

# ACH Series

## Introduction of Servo motor



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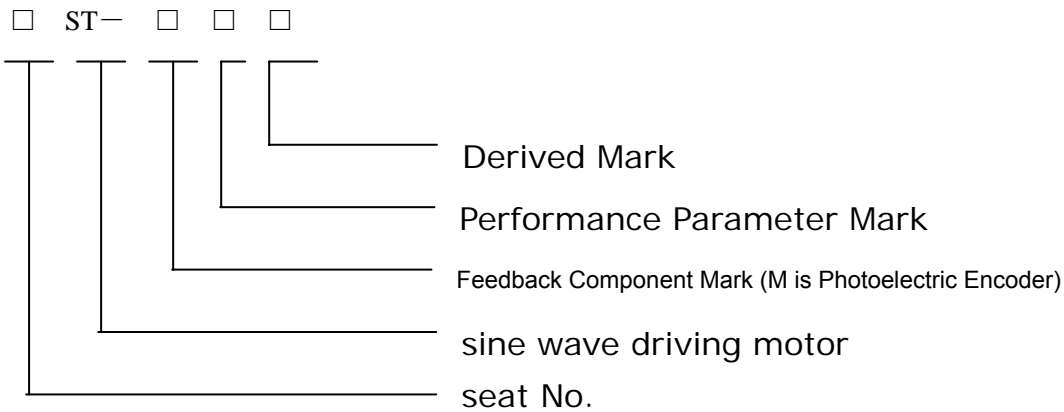
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### Motor name

The model of motor includes seat No. & symbol of product & mark of performance parameter and so on.



Seat No.: 060、080、090、110、130、180.

Feedback Component Mark: M is Photoelectric Encoder.

Performance Parameter Mark: the first, second and third are rated torque;  
the forth and fifth are rated speed;

e.g.: Performance Parameter Mark 02030 indicates the rated torque is 2NM,  
rated speed is 3000rpm.

Derived Mark: Z—sittian arrester brake



Item: 60Series

### Specifications

Motor model	ACH-0602D	ACH-06040D
Rated power(W)	200	400
Rated voltage(V)	220	220
Rated current(A)	1.2	2.8
Rated speed(rpm)	3000	3000
Holding torque(N.m)	0.637	1.27
Peak torque(N.m)	1.911	3.8
Voltage constant (V/1000r/min)	28	28

Torque coefficient (N.m/A)	0.5	0.5
Rotor inertia(Kg.m <sup>2</sup> )	0.17×10 <sup>-4</sup>	0.302×10 <sup>-4</sup>
Phase Resistance(Ω)	11.6	5.83
Phase Inductance (mH)	22	12.23
Machanical time-constant (Ms)	1.9	2.1
Weight(Kg)	1.11	1.33
Encoder line number (PPR)	2500	
Insulation class	Class B(130℃)	
Safety class	IP64	
The operating of Environmental Conditions	Temperature: -20℃ ~ +50 ℃  Humidity: Below 90%RH No dewing	

Motor winding  plue	Winding lead wire	U(red)				V(yellow)				W(blue)				PE(yellow, green/black)		
	Plug serial numberr	1				2				3				4		
Encoder plug	Signal lead wire	5V	0V	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
	Color	red	black	green	yellow black	brown	yellow black	brown	blue	grey		grey white	black	blue black	green black	White black

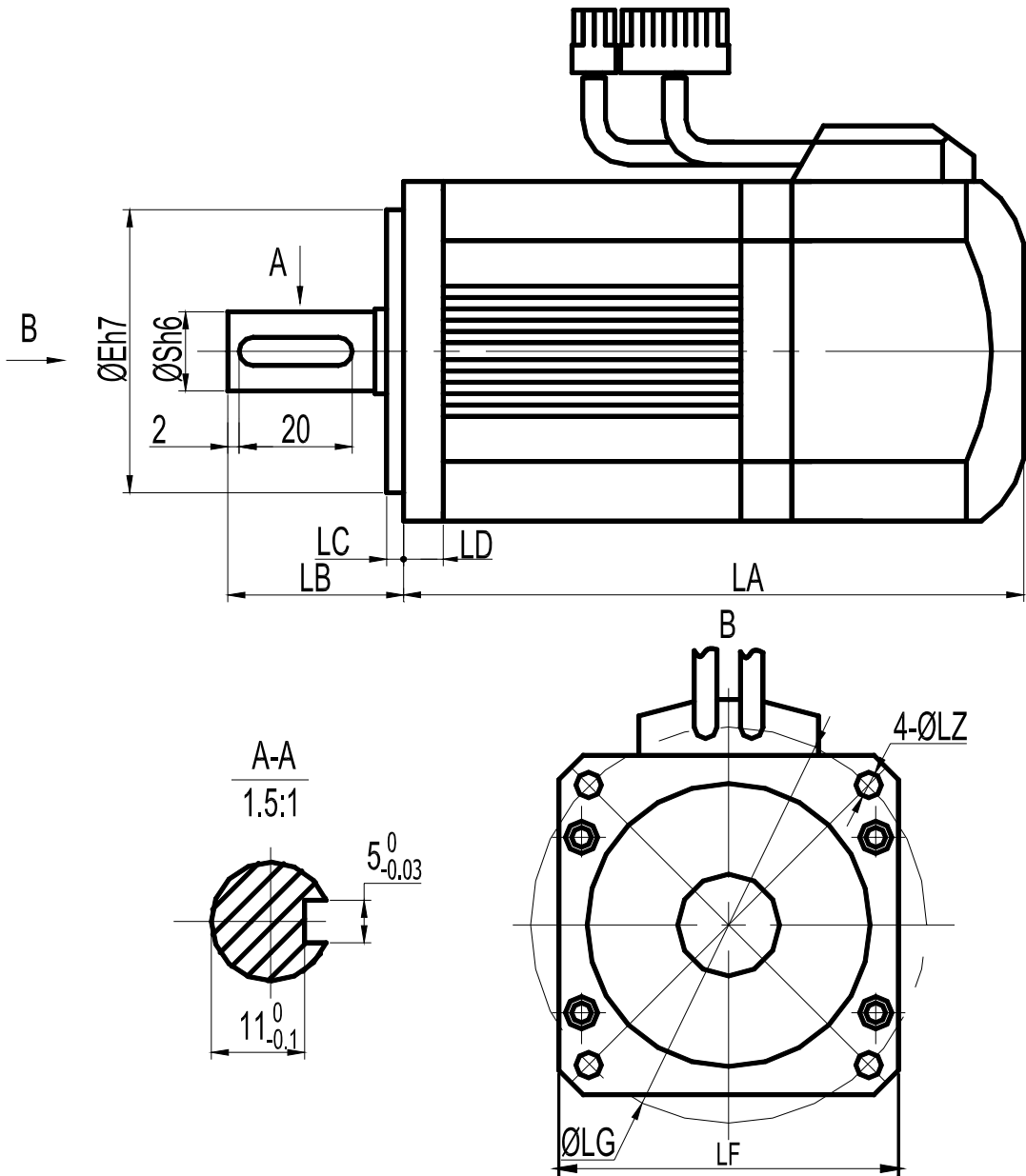
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Installation precaution:

1. Installation/disassembly components coupled to the motor shaft end, do not hit hard shaft 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

Rated torque(N.m)	0.637	1.27
LA	102	122
LB	30	30
LC	3	3
LD	7	7
LE	50	50
LF	60	60
LG	70	70
LZ	4.5	4.5
S	14	14



Item: 80Series



### Specifications

Motor model	Undetermined		Undetermined		Undetermined		Undetermined									
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									
Holding 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															
Voltage constant (V/krpm)	6		9		9		13.2									
Torque coefficient (N.m/A)	40		48		71		56									
Rotor inertia(Kg.m <sup>2</sup> )	0.64		0.8		1.17		0.9									
Phase Resistance(Ω)	1.32 × 10 <sup>-4</sup>		2.4 × 10 <sup>-4</sup>		3 × 10 <sup>-4</sup>		3.5 × 10 <sup>-4</sup>									
Phase Inductance (mH)	4.44		2.88		3.65		1.83									
Machanical time-constant (Ms)	1.66		2.22		2.4		2.58									
Weight(Kg)	1.78		2.86		3.7		3.8									
Encoder line number (PPR)	2500															
Insulation class	Class B(130℃)															
Safety class	IP65															
The operating of Environmental Conditions	Temperature: -20℃ ~ +50 ℃ Humidity: Below 90%RH No dewing															
Motor winding plue	Winding lead wire	U(red)			V(yellow)			W(blue)			PE(yellow, green/black)					
	Plug serial numberr	1			2			3			4					
Encoder plug	Signal lead wire	5V	0V	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE

	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
	Color	red	black	green	yellow black	brown	yellow	brown black	blue	grey	white	grey black	blue black	green black	White black	

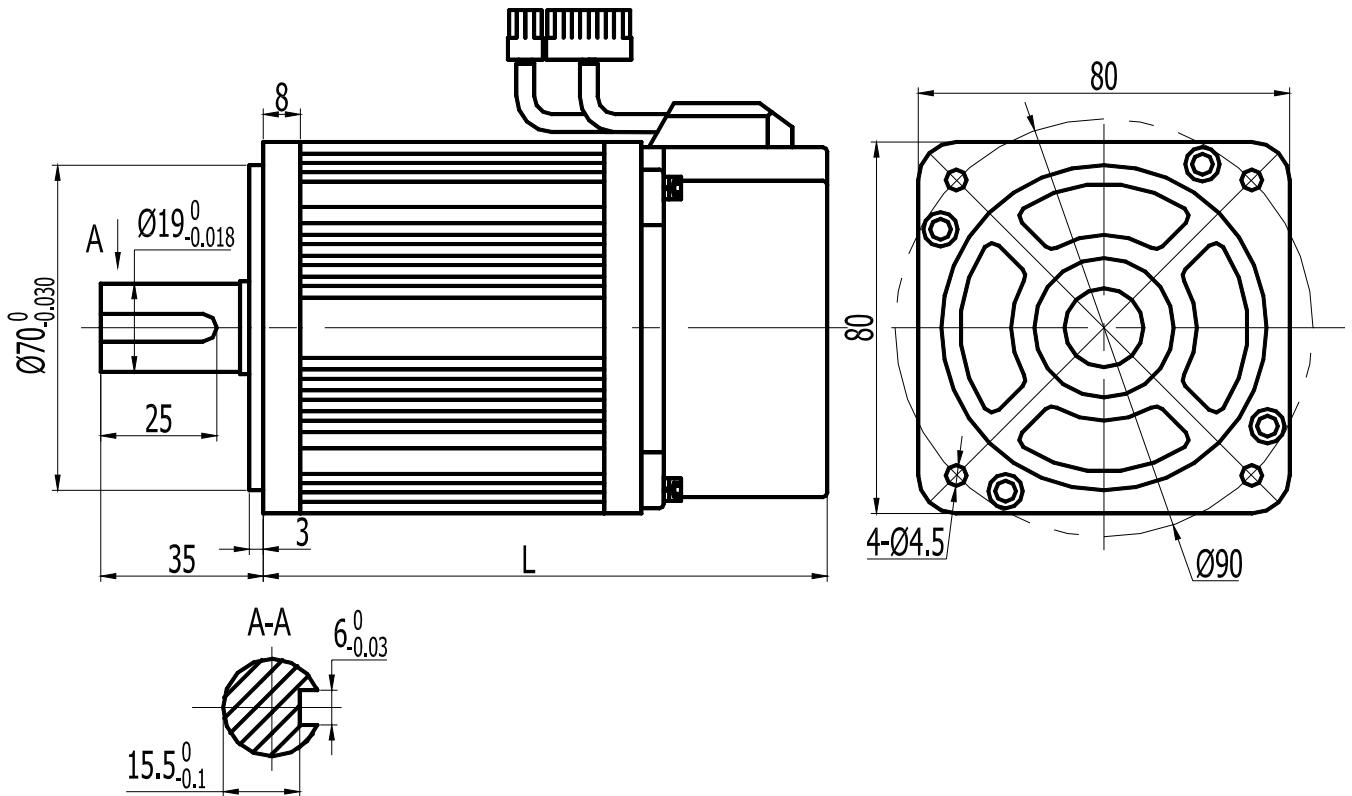
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Installation precaution:

1. Installation/disassembly components coupled to the motor shaft end, do not hit hard shaft 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

Model	L
Undetermined	123
Undetermined	150
Undetermined	178
Undetermined	190





Item: 90Series

Specifications

Motor model	ACH-09075D		ACH-09075B		Undetermined											
Rated power(KW)	0.75		0.75		1.0											
Rated voltage(V)	220		220		220											
Rated current(A)	3		3		4											
Rated speed(rpm)	3000		2000		2500											
Holding torque(N.m)	2.4		3.5		4											
Peak torque(N.m)	7.1		10.5		12											
Peak current(A)	9		7.5		12											
Voltage constant (V/krpm)	51		67		60											
Torque coefficient(N.m/A)	0.8		1.2		1.0											
Rotor inertia(Kg.m <sup>2</sup> )	2.45 × 10 <sup>-4</sup>		3.4 × 10 <sup>-4</sup>		3.7 × 10 <sup>-4</sup>											
Phase Resistance(Ω)	3.2		4.06		2.69											
Phase Inductance (mH)	7.0		9.7		6.21											
Machanical time-constant (Ms)	2.2		2.39		2.3											
Weight(Kg)	3.4		3.8		4.13											
Encoder line number (PPR)	2500															
Insulation class	Class B(130℃)															
Safety class	IP65															
The operating of Environmental Conditions	Temperature: -20℃ ~ +50 ℃ Humidity: Below 90%RH No dewing															
Motor winding plue	Winding lead wire	U(red)			V(yellow)			W(blue)			PE(yellow, green/black)					
	Plug serial numberr	1			2			3			4					
Encoder plug	Signal lead wire	5V	0V	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1



	Color	red	black	green	yellow	brown		brown		grey		grey	blue	green	White	
					black		yellow	black	blue		white	black	black	black	black	

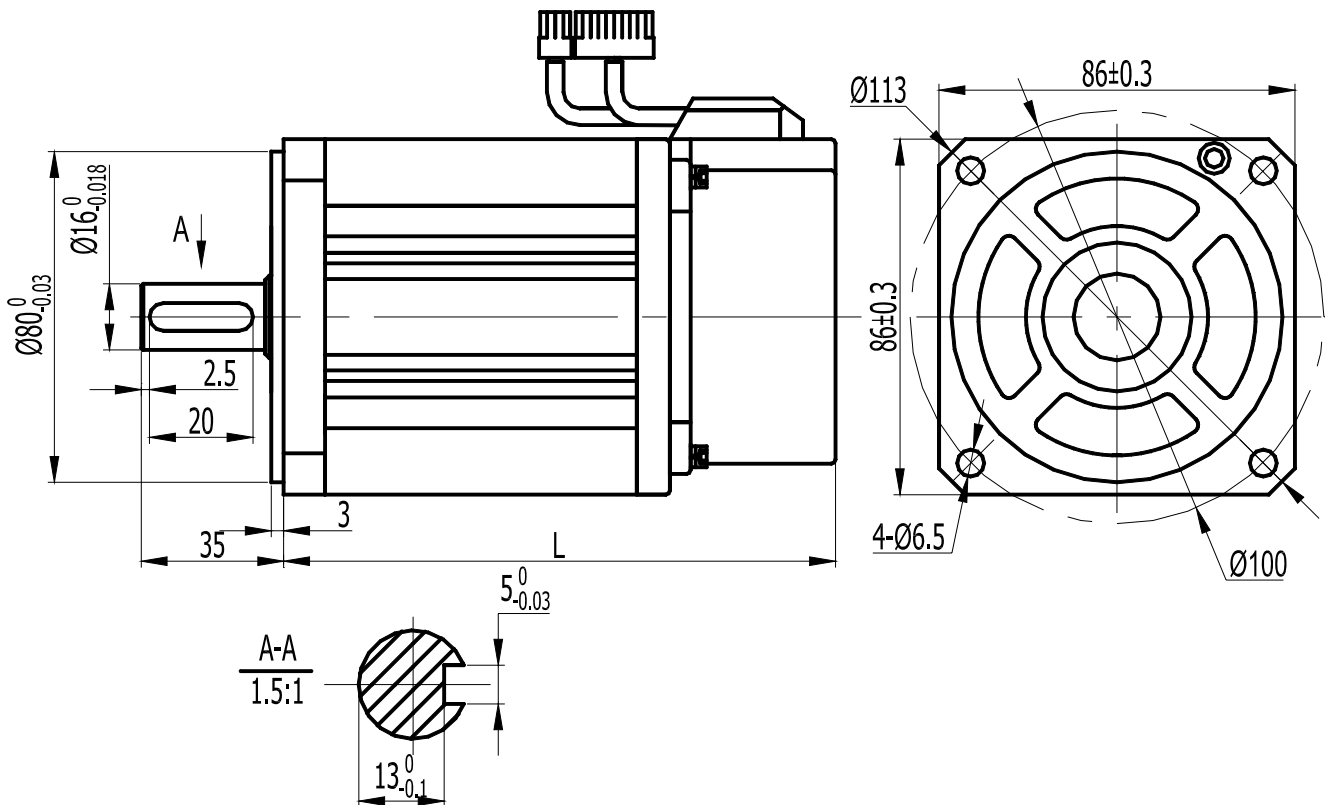
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Installation precaution:

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Installation dimension

Model	L
ACH-09075D	149
ACH-09075B	171
Undetermined	181





Item: 110Series  
Specifications

Motor model	ACH11060D	Undetermined	ACH-11120D
Rated power(KW)	0.6	0.8	1.2
Rated voltage(V)	220	220	220
Rated current(A)	2.5	3.5	5.0
Rated speed(rpm)	3000	2000	3000
Holding torque(N.m)	2	4	4
Peak torque(N.m)	6	12	12
Voltage constant (V/krpm)	56	79	54
Torque coefficient(N.m/A)	0.8	1.14	0.8
Rotor inertia(Kg.m <sup>2</sup> )	$0.31 \times 10^{-3}$	$0.54 \times 10^{-3}$	$0.54 \times 10^{-3}$
Phase Resistance( $\Omega$ )	3.6	2.41	1.09
Phase Inductance (mH)	8.32	7.3	3.3
Machanical time-constant (Ms)	2.3	3	3.0
Weight(Kg)	4.5	5.5	5.5
Motor model	ACH-11150D	ACH-11120B	ACH-11180D
Rated power(KW)	1.5	1.2	1.8
Rated voltage(V)	220	220	220
Rated current(A)	6.0	4.5	6.0
Rated speed(rpm)	3000	2000	3000
Holding torque(N.m)	5	6	6
Peak torque(N.m)	15	12	18
Voltage constant	62	83	60

(V/krpm)																
Torque coefficient(N.m/A)	0.83	1.3	1.0													
Rotor inertia(Kg.m <sup>2</sup> )	0.63×10 <sup>-3</sup>	0.76×10 <sup>-3</sup>	0.76×10 <sup>-3</sup>													
Phase Resistance(Ω)	1.03	1.46	0.81													
Phase Inductance (mH)	3.43	4.7	2.59													
Machanical time-constant (Ms)	3.33	3.2	3.2													
Weight(Kg)	6.1	6.7	6.7													
Encoder line number (PPR)	2500															
Insulation class	Class B(130℃)															
Safety class	IP65															
The operating of Environmental Conditions	Temperature: -20℃ ~ +50 ℃ Humidity: Below 90%RH No dewing															
Motor winding plug	Winding lead wire	U			V			W			PE					
	Plug serial numberr	2			3			4			1					
Encoder plug	Signal lead wire	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
	Color	red	black	green	yellow	brown		brown		grey		grey	blue	green	White	
				black		yellow	black	blue		white	black	black	black	black	black	

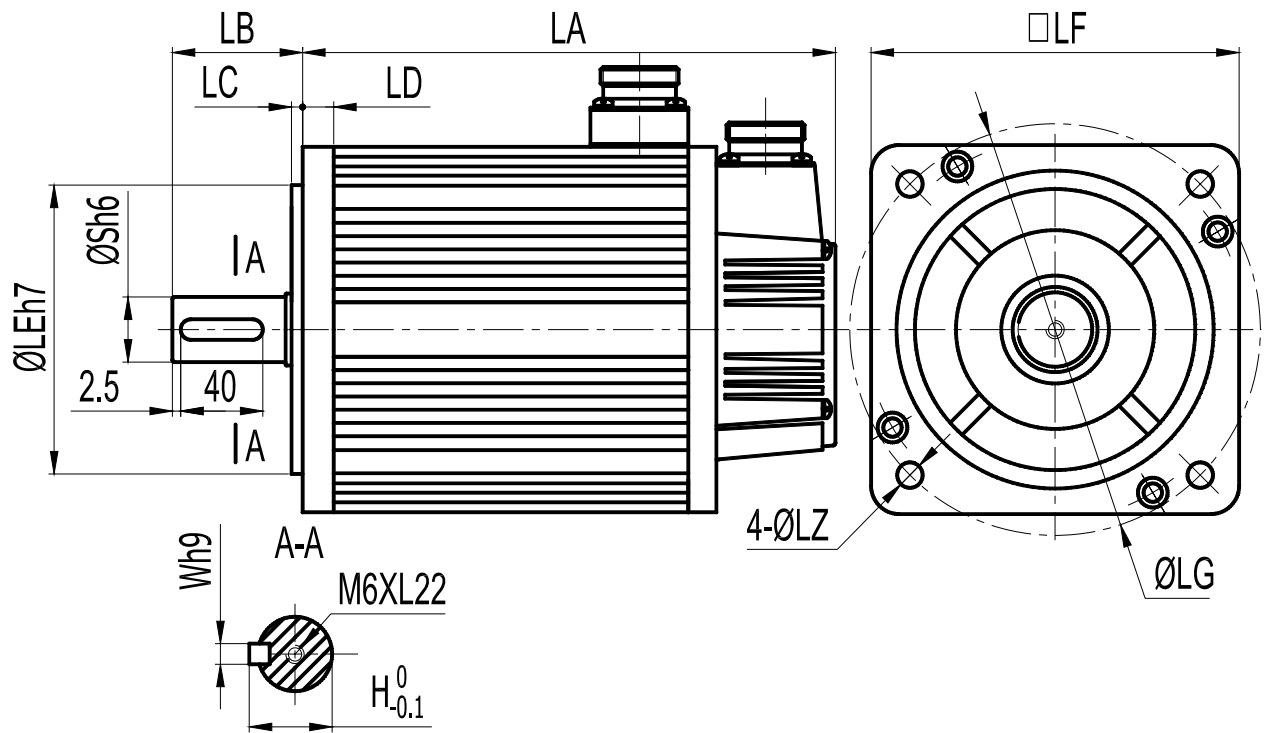
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Installation precaution:

1. Installation/disassembly components coupled to the motor shaft end, do not hit hard shaft 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

	110series			
Rated torque(N.m)	2	4	5	6
LA	159	189	204	219
LB	55	55	55	55
LC	5	5	5	5
LD	12	12	12	12
LE	95	95	95	95
LF	110	110	110	110
LG	130	130	130	130
LZ	9	9	9	9
S	19	19	19	19
H	21.5	21.5	21.5	21.5
W	6	6	6	6





Item: 130Series

Specifications

Motor model	ACH-13100C	Undetermined	ACH-13150C	ACH-13200C	
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	
Holding torque(N.m)	4	5.0	6	7.7	
Peak torque(N.m)	12	15	18	22	
Voltage constant (V/krpm)	72	68	65	68	
Torque coefficient(N.m/A)	1.0	1.0	1.0	1.03	
Rotor inertia(Kg.m <sup>2</sup> )	$0.85 \times 10^{-3}$	$1.06 \times 10^{-3}$	$1.26 \times 10^{-3}$	$1.53 \times 10^{-3}$	
Phase Resistance( $\Omega$ )	2.76	1.84	1.21	1.01	
Phase Inductance (mH)	6.42	4.9	3.87	2.94	
Machanical time-constant (Ms)	2.32	2.66	3.26	3.80	
Weight(Kg)	7.7	8.2	8.9	10	
Motor model	Undetermined	ACH-13150A	ACH-13260C	ACH-13230A	ACH-13380C3
Rated power(KW)	1.0	1.5	2.6	2.3	3.8
Rated voltage(V)	220	220	220	220	220
Rated current(A)	4.5	6.0	10	9.5	13.5
Rated speed(rpm)	1000	1500	2500	1500	2500
Holding torque(N.m)	10	10	10	15	15
Peak torque(N.m)	20	25	25	30	30
Voltage constant (V/krpm)	140	103	70	114	67
Torque coefficient(N.m/A)	2.2	1.67	1.0	1.58	1.11

Rotor inertia(Kg.m <sup>2</sup> )	1.94×10-3	1.94×10-3	1.94×10-3	2.77×10-3	2.77×10-3											
Phase Resistance(Ω)	2.7	1.29	0.73	1.1	0.49											
Phase Inductance (mH)	8.8	5.07	2.45	4.45	1.68											
Machanical time-constant (Ms)	3.26	3.93	3.36	4.05	3.43											
Weight(Kg)	11.5	11.5	11.5	14.4	14.4											
Encoder line number (PPR)	2500															
Insulation class	Class B(130℃)															
Safety class	IP65															
The operating of Environmental Conditions	Temperature: -20℃ ~ +50 ℃ Humidity: Below 90%RH No dewing															
Motor winding plug	Winding lead wire	U			V			W			PE					
	Plug serial numberr	2			3			4			1					
Encoder plug	Signal lead wire	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
	Color	red	black	green	yellow black	brown	yellow black	brown black	blue	grey	white black	grey black	blue black	green black	White black	

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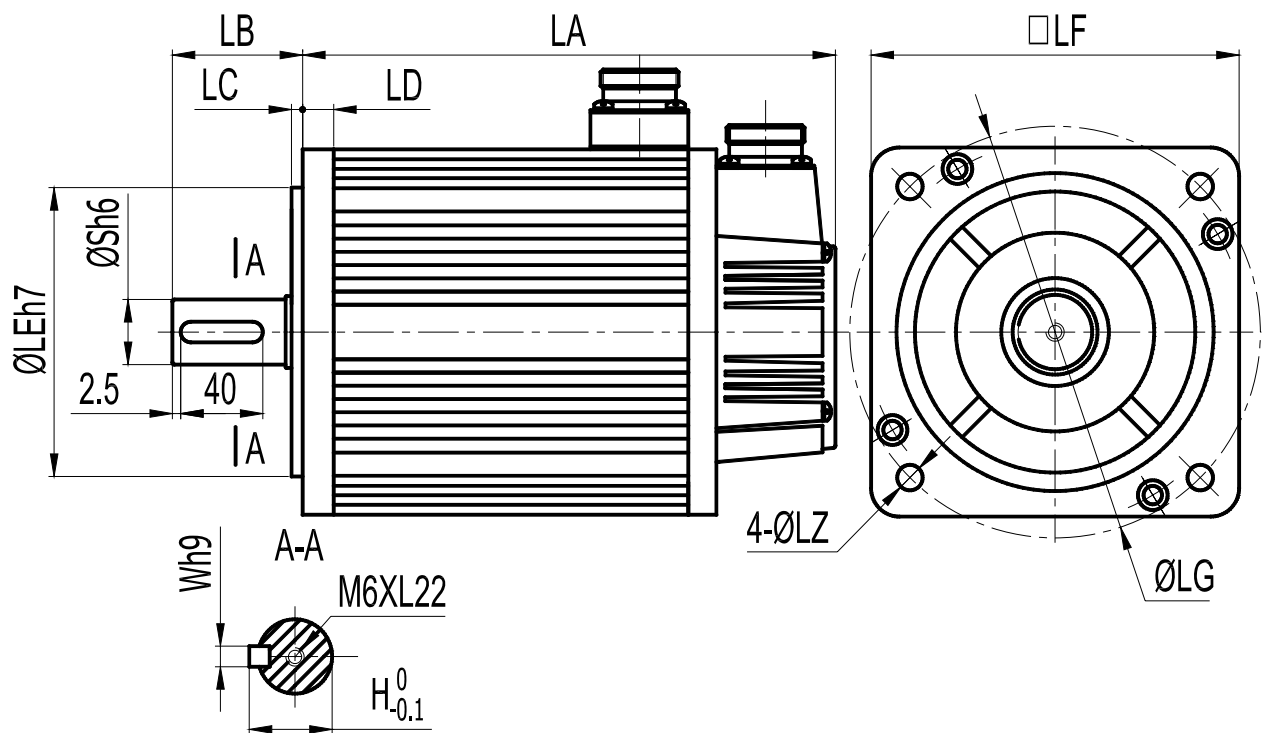
Installation precaution:

1. Installation/disassembly components coupled to the motor shaft end, do not hit hard shaft 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

130series									
Rated torque(N.m)	4	5	6	7.7	10			15	
					1000rpm	1500rpm	2500rpm	1500rpm	2500rpm

LA	166	171	179	192	213	209	241	231
LB	57	57	57	57	57		57	
LC	5	5	5	5	5		5	
LD	14	14	14	14	14		14	
LE	110	110	110	110	110		110	
LF	130	130	130	130	130		130	
LG	145	145	145	145	145		145	
LZ	9	9	9	9	9		9	
S	22	22	22	22	22		22	
H	24.5	24.5	24.5	24.5	24.5		24.5	
W	6	6	6	6	6		6	





Item: 180Series  
Specifications

Motor model	Undetermined	Undetermined	Undetermined	Undetermined
Rated power(KW)	2.7	3.0	4.5	2.9
Rated voltage(V)	220	220	220	220
Rated current(A)	10.5	12	17.5	12
Rated speed(rpm)	1500	1500	2000	1000
Holding torque(N.m)	17.2	19	21.5	27
Peak torque(N.m)	43	47	53	67
Voltage constant (V/krpm)	112	97	84	138
Torque coefficient(N.m/A)	1.64	1.58	1.23	2.25
Rotor inertia(Kg.m <sup>2</sup> )	3.4×10 <sup>-3</sup>	3.8×10 <sup>-3</sup>	4.7×10 <sup>-3</sup>	6.1×10 <sup>-3</sup>
Phase Resistance(Ω)	0.55	0.4	0.24	0.48
Phase Inductance (mH)	3.15	2.42	1.45	3.26
Machanical time-constant (Ms)	5.7	6	6	6.79
Weight(Kg)	19.5	20.5	22.2	25.5
Motor model	180ST-M027015	180ST-M35010	180ST-M35015	180ST-M48015
Rated power(KW)	4.3	3.7	5.5	7.5
Rated voltage(V)	220	220	220	220
Rated current(A)	16	16	21	35
Rated speed(rpm)	1500	1000	1500	1500
Holding torque(N.m)	27	35	35	48
Peak torque(N.m)	67	70	70	96
Voltage constant (V/krpm)	103	134	113	94
Torque coefficient(N.m/A)	1.69	2.2	1.67	1.37
Rotor inertia(Kg.m <sup>2</sup> )	6.1×10 <sup>-3</sup>	8.6×10 <sup>-3</sup>	8.6×10 <sup>-3</sup>	9.5×10 <sup>-3</sup>
Phase Resistance(Ω)	0.28	0.31	0.21	0.104
Phase Inductance (mH)	1.74	3.28	1.57	0.77



Mechanical time-constant (Ms)		6.2				10.58				7.47				7.4			
Weight(Kg)		25.5				30.5				30.5				40			
Encoder line number (PPR)		2500															
Insulation class		Class B(130℃)															
Safety class		IP65															
The operating of Environmental Conditions		Temperature: -20℃ ~ +50 ℃ Humidity: Below 90%RH No dewing															
Motor winding plug	Winding lead wire	U				V				W				PE			
	Plug serial numberr	2				3				4				1			
Encoder plug	Signal lead wire	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE	
	Plug serial number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	
	Color	red	black	green	yellow	brown		brown		grey		grey	blue	green	White		
					black		yellow	black	blue		white	black	black	black	black		

Installation dimension

