

WEIDE AC SERVO DRIVE AND MOTOR

ACCURATE
CREDITABLE
INTELLIGENT



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韦德伺服 GUANGZHOU WEIDE ELECTRIC MACHINERY CO.,LTD

AC SERVO DRIVE



FEATURES OF B SERIES

Control Mode : Position Control
 Feedback Unit : 2500PPR incremental encoder, 2500 PPR wire-saving encoder
 Adopting the newest IPM(intelligent power module) with small size,high over capacity and reliability
 Optimized the braking system is applicable to frequent start and stop devices.
 Easy to operate, can do trial operation,monitor and parameter setting with only 4 keys.
 Adaptive Power:0.1~3. 8KW



FEATURES OF B2 SERIES

Control Mode : Position,Speed,Torque and Inner Speed Controls
 Feedback Unit : 2500PPR incremental encoder,2500 PPR wire-saving encoder,17 bit absolute encoder
 Integrated RS232,RS485 communication protocol
 Set Frequency division of the encoder randomly
 Output the speed and torque (analog output volume 0~5V)
 Adopting the newest IPM(intelligent power module) with small size,high over capacity and reliability
 Optimized the braking system is applicable to frequent start and stop devices.
 Easy to operate, can do trial operation,monitor and parameter setting with only 4 keys.
 Adaptive Power:0.1~5.5KW

Product Code Explanation of Servo Drive

WD	Brand code:WEIDE
15	Specific code:05 10 15 20 30 50 75
B	Code of Generation:B B2
040	Rated Power:005:50W 010:100W 020:200W 040:400W 075:750W 100:1KW
L	Working Voltage: L:220V H:380V
M	Encoder type:M:2500PPR incremental encoder S:2500 PPR wire-saving encoder C:1000 wire magnetic encoder J:17 bit multi-circle absolute encoder J1:17 bit single circle absolute encoder J2:23 bit multi-circle absolute encoder J3:23 bit single circle absolute encoder
	Servo Code: Blank:Universal N:Button Machine L:Screw Machine J:Absolute Value



TECHNICAL INFORMATION OF B SERIES

Model No.	10B	15B	20B	30B
Output Power (KW)	0.05-0.4	0.6-1.0	1.0-1.3	1.5-3.8
Rated Torque (N.m)	0.01-1.3	1.9-4	4-10	6-15
Input Power	Single PhaseL1,L2;Three PhasesL1,L2,L3 AC220V-15%~+10%			
Temperature	Working:0~40℃ Storing:-40~50℃			
Humidity	Working:40%~80%(No Dew) Storing:below 93%(No Dew)			
IP Grade	IP20			
Control Method	PWM sine wave vector control			
Regenerative Braking	With built-in braking resistance for the motor power below 1KW items;Should the inertia is higher,it is advised to have external resistance with terminal end B1 and B2.			
Feedback Mode	2500PPR incremental encoder			
Control Mode	Position			
Digital Input	Servo On/Alarm Clear/CCWL/CWL/TCCW/TCW/EMG STOP/Electronic Gear 1/Electronic Gear 2/Position Deviation Clear/Pulse Input Prohibited			
Digital Output	Servo Ready/Alarm/Location Completed/Speed Arrival/Electromagnetic Brake			
Signal of Encoder Output	Signal Type	Differential A,B,Z Output,Signal Z open-collector Output		
Position	Input Frequency	Differential A,B,Z Input:≤500kHz (kpps) ,Single Ended Input ≤200kHz (kpps)		
	Command Mode	Pulse+Direction;CCW/CW Pulse;Orthogonal AB Pulse		
	Electronic Gear Ratio	1~32767/1~32767		
Monitor Function	Speed/Present Location/Location Deviation/Motor Torque/Motor Current/Frequency of Command Pulse.etc			
Protection Function	Over-speed/Over Voltage/Over Current/Over Load/Brake Abnormal/Encoder Abnormal/Location out-of-tolerance			
Characteristics	Speed Frequency Response	>400Hz		
	Speed Fluctuation Ratio	<±0.03% (Electrical Load:0~100%);<±0.02%(Power:-15~+10%)		
	Speed Regulation Ratio	1:5000		



TECHNICAL INFORMATION OF B2 SERIES

Model No.		10B2	15B2	20B2	30B2	50B2	75B2
Output Power (KW)		0.05-0.4	0.6-1.0	1.0-1.3	1.5-3.8	2.7-3.5	4.3-5.5
Rated Torque (N.m)		0.01-1.3	1.9-4	4-10	6-15	17-35	27-48
Feedback Mode		2500PPR incremental encoder,2500 PPR wire-saving encoder,17 bits absolute encoder					
Control Mode		Position;Speed;Inner Speed;Torque;JOG;Trail Operation					
Regenerative Braking		Built-in Type;External Installation					
Braking Mode		Power Resistor Braking					
Control Mode	Speed Response	Higher than 250Hz					
	Speed Fluctuation Rate	<±3%(Electrical Load0%~100%);<±2%(Power-10%~+10%)					
	Speed Regulation Ratio	1:5000					
	Input Pulse Frequency	≅ 500KHz					
Position Control	Input Mode	①Pulse+Direction②CW Pulse+CCW Pulse③Orthogonal AB Pulse					
	Electrical Gear Ratio	1-9999/1-9999					
	Feedback Pulse	Any Frequency Division					
Speed Control	Speed Range	-3000~+3000rpm					
	Speed Signal	DC-10V~+10V Analog Signal (The positive and negative of the Voltage represent the turning direction)					
	Speed Variation Rate	±1%(Electrical Load Change 0-100%)					
Torque Control	Torque Range	±3 times of the rated torque					
	Torque Singal	DC-10V~+10V Analog Signal (The positive and negative of the Voltage represent the turning direction)					
	Speed Variation Rate	±1%(Electrical Load Change 0-100%)					
Communication		RS232,RS485					
Grounding Mode		Grounding the housing terminal,Grounding Resistance ≅ 0.1Ω					
Monitor Function	Keyboard Display	Speed,Present Position,Command Pulse,Position Deviation,Current, Torque,Peak Torque,Command Pulse Frequency,Rotator Absolute Position,Running State,State of Input and Output Terminals,State of the encoder signal,Main cable Voltage,Main-board Temperature,AD Value of Analog Command Sampling,Alarm information,etc					
	Analog Volume display	Speed,Torque,Current,Peak Torque,Rotator Absolute Position					
Protection Function		Over Speed,Voltage Lack ,Over Voltage,Over Current,Over Load, Brake Abnormal,Encoder Error,Over Temperature,Location Out-of-tolerance,etc					
Working Condition	Temperature	Working:0~55℃;Storing:-20~80℃					
	Humidity	Less than 90%,No Dew					
	Vibration	Less than 0.5G(4.9m/S2),10~60Hz(Not Continuous Working)					

AC SERVO MOTOR



SERVO MOTOR CODE EXPLANATION

The code of the motor consists of seat flange code no.,product name and specification no..

NZ	Motor GeneratIve Code
80	Flange:40,60,80,90,110,130
ST	Sine Wave Drive Motor
M	Encoder type:M:2500PPR incremental encoder S:2500 PPR wire-saving encoder C:1000 wire magnetic encoder J:17 bit multi-circle absolute encoder J1:17 bit single circle absolute encoder J2:23 bit multi-circle absolute encoder J3:23 bit single circle absolute encoder
024	Rated Torque:three nos x0.1N.m eg.:024=2.4N.m
30	Rated Speed: two nos. x100rpm eg. :30=3000rpm
L	Working Voltage: L:220 H:380
4	Number of Polar-pairs: 4:4 polar-pairs 5:5 polar-pairs
Z	Brake: Blank:no brake Z:with brake

Feel free to check the reverse pages for more information of servo motors !

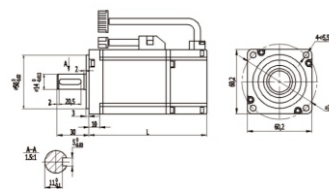
60 SERIES MOTOR

Installation Precautions

1. Please don't hit the shaft with strength when installing and disassembling the end of the motor shaft to avoid damage to the encoder at other side.
2. Please prevent the vibration of the shaft seat to avoid damage to the bearing.

Installation Dimension Unit:mm

60 Series		
Model No.	60ST-M00630	60ST-M01330
L With no brake	112 (116)	137 (141)
L With Permanent-magnetic Brake	160 (164)	185 (189)



Specification

Model No.	60ST-M00630	60ST-M01330
Rated Power(W)	200	400
Rated Circuit Voltage(V)	220	220
Rated Circuit Current(A)	1.2	2.8
Rated Speed(rpm)	3000	3000
Rated Torque(N.m)	0.637	1.27
Peak Torque(N.m)	1.91	3.9
Voltage Constant(V/1000r/min)	30.9	29.6
Torque Coefficient(N.m/A)	0.53	0.45
Rotor Inertia(Kg.m ²)	0.175×10 ⁻⁴	0.29×10 ⁻⁴
Winding Resistance(Ω)	6.18	2.35
Winding Inductance(mH)	29.3	14.5
Electrical Time Constant(ms)	4.74	6.17
Weight(Kg)	1.16	1.63

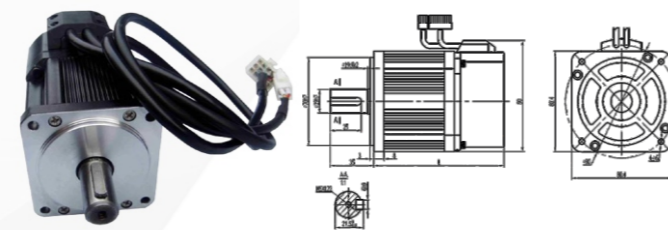
Wire Number Encoder (PPR)	2500																
Insulation Class	Class F(155℃)																
IP Grade	IP65																
Operating Environment	Temperature:-20℃~+40℃ Humidity:Relative humidity<90%(No DEW)																
Winding Plug	Winding Lead Wire	U(Red)				V(Yellow)				W(Blue)				PE(Yellow-green/Black)			
	Plug Serial Number	1				2				3				4			
Encoder Plug	Signal 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	

80 SERIES MOTOR

Model No.	L With no Brake	L With Permanent-magnetic Brake	L With Electro-magnetic Brake
80ST-M01330	124	178	164
80ST-M02430	151	205	191
80ST-M03520	179	233	219
80ST-M04025	191	245	231

Specification

Model No.	80ST-M01330	80ST-M02430	80ST-M03520	80ST-M04025
Rated Power(KW)	0.4	0.75	0.73	1.0
Rated Circuit Voltage(V)	220	220	220	220
Rated Circuit Current(A)	2	3.0	3.0	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	9.0	9.0	13.2
Voltage Constant(V/1000r/min)	40	48	71	56
Torque Coefficient(N.m/A)	0.64	0.8	1.17	0.9
Rotor Inertia(Kg.m ²)	1.05×10 ⁻⁴	1.82×10 ⁻⁴	2.63×10 ⁻⁴	2.97×10 ⁻⁴
Winding Resistance(Ω)	4.44	2.88	3.65	1.83
Winding 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	2.86	3.7	3.8



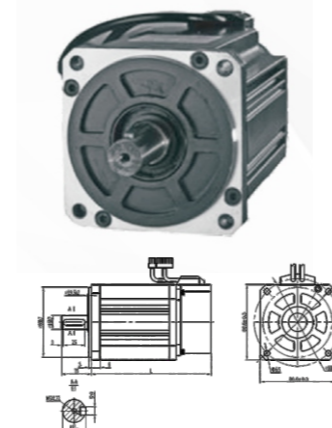
90 SERIES MOTOR

Installation Precautions

1. Please don't hit the shaft with strength when installing and disassembling the end of the motor shaft to avoid damage to the encoder at other side.
2. Please prevent the vibration of the shaft seat to avoid damage to the bearing.

Installation Dimension Unit:mm

Model No.	L With No Brake	L With Permanent-magnetic Brake	L With Electro-magnetic Brake
90ST-M02430	150	207	198
90ST-M03520	172	229	220
90ST-M04025	182	239	230



Specification

Model No.	90ST-M02430	90ST-M03520	90ST-M04025
Rated Power(KW)	0.75	0.73	1.0
Rated Circuit Voltage(V)	220	220	220
Rated Circuit Current(A)	3.0	3.0	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
Rotor Inertia(Kg.m ²)	2.45×10 ⁻⁴	3.4×10 ⁻⁴	3.7×10 ⁻⁴
Winding Resistance(Ω)	3.2	4.06	2.69
Winding Inductance(mH)	7.0	9.7	6.21
Electrical Time Constant(ms)	2.2	2.39	2.3
Weight(Kg)	3.4	3.8	4.13

110 Series				
Rated Torque (N.m)	2	4	5	6
L With No Brake	159	189	204	219
L With Permanent-magnetic Brake	215	245	260	275
L With Electro-magnetic Brake	233	263	278	293

Specification

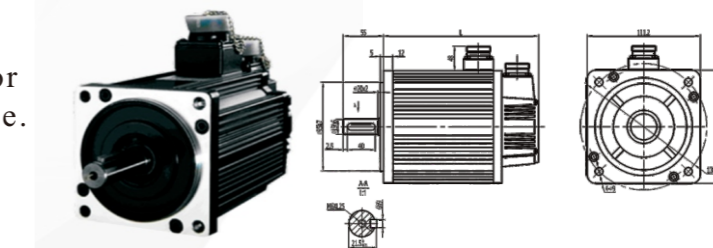
Model No.	110ST-M02030	110ST-M04020	110ST-M04030	110ST-M05030	110ST-M06020	110ST-M06030
Rated Power(KW)	0.6	0.8	1.2	1.5	1.2	1.8
Rated Circuit Voltage(V)	220	220	220	220	220	220
Rated Circuit Current(A)	2.5	3.5	5.0	6.0	4.5	6.0
Rated Speed(rpm)	3000	2000	3000	3000	2000	3000
Rated Torque(N.m)	2	4	4	5	6	6
Peak Torque(N.m)	6	12	12	15	12	18
Voltage Constant(V/1000r/min)	56	79	54	62	83	60
Torque Coefficient(N.m/A)	0.8	1.14	0.8	0.83	1.3	1.0
Rotor Inertia(Kg.m ²)	0.31×10 ⁻³	0.54×10 ⁻³	0.54×10 ⁻³	0.63×10 ⁻³	0.76×10 ⁻³	0.76×10 ⁻³
Winding Resistance(Ω)	3.6	2.41	1.09	1.03	1.46	0.81
Winding Inductance(mH)	8.32	7.3	3.3	3.43	4.7	2.59
Electrical Time Constant(ms)	2.3	3.0	3.0	3.33	3.2	3.2
Weight(Kg)	4.5	5.5	5.5	6.1	6.7	6.7

110 SERIES MOTOR

Installation Precautions

1. Please don't hit the shaft with strength when installing and disassembling the end of the motor shaft to avoid damage to the encoder at other side.
2. Please prevent the vibration of the shaft seat to avoid damage to the bearing.

Installation Dimension Unit:mm



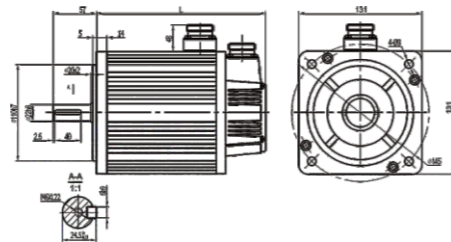
Wire Number Of Encoder(PPR)	2500																
Insulation Class	Class F (155℃)																
IP Grade	IP65																
Operating Environment	Temperature:20℃~+40℃ Humidity:Relative humidity<90%(No DEW)																
Winding Plug	Winding Lead Wire	U(Red)				V(Yellow)				W(Blue)				PE(Yellow-green/Black)			
	Plug Serial Number	2				3				4				1			
Encoder Plug	Signal 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	

【110 SERIES MOTOR】

Specification

Model No.	130ST-M04025	130ST-M05025	130ST-M06025	130ST-M07725
Rated Power (KW)	1.0	1.3	1.5	2.0
Rated Circuit Voltage(V)	220	220	220	220
Rated Circuit Current(A)	4.0	5.0	6.0	7.5
Rated Speed(rpm)	2500	2500	2500	2500
Rated Torque(N.m)	4	5.0	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
Rotor Inertia(Kg.m ²)	0.85×10 ⁻³	1.06×10 ⁻³	1.26×10 ⁻³	1.53×10 ⁻³
Winding Resistance(Ω)	2.76	1.84	1.21	1.01
Winding Inductance(mH)	6.42	4.9	3.87	2.94
Electrical Time Constant(ms)	2.32	2.66	3.26	3.80
Weight(Kg)	7.7	8.2	8.9	10

Model No.	130ST-M10010	130ST-M10015	130ST-M10025	130ST-M15015	130ST-M15025
Rated Power(KW)	1.0	1.5	2.6	2.3	3.8
Rated Circuit Voltage(V)	220	220	220	220	220
Rated Circuit Current(A)	4.5	6.0	10	9.5	13.5
Rated Speed(rpm)	1000	1500	2500	1500	2500
Rated Torque(N.m)	10	10	10	15	15
Peak Torque(N.m)	20	25	25	30	30
Voltage Constant(V/1000r/min)	140	103	70	114	67
Torque Coefficient(N.m/A)	2.2	1.67	1.0	1.58	1.11
Rotor Inertia(Kg.m ²)	1.94×10 ⁻³	1.94×10 ⁻³	1.94×10 ⁻³	2.77×10 ⁻³	2.77×10 ⁻³
Winding Resistance(Ω)	2.7	1.29	0.73	1.1	0.49
Winding Inductance(mH)	8.8	5.07	2.45	4.45	1.68
Electrical 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



130 SERIES MOTOR

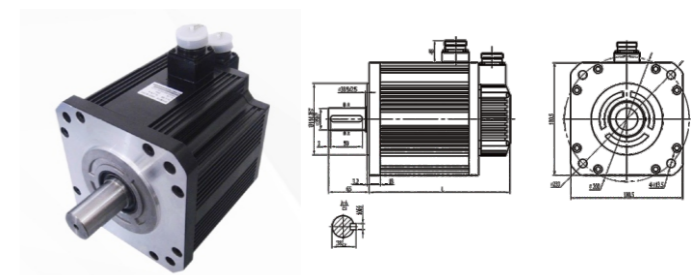
Rated Torque(N.m)	130 Series									
	4	5	6	7.7	10			15		
	1000rpm	1500rpm	2500rpm	1500rpm	2500rpm	1500rpm	2500rpm	1500rpm	2500rpm	1500rpm
L With no Brake	166	171	179	192	213	209	241	231		
L With Permanent-magnetic Brake	236	241	249	262	283	279	311	301		
L With Electro-magnetic Brake	223	228	236	249	294	290	322	312		

180 SERIES MOTOR

Installation Dimension Unit:mm

Installation Precautions

- 1.Please don't hit the shaft with strength when installing and disassembling the end of the motor shaft to avoid damage to the encoder at other side.
- 2.Please prevent the vibration of the shaft seat to avoid damage to the bearing.Installation Dimension Unit:mm



Rated Torque (N.m)	180 Series					
	17.2	19	21.5	27	35	48
L With no Brake	226	232	243	262	292	346
L With Permanent-magnetic Brake	308	314	325	344	382	436
L With Electro-magnetic Brake	298	304	315	334	364	418

Specification

Model No.	180ST-M17215	180ST-M19015	180ST-M03510	180ST-M27010
Rated Power(KW)	2.7	3.0	3.7	2.9
Rated Circuit Voltage(V)	220	220	220	220
Rated Circuit Current(A)	10.5	12	16	12
Rated Speed(rpm)	1500	1500	1000	1000
Rated Torque(N.m)	17.2	19	35	27
Peak Torque(N.m)	43	47	70	67
Voltage Constant(V/1000r/min)	112	97	134	138
Torque Coefficient(N.m/A)	1.64	1.58	2.2	2.25
Rotor Inertia(Kg.m ²)	3.4×10 ⁻³	3.8×10 ⁻³	8.6×10 ⁻³	6.1×10 ⁻³
Winding Resistance(Ω)	0.7	0.4	0.31	0.48
Winding Inductance(mH)	3.5	2.42	3.28	3.26
Electrical Time Constant(ms)	5	6	10.58	6.79
Weight(Kg)	19.5	20.5	30.5	25.5

Wire Number Of Encoder (PPR)	2500																
Insulation Class	Class F (155℃)																
IP Grade	IP65																
Operating Environment	Temperature:20℃~+40℃ Humidity:Relative humidity<90%(No DEW)																
Winding Plug	Winding Lead Wire	U(Red)				V(Yellow)				W(Blue)				PE(Yellow-green/Black)			
	Plug Serial Number	2				3				4				1			
Encoder Plug	Signal 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	

Please feel free to contact us for other model numbers or customized request!