



UniMAT Uniface US200 Series
Servo System Catalog

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UniMAT



CE











1 Corporate Profile

UniMAT Automation Technology Co., Ltd established in 2004. With the philosophy “based on quality, morality, and be surpassing by heart with concentrated attention”, we are now in the leading fleet of China Industrial Automation. We focus on the field of core control, create UniMAT brand, self-research and self-production PLC, HMI, servo driver, converter, industry specialized controllers and other automation products. We also provide systematic comprehensive solutions for equipment production and system integration.

Our enterprise has good relationship with colleges and universities and has built research centers in Shenzhen and Wuhan. 35% of our employees are R&D engineers. All of these help our company win the title of “state-level high-tech enterprise” and “software enterprise”. Over the past few years, our products are widely used in the field of metallurgy, chemical engineering, environmental protection, renewable energy, electric vehicles, logistics etc. We are dedicated ourselves to develop Chinese high-end equipment manufacturing.

We pay serious attention to the product quality, providing 3-year free quality warranty for PLC products and 18-month quality warranty for other products.

At present, we have set up over 20 branches in Beijing, Shanghai, Guangzhou and other cities to form service site nationwide. At the same time, our international business has expanded to more than 20 countries and districts, and won good reputation widely.

Our mission is using technology to enhance human productivity, and striving for being a global respected leading enterprise in industry automation field.

Company Mission

To improve Human Productivity through Technology Development

Value

Integrity, Responsibility, Cooperation, Innovation

Company Vision

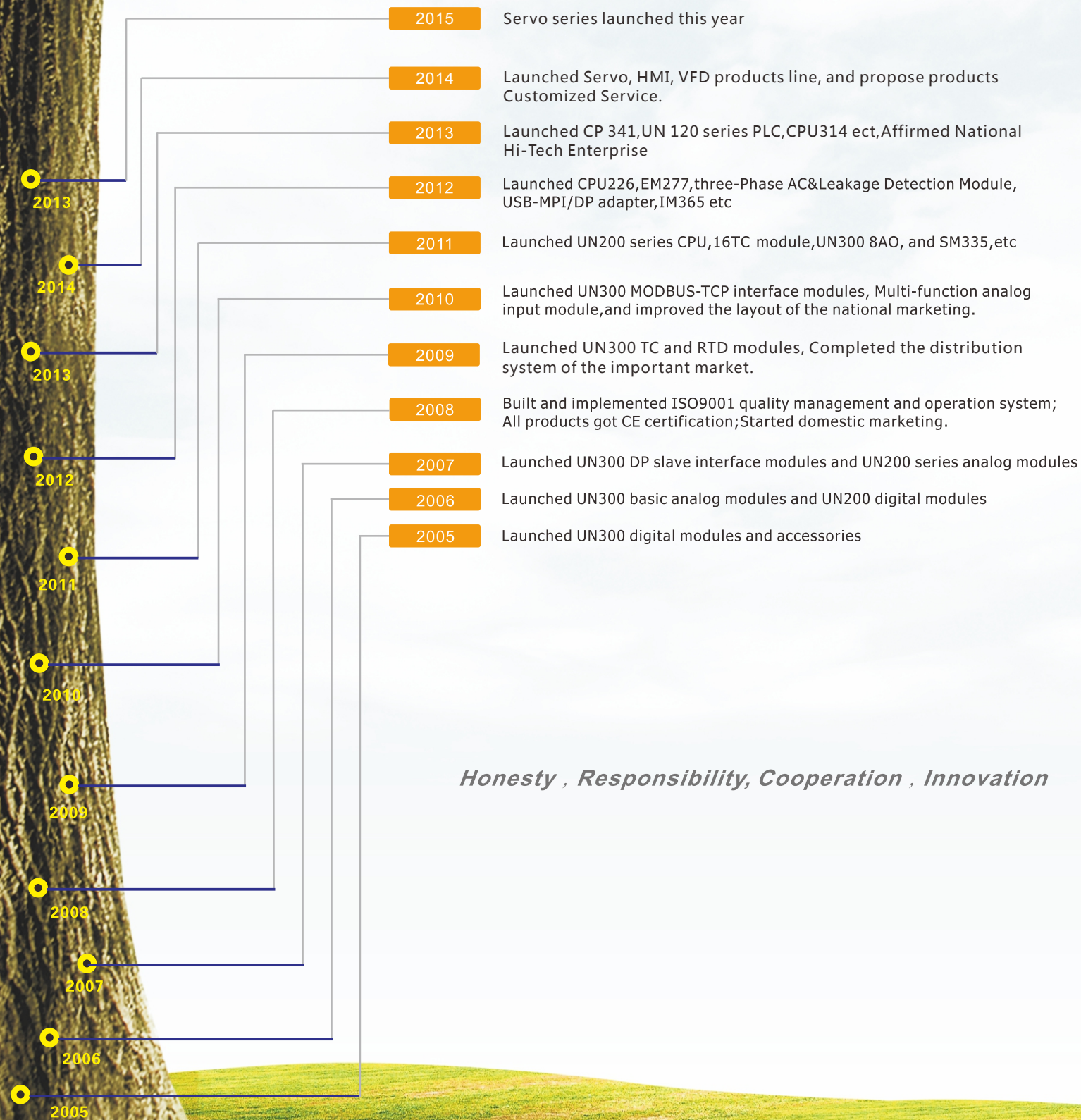
Become the Global Leading and Respected Provider of Automatic Products and Service

Quality Warranty

ISO 9001:2008 Management system
TQC production and quality control system
All products CE Certificated

Corporate culture

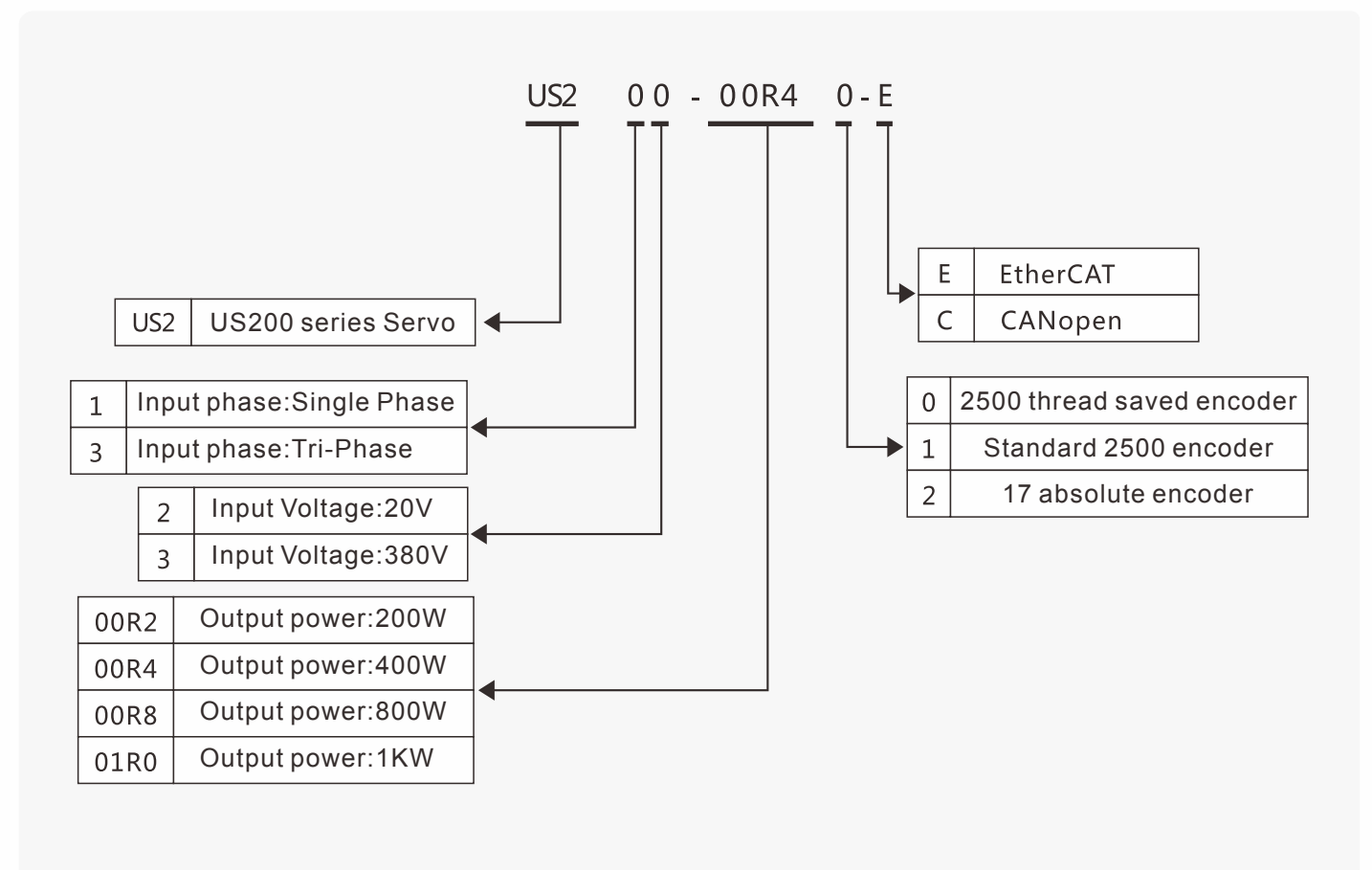
Development History



Servo system standard configuration

No.	Power	Driver	Motor	Motor cable	Encoder cable
1	200W	US212-00R8	UM060-00R20-30BA	USCM03-05C	USCE03 Soft cable
2	400W		UM060-00R40-30BA		
3	750W		UM080-00R80-30BA		
4	1KW		UM080-01R00-25BA		
5	1.5KW	US232-01R3	UM110-01R50-30DA	USCM03-10A	
6	2.0KW	US232-02R0	UM130-02R00-30DA		

Servo Driver Name Rule



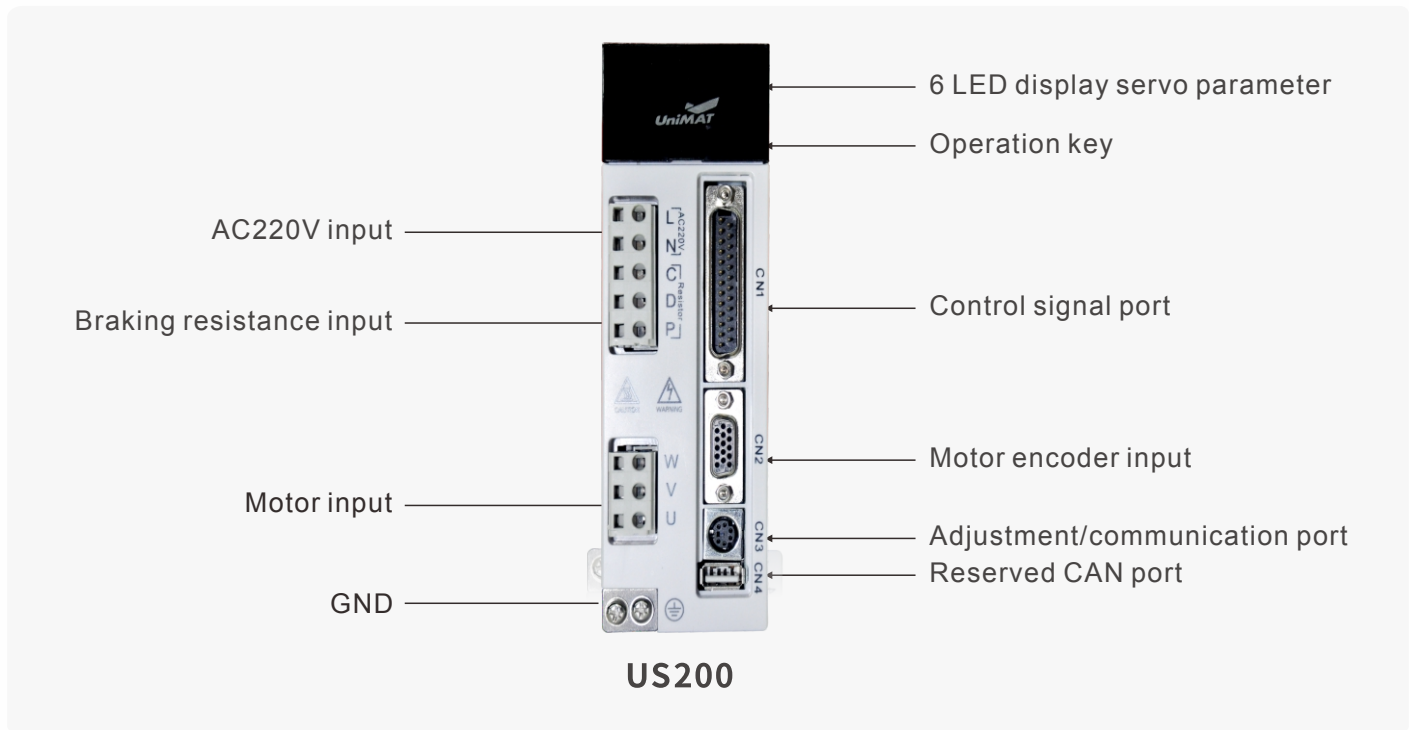
Characteristic

- Leading control platform and algorithm, easily realize high accuracy locating.
- 2500 thread saved encoder, reduce the failure probability caused by encoder cable.
- RS485 interface, realize multi serial control.
- Built-in multispeed, no need PLC at repeated positioning.
- IPM intelligent module design, has perfect protection function.
- Configure upper software and operation panel for adjustment and diagnosis.
- Input/output port can be defined freely.

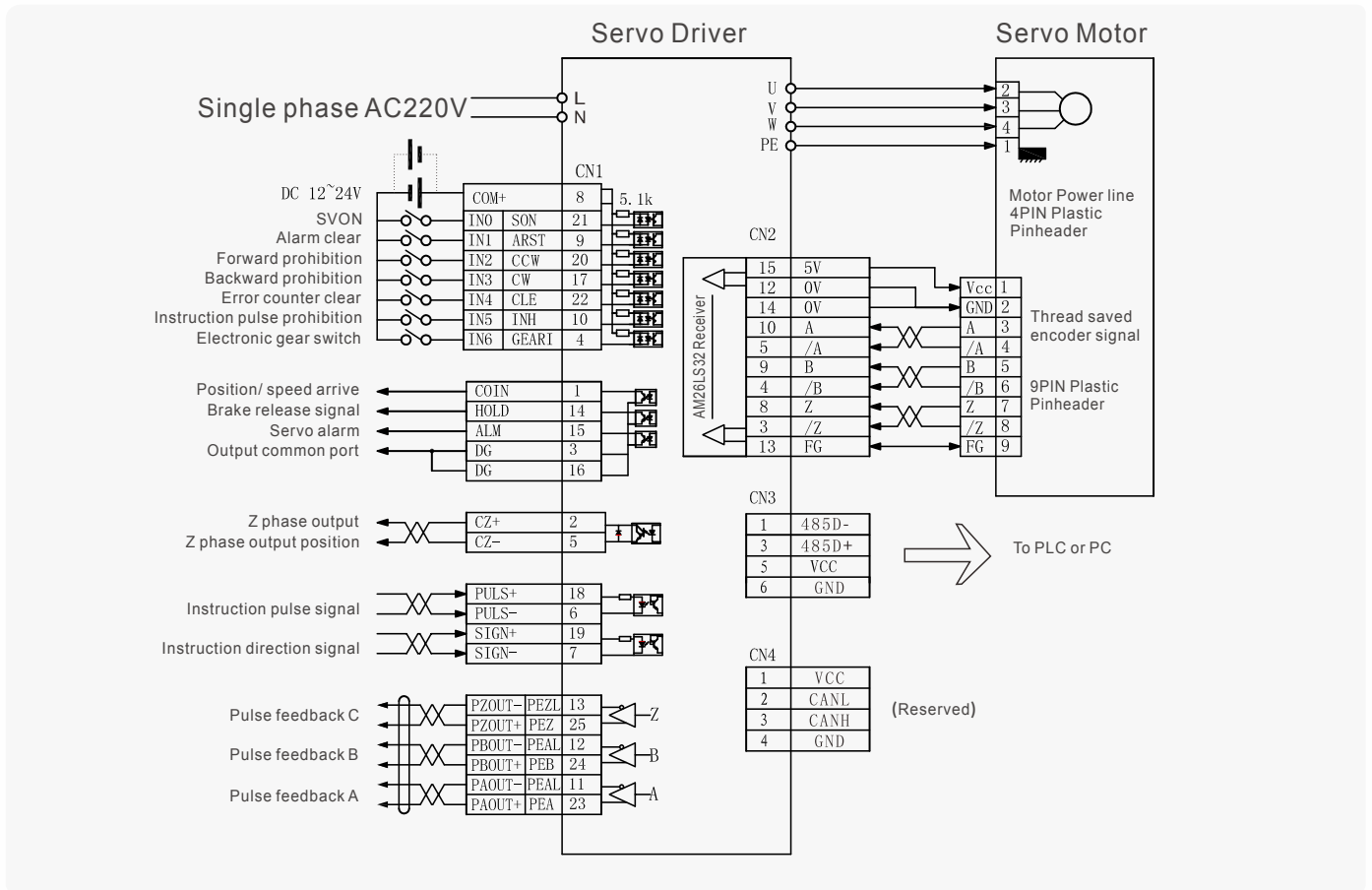
Parameter

Model No.		US212-00R8	US232-01R3	US232-02R0
Input power	Rated voltage	Single-phase AC220V Tri-phase AC220V		
	Voltage range	AC170V~253V 50/60Hz		
Control type		SVPWM control		
Function	Feedback	2500 thread saved encoder		
	Display and operation	6bits 7 sectionLED, 4 function operating keys		
	Control mode	Position control/speed pilot run/jog/internal locating PLC function/RS485 communication		
	Braking	Built-in/outboard		
	Protection	Under-voltage, over-voltage, over-load, over-current, encoder abnormal, braking abnormal, location over-error		
Digital input/output	Input	7optoelectronic isolation input, function: SVON, A-CLR, Error counter clear/ speed select, command pulse prohibit/speed select, position 0, position 1, position trigger		
	Output	4 points open-collector, function: servo ready to output, servo alarm output, Z signal output, band-type braking output		
Encoder signal	Encoder signal output	ABZ phase thread drive output, Z phase open-collector output.		
	Dividing ratio	1/255~1		
Position mode	Frequency type	Pulse+ direction, CW/CCW, A phase+B phase		
	Max. Frequency	1MHz(Differential input), 200KHz(Open-collector input)		
	Electric gear ratio	1~32767/1~32767		
Speed mode	Internal speed control	I/O terminal control		
Torque mode	Internal torque control	I/O terminal control		
Speed frequency response		550Hz		
Speed ratio		1 : 5000		
Interface		RS485		
Environment	Temperature	Working: 0°C~55°C,Storage:-20°C~80°C		
	Humidity	Below 90%(non condensing)		

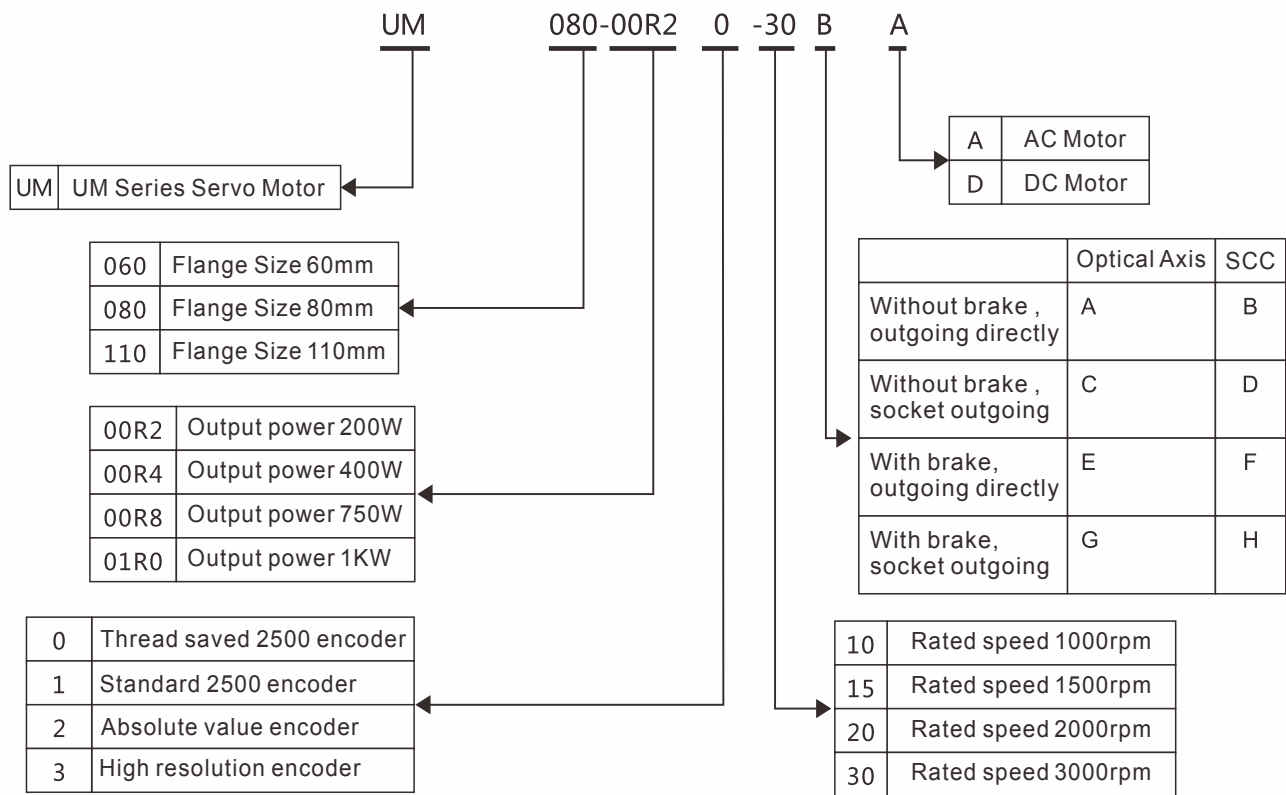
Servo driver interface



Classic application wiring



Servo motor name rule

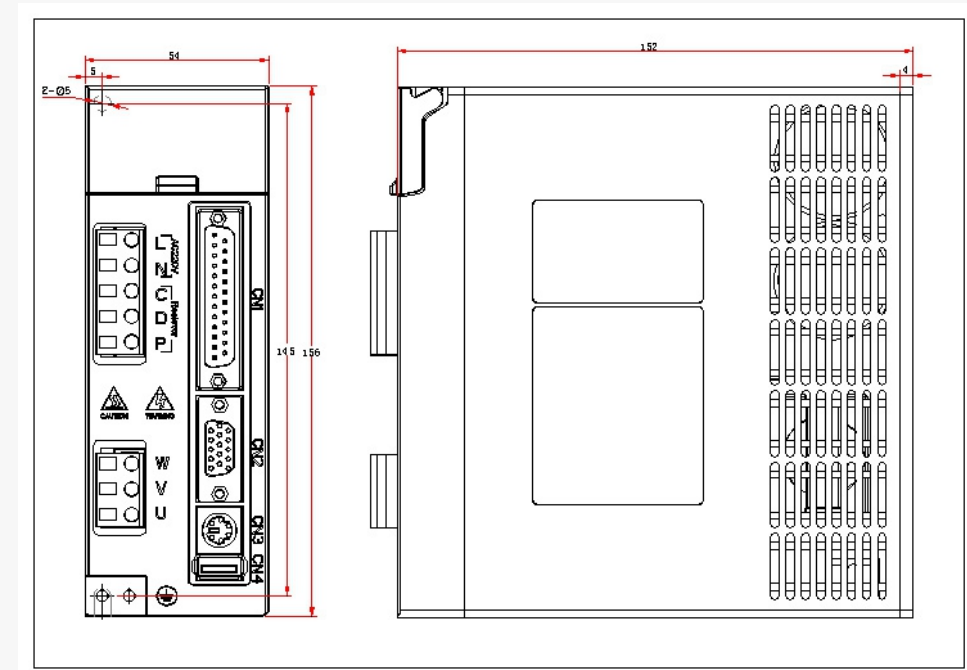


Motor Parameter

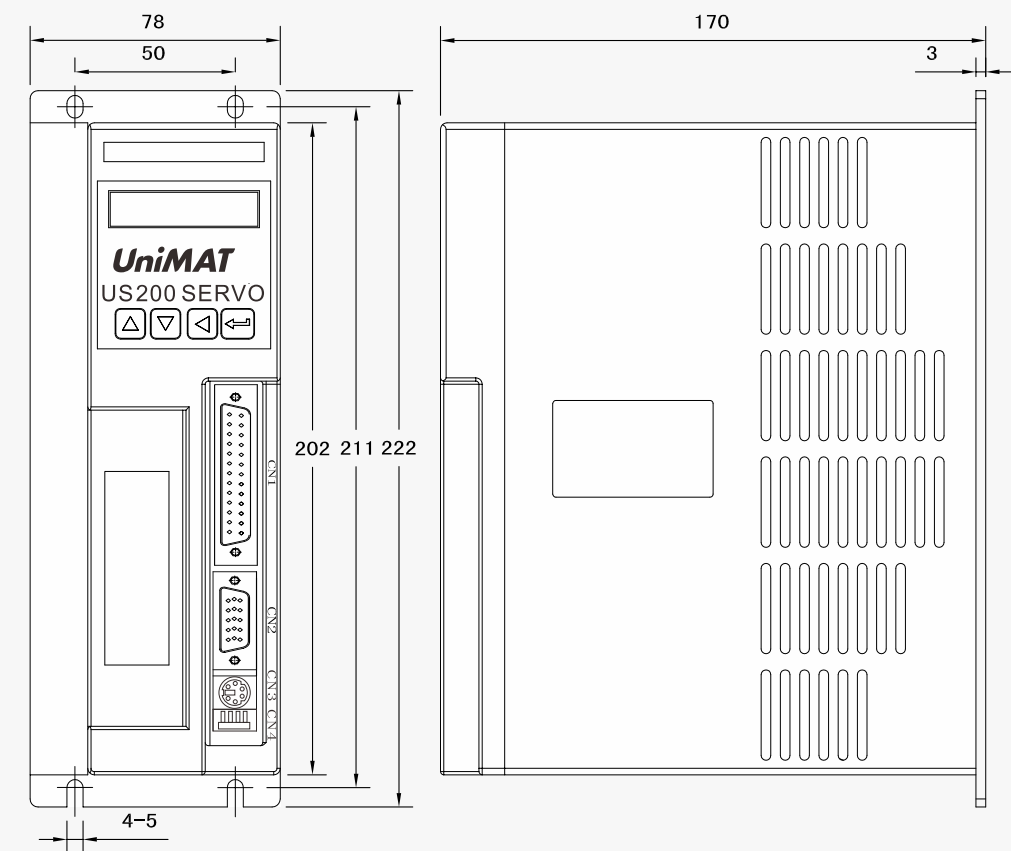
Motor Type	UM060-00R 20-30BA	UM060-00 R40-30BA	UM080-00 R80-30BA	UM080-01 R00-25BA	UM110-01 R50-30DA	UM130-02 R00-25DA				
Rated Power (KW)	0.2	0.4	0.75	1.0	1.5	2.0				
Rated Thread Voltage(V)	220	220	220	220	220	220				
Rated Thread Current(A)	1.2	2.8	3	4.4	6	7.5				
Rated Speed (rpm)	3000	3000	3000	2500	3000	2500				
Rated Torque (N.m)	0.637	1.27	2.39	4	5	7.7				
Top Torque (N.m)	1.91	3.9	7.1	12	15	22				
Top Current (A)			9	13.2		22.5				
Back EMF (V/krpm)	30.9	29.6	48	56	62	68				
Coefficient Torque(N.m/A)	0.53	0.45	0.8	0.9	0.83	1.06				
Rotor Inertia (Kg.m2)	0.175×10 ⁻⁴	0.29×10 ⁻⁴	1.82×10 ⁻⁴	2.97×10 ⁻⁴	0.63×10 ⁻³	1.53×10 ⁻³				
Winding Resistance (Ω)	6.18	2.35	2.88	1.83	1.03	1.01				
Winding Inductance (mH)	29.3	14.5	6.4	4.72	3.43	2.94				
Electrical Time Constant (ms)	4.74	6.17	2.22	2.58	3.33	3.8				
Weight (Kg)	1.16	1.6	2.9	4.1	6.8	10				
Encoder Thread(PPR)	2500									
Degree of motor Insulation	Class F									
Protection Degree	IP65									
Environment	Temperature:-20℃~40℃, Humidity<90%(Non condensing)									
Motor Winding Socket	Winding leads	U(red)		V(yellow)		W(blue)	PE(yellow green/black)			
	Socket No.	1		2		3	4			
Encoder socket	Signal leads	VCC	GND	A	/A	B	/B	Z	/Z	PE
	Socket No.	1	2	3	4	5	6	7	8	9

Servo Driver Installation Dimension

US212-00R8(mm)

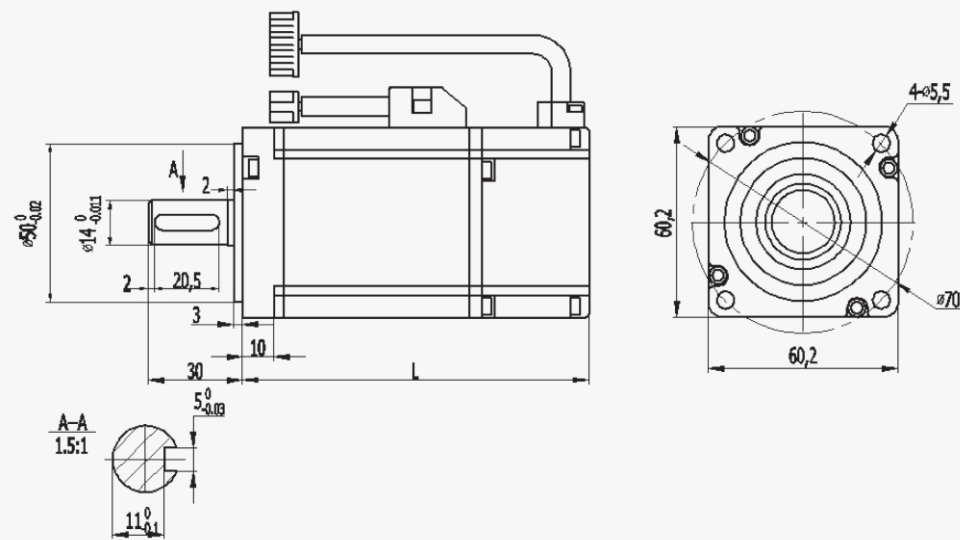


US232-01R3/US232-02R0(mm)



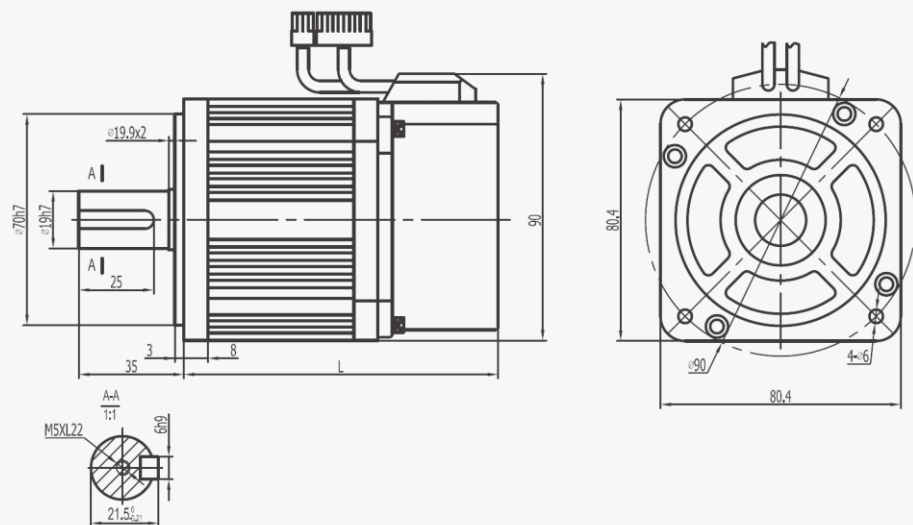
Servo Motor Dimension

60Motor Dimension (mm)



Model No.	UM060-00R20-30BA	UM060-00R40-30BA
L(without brake)	116	141
L(with brake)	164	189

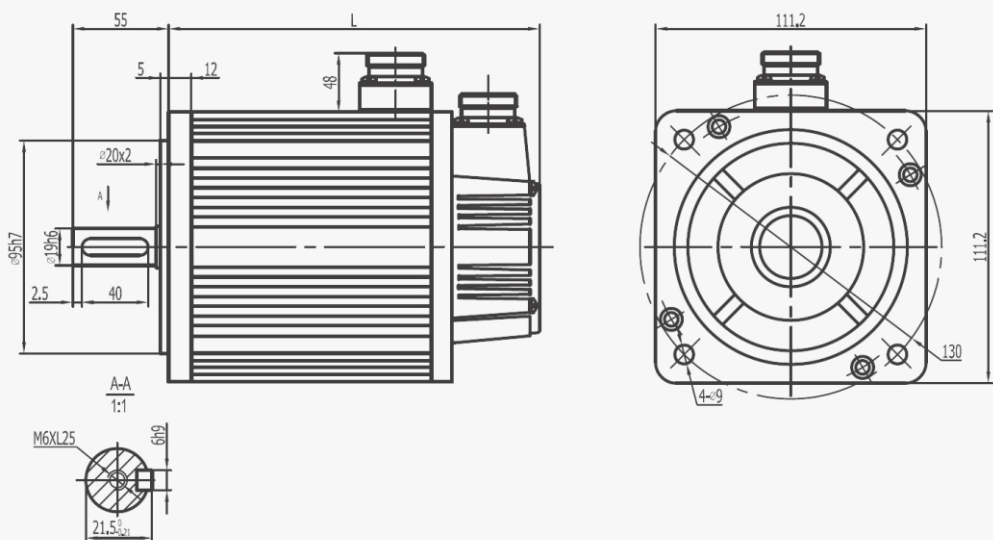
80 Motor Dimension (mm)



Model No.	UM080-00R80-30BA	UM080-01R00-25BA
L(without brake)	151	191
L(with brake)	205	245

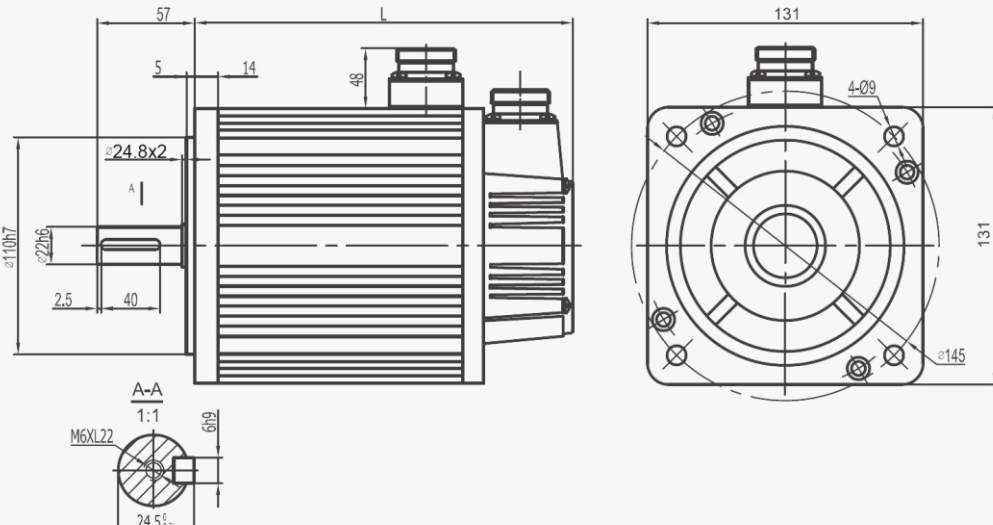
Servo Motor Dimension

110Motor Dimension (mm)



Model No.	UM110-01R50-30DA
L(without brake)	204
L(with brake)	260

130Motor Dimension (mm)



Model No.	UM130-02R00-25DA
L(without brake)	192
L(with brake)	262