)Controller to driver		3-10M for option
	(Encoder cable)Encoder to driver		3-10M for option
	(Power cable)Motor to driver		



**90 Series**



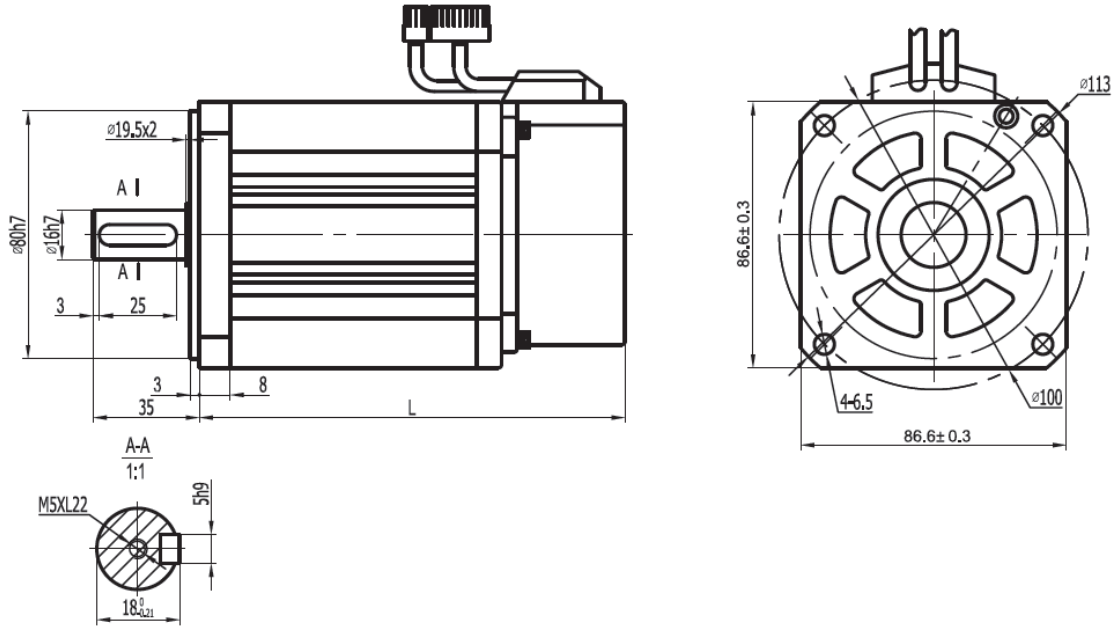
Model	90ST-M02430	90ST-M03520	90ST-M04025
Matched driver	TMK-GA3210B	TMK-GA3210B	TMK-GA3210B
Rated power(KW)	0.75	0.73	1
Rated voltage(V)	220	220	220
Rated current(A)	3	3	4
Rated speed(rpm)	3000	2000	2500
Holding torque(nm)	2.4	3.5	4
Peak torque(nm)	7.1	10.4	12
Voltage constant(v/1000*rpm)	51	67	60
Torque coefficient(N.m/A)	0.8	1.2	1
Rotor inertia(Kg.m <sup>2</sup> )	2.45x10-4	3.4x10-4	3.7x10-4

Line-Line Resistance(Q)	3.2		4.06		2.69											
Line-Line Inductance(mH)	7		9.7		6.21											
Electric time-constant (Ms)	2.2		2.39		2.3											
Weight(Kg)	3.1		3.9		4.2											
Encoder line number(PPR)	2500															
Isolation class	Class B															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)		V (Yellow)		W (Blue)	PE (Yellow/Green)									
	Plug No.	1		2		3	4									
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Plug(7pin)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		

### Installation :

1. Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
2. Striving to make the best of its shaft to prevent vibration and bearing damage.

Model	L Without Brake	L With permanent brake	L With electromagnetic brake
90ST-M02430	150	207	198
90ST-M03520	172	229	220
90ST-M04025	182	239	230
Cable for option	(Pulse cable)Controller to driver		3-10M for option
	(Encoder cable)Encoder to driver		3-10M for option
	(Power cable)Motor to driver		



**100 Series**



Model	100ST-M03230	100ST-M06430
Matched driver	TMK-GA3210B	TMK-GA3220B
Rated power(KW)	1.0	2.0
Rated voltage(V)	220	220
Rated current(A)	5	9.9
Rated speed(rpm)	3000	3000
Holding torque(nm)	3.2	6.4
Peak torque(nm)	9.6	19.2
Voltage	39.5	39.0

constant(v/1000*rpm)																
Torque coefficient(N.m/A)	0.64		0.65													
Rotor inertia(Kg.m <sup>2</sup> )	2.458x10-4		4.422x10-4													
Line-Line Resistance(Q)	0.98		0.41													
Line-Line Inductance(mH)	8.91		3.92													
Electric time-constant (Ms)	9.09		9.56													
Weight(Kg)	4.04		7.12													
Encoder line number(PPR)	2500															
Isolation class	Class B															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)		V (Yellow)	W (Blue)	PE (Yellow/Green)										
	Plug No.	2		3	4	1										
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Plug(7pin)	Signal wires	E-		E+	SD-		0V	SD+		+5V		PE				
	Pin No.	2		3	4		5	6		7		1				

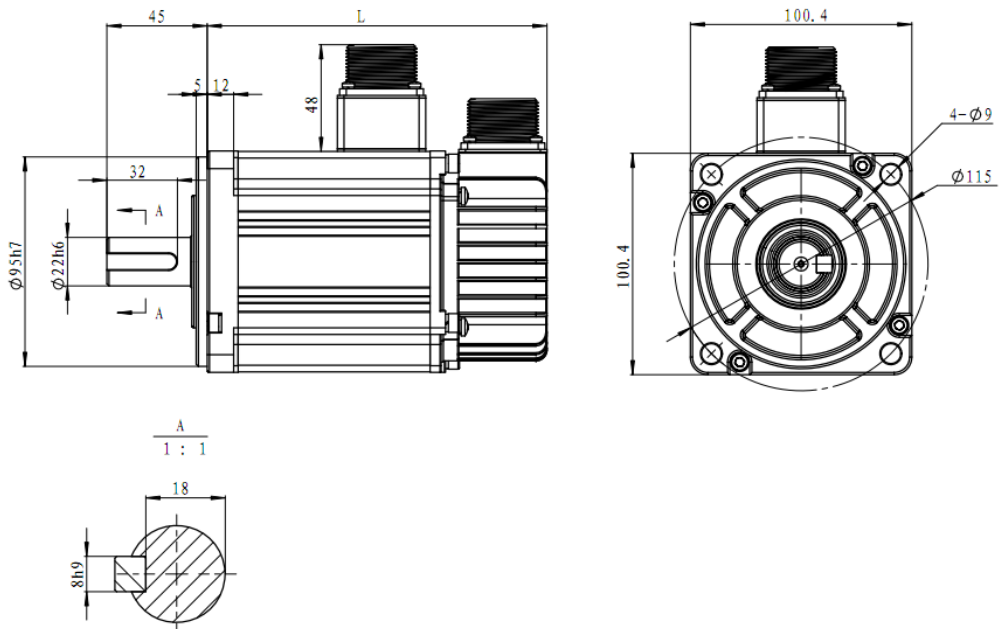
### Installation :

1. Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
2. Striving to make the best of its shaft to prevent vibration and bearing damage.

Model	100ST-M03230	100ST-M06430
L (without brake)	153	198
L (with brake)	194	239
Matched Driver	TMK-GA3210B	TMK-GA3210B
Cable for option	(Pulse cable)Controller to driver	3-10M for option
	(Encoder cable)Encoder to driver	3-10M for option

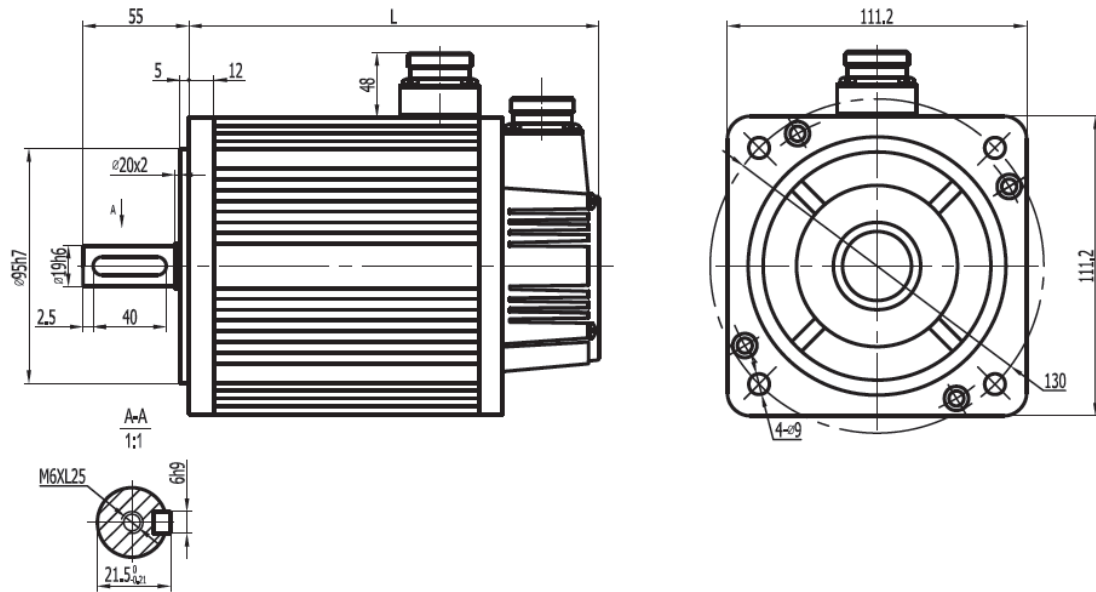
Model	110ST-M02030	110ST-M04020	110ST-M04030	110ST-M0503	110ST-M06020	110ST-M06030
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(Power cable)Motor to driver



Matched driver	TMK-GA3207	TMK-GA3210	TMK-GA3210	TMK-GA3210	TMK-GA3210B	TMK-GA3220B										
Rated power(KW)	0.6	0.8	1.2	1.5	1.2	1.8										
Rated voltage(V)	220	220	220	220	220	220										
Rated current(A)	2.5	3.5	5.0	6.0	4.5	6.0										
Rated speed(rpm)	3000	2000	3000	3000	2000	3000										
Holding	2	4	4	5	6	6										
Peak torque(nm)	6	12	12	15	12	18										
Voltage	56	79	54	62	83	60										
Torque	0.8	1.14	0.8	0.83	1.3	1.0										
Rotor	$0.31 \times 10^{-3}$	$0.54 \times 10^{-3}$	$0.54 \times 10^{-3}$	$0.63 \times 10^{-3}$	$0.76 \times 10^{-3}$	$0.76 \times 10^{-3}$										
Line-Line	3.6	2.41	1.09	1.03	1.46	0.81										
Line-Line	8.32	7.3	3.3	3.43	4.7	2.59										
Electric	2.3	3	3	3.33	3.2	3.2										
Weight(Kg)	4.5	6	6	6.8	7.9	7.9										
Encoder line	2500															
Isolation class	Class F															
Safety class	IP65															
Using environment	Temperature: $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$ Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U			V			w			PE					
	Plug No.	2			3			4			1					
Encoder socket(15pins)	Lead wire	5v	0v	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Pin No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Socket(7pins)	Signal	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		





### Installation :

- 1 Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
- 2 Striving to make the best of its shaft to prevent vibration and bearing damage.

	110 Series			
Rated torque(Nm)	2	4	5	6
L Without brake	159	189	204	219
L With permanent magnet brake	215	245	260	275
L With electromagnet brake	233	263	278	293
Cable for option	(Pulse cable)Controller to driver		3-10M for option	
	(Encoder cable)Encoder to driver		3-10M for option	
	(Power cable)Motor to driver			

### 130 Series



Store No: 142417

Model	130ST-M04025	130ST-M05025	130ST-M06025	130ST-M07725	130ST-M10010
Matched driver	TMK-GA3210B	TMK-GA3210B	TMK-GA3210B	TMK-GA3220B	TMK-GA3210B
Rated power(KW)	1.0	1.3	1.5	2.0	1.0
Rated voltage(V)	220	220	220	220	220
Rated current(A)	4.0	5.0	6.0	7.5	4.5
Rated speed(rpm)	2500	2500	2500	2500	1000
Holding torque(nm)	4.0	5.0	6.0	7.7	10
Peak torque(nm)	12	15	18	22	20
Voltage constant(v/1000*rpm)	72	68	65	68	140
Torque coefficient(N.m/A)	1	1	1	1.03	2.2
Rotor inertia(Kg.m <sup>2</sup> )	0.85X10 <sup>-3</sup>	1.06x10 <sup>-3</sup>	1.26x10 <sup>-3</sup>	1.53x10 <sup>-3</sup>	1.94X10 <sup>-3</sup>
Line-Line Resistance(Q)	2.76	1.84	1.21	1.01	2.7
Line-Line Inductance(mH)	6.42	4.9	3.87	2.94	8.8
Electric time-constant (Ms)	2.32	2.66	3.26	3.80	3.26
Weight(Kg)	6.2	6.6	7.4	8.3	10.2
Model	130ST-M10015	130ST-M10025	130ST-M15015	130ST-M15025	
Matched driver	TMK-GA3220B	TMK-GA3220B	TMK-GA3220B	TMK-GA3230B	
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	
Holding torque(nm)	10	10	15	15	
Peak torque(nm)	25	25	30	30	
Voltage constant(v/1000*rpm)	103	70	114	67	
Torque	1.67	1.0	1.58	1.11	
Rotor inertia(Kg.m <sup>3</sup> )	1.94X10 <sup>-3</sup>	1.94X10 <sup>-3</sup>	2.77X10 <sup>-3</sup>	2.77X10 <sup>-3</sup>	
Line-Line Resistance(Q)	1.5	0.73	1.1	0.49	
Line-Line Inductance(mH)	4.37	2.45	4.45	1.68	
Electric time-constant (Ms)	2.91	3.36	4.05	3.43	
Weight(Kg)	10.2	9.8	12.6	11.7	
Encoder line(CPR)	2500				
Isolation class	Class F				
Safety class	IP65				

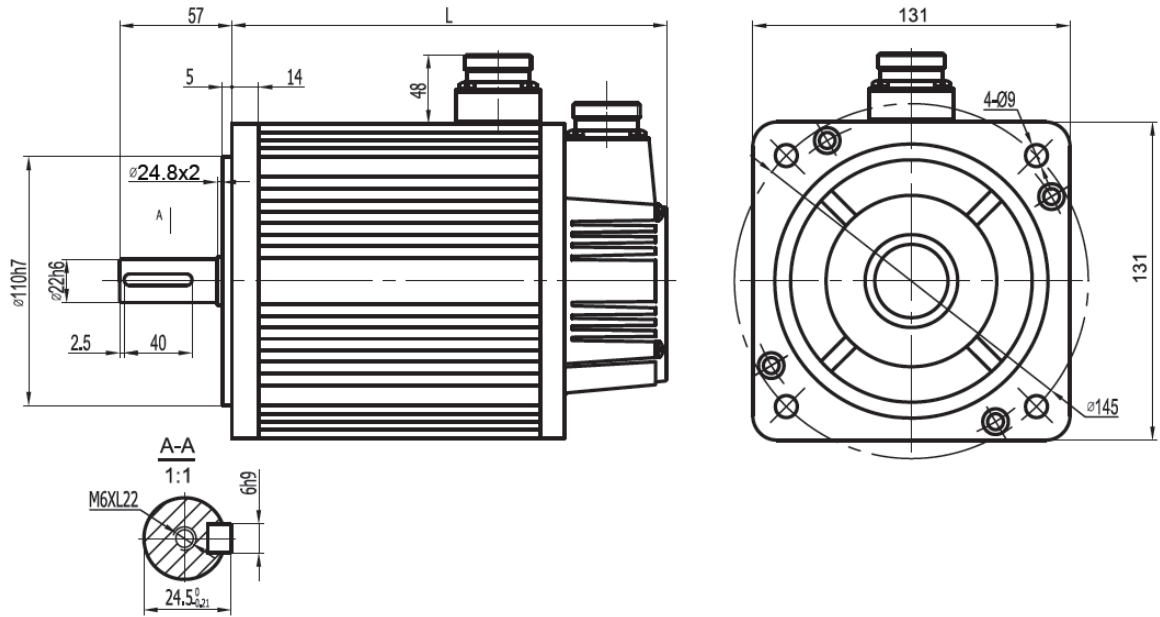
Using environment	Temperature: -20 <sup>0</sup> ~+40 °C Humidity Below 90%RH No dewing																
Motor power plug	Lead wire	U				V				w				PE			
	Plug No.	2				3				4				1			
Encoder socket(15pins)	Lead wire	5v	0v	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE	
	Pin No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	
Absolute encoder Socket(7pins)	Signal	E-		E+		SD-		0V		SD+		+5V		PE			
	Pin No.	2		3		4		5		6		7		1			

### Installation :

- 1 Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
- 2 Striving to make the best of its shaft to prevent vibration and bearing damage.

130 Series										
Rated torque(N*M)	4	5	6	7.7	10			15		
					1000rpm 1500rpm	2500rpm	2500	1500	2500	
L Without brake	166	171	179	192	213			209	166	231
L With permanent magnet brake	236	241	249	262	283			279	236	301
L With electromagnet brake	223	228	236	249	294			290	223	312
Cable for option					(Pulse cable)Controller to driver			3-10M for option		
					(Encoder cable)Encoder to driver			3-10M for option		
					(Power cable)Motor to driver					

### Dimension:





Store No: 142417

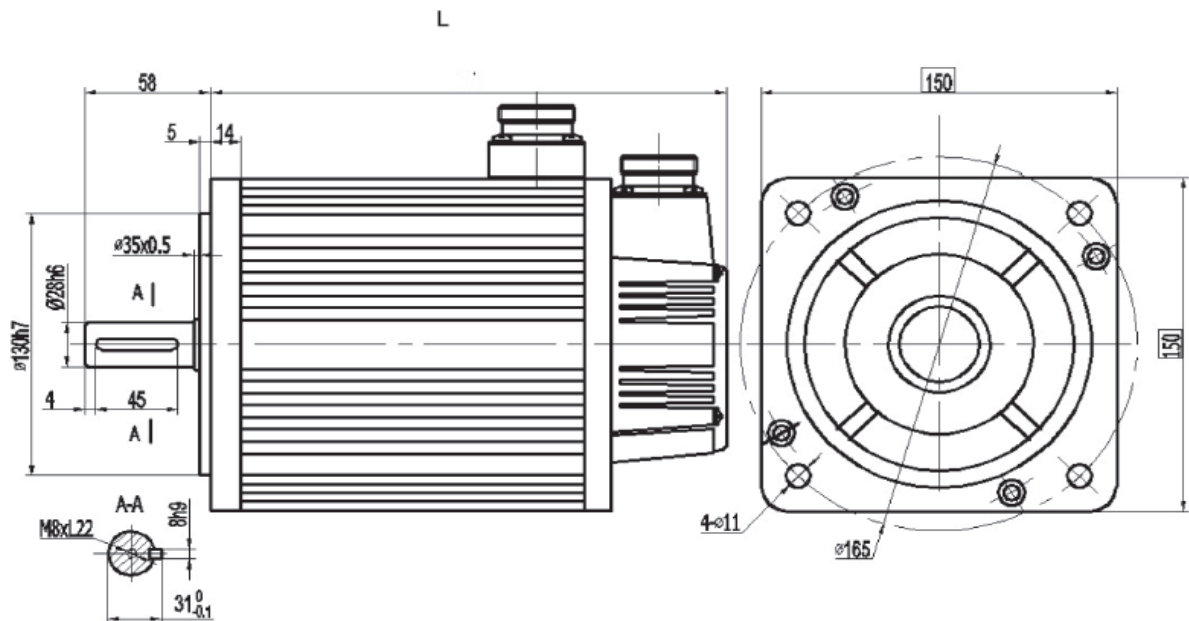
Model	150ST-M15025	150ST-M15020	150ST-M18020	150ST-M23020	150ST-M27020											
Matched driver	TMK-GA3230B	TMK-GA3230B	TMK-GA3230B	TMK-GA3250B	TMK-GA3250B											
Rated power(KW)	3.8	3.0	3.6	4.7	5.5											
Rated voltage(V)	220	220	220	220	220											
Rated current(A)	17	14	17	21	24											
Rated speed(rpm)	2500	2000	2000	2000	2000											
Holding torque(nm)	15	15	18	23	27											
Peak torque(nm)	30	30	36	46	54											
Voltage constant(v/1000*rpm)	59	70	71	72	64											
Torque coefficient(N.m/A)	0.88	1.07	1.05	1.09	1.1											
Rotor inertia(Kg.m <sup>2</sup> )	3.88x10 <sup>-3</sup>	3.88x10 <sup>-3</sup>	4.6X10 <sup>-3</sup>	5.8x10 <sup>-3</sup>	6.8x10 <sup>-3</sup>											
Line-Line Resistance(Q)	0.23	0.34	0.255	0.2	0.125											
Line-Line Inductance(mH)	1.08	1.55	1.3	1.06	0.7											
Electric time-constant (Ms)	4.7	4.56	5.1	5.3	5.6											
Weight(Kg)	15	15	17	20.4	22.7											
Encoder line number(PPR)	2500															
Isolation class	Class F															
Safety class	IP65															
Using environment	Temperature: -20 <sup>o</sup> ~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U			V			w			PE					
	Plug No.	2			3			4			1					
Encoder socket(15pins)	Lead wire	5v	0v	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Pin No.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Socket(7pins)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		

## Installation :

- 1 Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
- 2 Striving to make the best of its shaft to prevent vibration and bearing damage.

## Installation Dimension: unit=mm

Model	150 series				
Rated torque(N.m)	15		18	23	27
	2500rpm	2000rpm			
L Without brake	230	230	248	278	302
L With Electromagnetic brake	303	303	321	351	375



**180 series**



Model	180ST-M17215		180ST-M19015		180ST-M21520		180ST-M27010	
Matched driver	TMK-GA3220B		TMK-GA3230B		TMK-GA3230B		TMK-GA3230B	
Rated power(W)	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	
Holding torque(nm)	17.2		19		21.5		27	
Peak torque(nm)	43		47		53		67	
Voltage constant(v/1000*rpm)	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
Rotor inertia(Kg.m <sup>2</sup> )	3.4 x10 <sup>-4</sup>		3.8 x10 <sup>-4</sup>		4.7 x10 <sup>-4</sup>		6.1 x10 <sup>-4</sup>	
Line-Line Resistance(Q)	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	7.3	1.45	4	3.26	8.6
Electric 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	
Encoder line number(PPR)	2500							
Isolation class	Class F							
Safety class	IP65							
Using environment	Temperature: -20 <sup>^</sup> 0~+40 °C Humidity Below 90%RH No dewing							
Motor power plug	Lead wire	U (Red)	V (Yellow)	W (Blue)	PE (Yellow/Green)			
	Plug No.	2	3	4	1			



Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Absolute encoder Plug(7pin)	Signal wires	E-		E+		SD-		0V		SD+		+5V		PE		
	Pin No.	2		3		4		5		6		7		1		

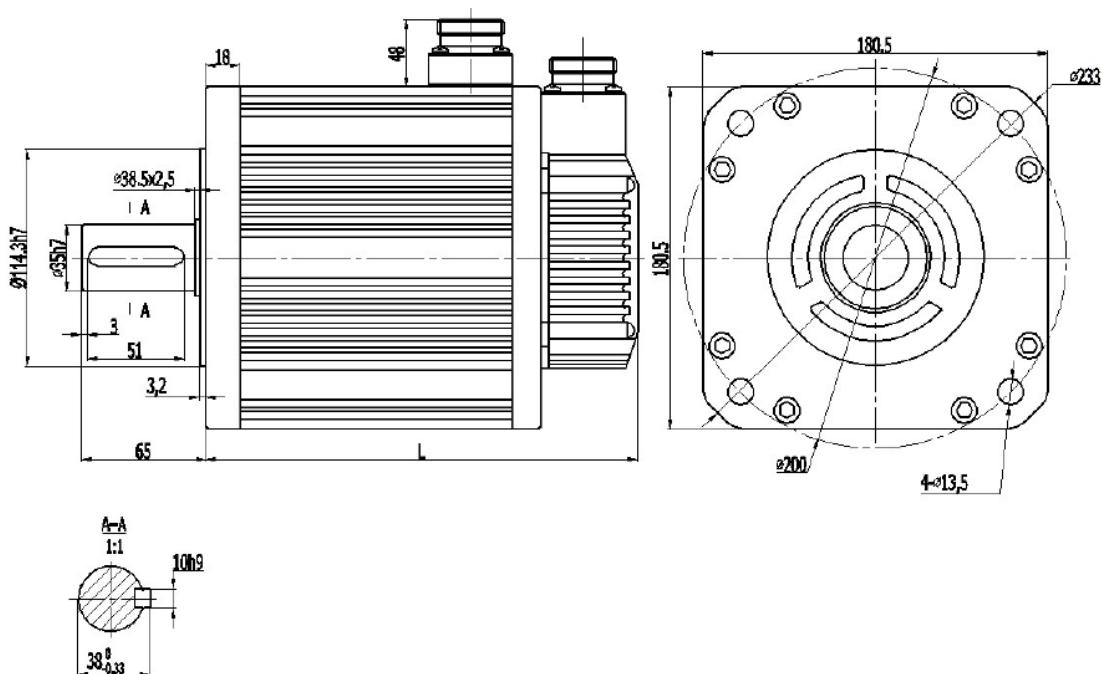
Model	180ST-M027015		180ST-M35010		180ST-M35015		180ST-M48015									
Rated power(W)	4.3		3.7		5.5		7.5									
Rated voltage(V)	220	380	220	380	220	380	220	380								
Rated current(A)	16	10	16	10	24	12	32	20								
Rated speed(rpm)	1500		1000		1500		1500									
Holding torque(nm)	27		35		35		48									
Peak torque(nm)	67		70		70		96									
Voltage constant(v/1000*rpm)	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								
Rotor inertia(Kg.m <sup>2</sup> )	6.1 x10 <sup>-3</sup>		8.6 x10 <sup>-3</sup>		8.6 x10 <sup>-3</sup>		9.5 x10 <sup>-3</sup>									
Line-Line Resistance(Q)	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								
Electric 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									
Encoder line number(PPR)	2500															
Isolation class	Class F															
Safety class	IP65															
Using environment	Temperature: -20~+40 °C Humidity Below 90%RH No dewing															
Motor power plug	Lead wire	U (Red)		V (Yellow)		W (Blue)		PE (Yellow/Green)								
	Plug No.	2		3		4		1								
Encoder plug	Lead wire	5v	0v	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug No	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1

Absolute encoder Plug(7pin)	Signal wires	E-	E+	SD-	0V	SD+	+5V	PE
	Pin No.	2	3	4	5	6	7	1

### Installation :

- 1 Installation/disassembly components coupled to the motor shaft end, do not hit shaft hard to prevent the other side of motor shaft encoder was knocked out bad.
- 2 Striving to make the best of its shaft to prevent vibration and bearing damage.

Motor	180 Series					
Torque	17.2nm	19nm	21.5nm	27nm	35nm	48nm
Without brake	226	232	243	262	292	346
With permanent magnet brake	308	314	325	344	382	436
With electromagnet brake	298	304	315	334	364	418



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