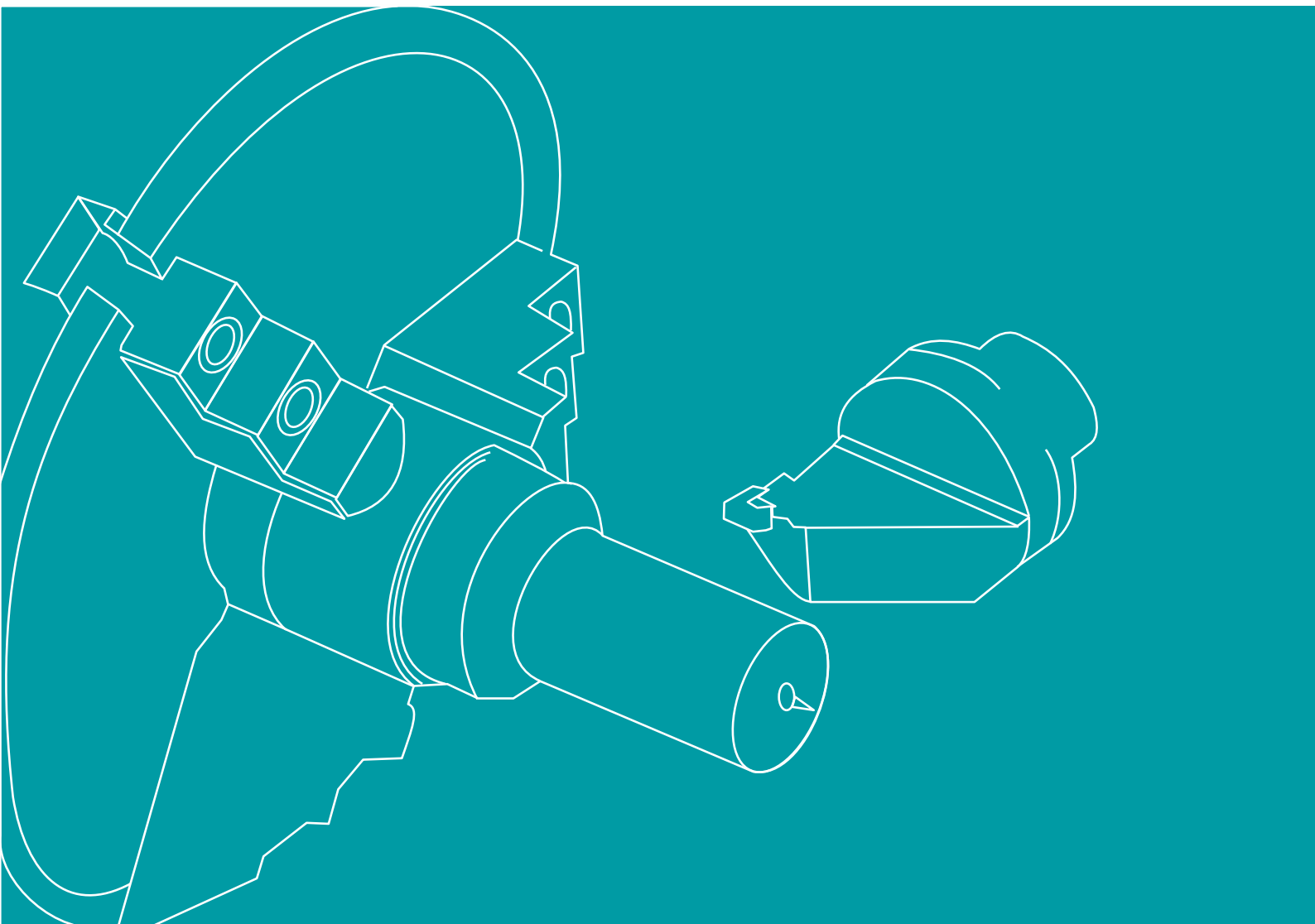


VEICHI

Professional Solution for Machine Tool Industry





Shenzhen Veichi Electric Co., Ltd. is a high-tech enterprise that is professionally engaged in the development, manufacturing and marketing of industrial automation control products, and committed to becoming a global leading provider of industrial automation control products and system solutions.

The company owns powerful R&D team, relatively perfect production system, independent intellectual property and manufacturing bases in Shenzhen and Suzhou. To improve our R&D strength, we keep on introducing advanced overseas technology and broadening our partnerships with first-class universities and research institutions.

The main products of Veichi Electric include a variety of Variable Frequency Drive (VFD), Servo Drive System, Photovoltaic Inverter, PLC, HMI, Automation Equipment, etc, which are widely used in industries such as oil & gas, chemical industry, ceramic, crane & hoist, metallurgy, electrical cable and wire, plastic, print and package, textile, metal work and cable, coal mining and municipal engineering. Suitable solutions and products are always ready to meet the demands and improve comprehensive competitiveness of users.

With the spirit of "Innovation is the lifeblood of Veichi", we're committed to becoming one of the leading providers of electric drives, industrial control and green energy products. Veichi has set up more than 40 branch offices in China and dozens of partners in Asia, Europe and Africa. Veichi has been named Chinese Electric Industry's Top Ten National Brands, Chinese Electric Industry Top Ten Satisfying Brands and Top Ten National Brands of Inverter Industry. Veichi products have become the first choice of many enterprises.





01

AC70-C Machine Tool Industry Purpose Variable Frequency Drive

Product overview

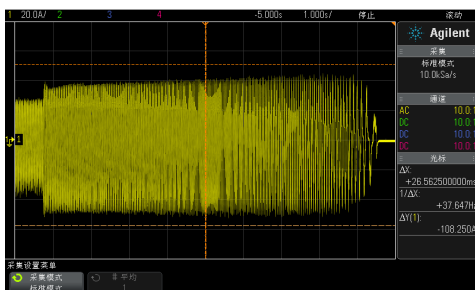
AC70-C is the latest development of a high performance machine tool purpose vector variable frequency drive. It adopts leading magnetic flux algorithm and modular design to achieve high-performance and high-precision motor drive control. Combining with the features of machine tool industry, the drive reliability has been enhanced to meet the processing demands of different products.

Product features

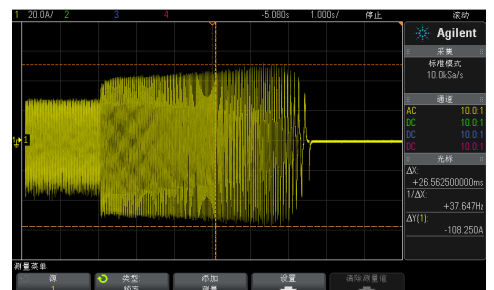
- Machine tool spindle adopts special macro parameter, which can simplify parameter setting.
- With low frequency large torque output, torque dynamic response is fast.
- With carrier smooth function, motor noise has been reduced effectively.
- It is easy for the drive to deal with all kinds of severe environment with sealed design and thickened three anti-paint treatment.

Deceleration overexcitation function

According to the set deceleration overexcitation current, the output current can be kept constant, which not only can quickly consume motor feedback energy to prevent over voltage of bus capacitor but also can produce large resistance torque to stop motor quickly and improve processing efficiency.



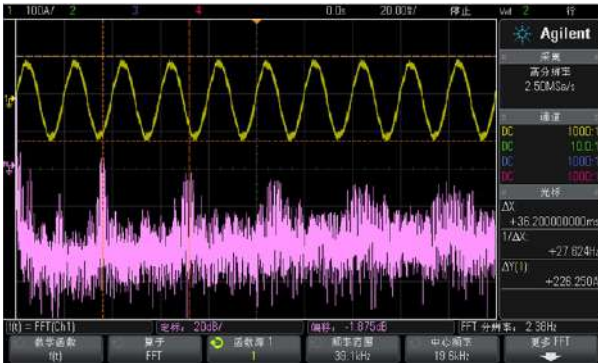
If deceleration overexcitation is off, output current is small and deceleration time is long.



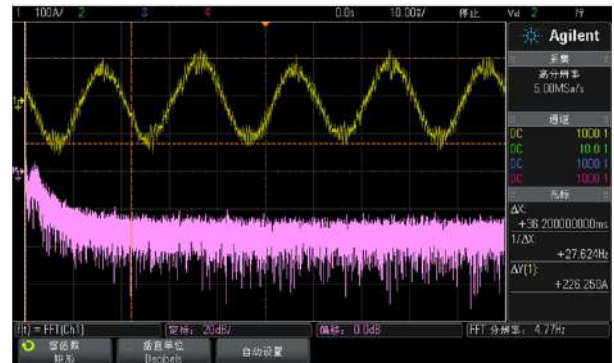
If deceleration overexcitation is on, output current increases and deceleration time shortens.

Noise control

Compared with high-pitched motor noise of fixed carrier, output voltage harmonic spectrum of random carrier is evenly distributed in a wide frequency range, which can reduce motor noise effectively.



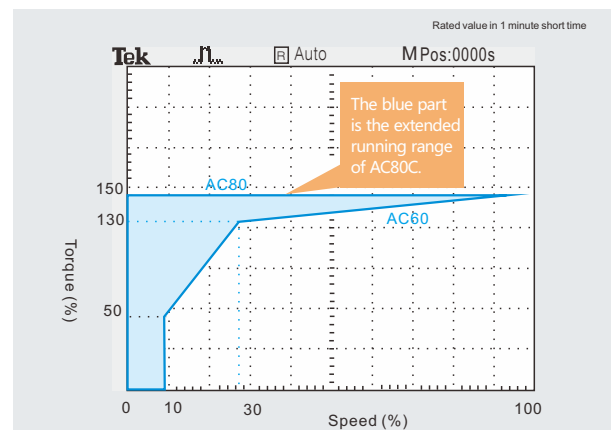
Random carrier is off.



Random carrier is on.

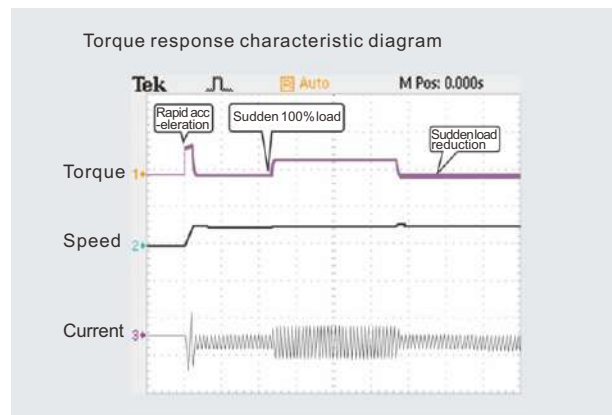
Large torque at low frequency

- In low frequency and weak magnetic field, torque performance is optimized.
- It has linear torque feature in the whole speed range.
- Torque dynamic response time is less than 20ms.



Load strain capacity

- Automatic current limit technology and automatic frequency adjusting technology can respond to load sudden change.
- Avoid frequent drive fault report to ensure its fast response characteristics.

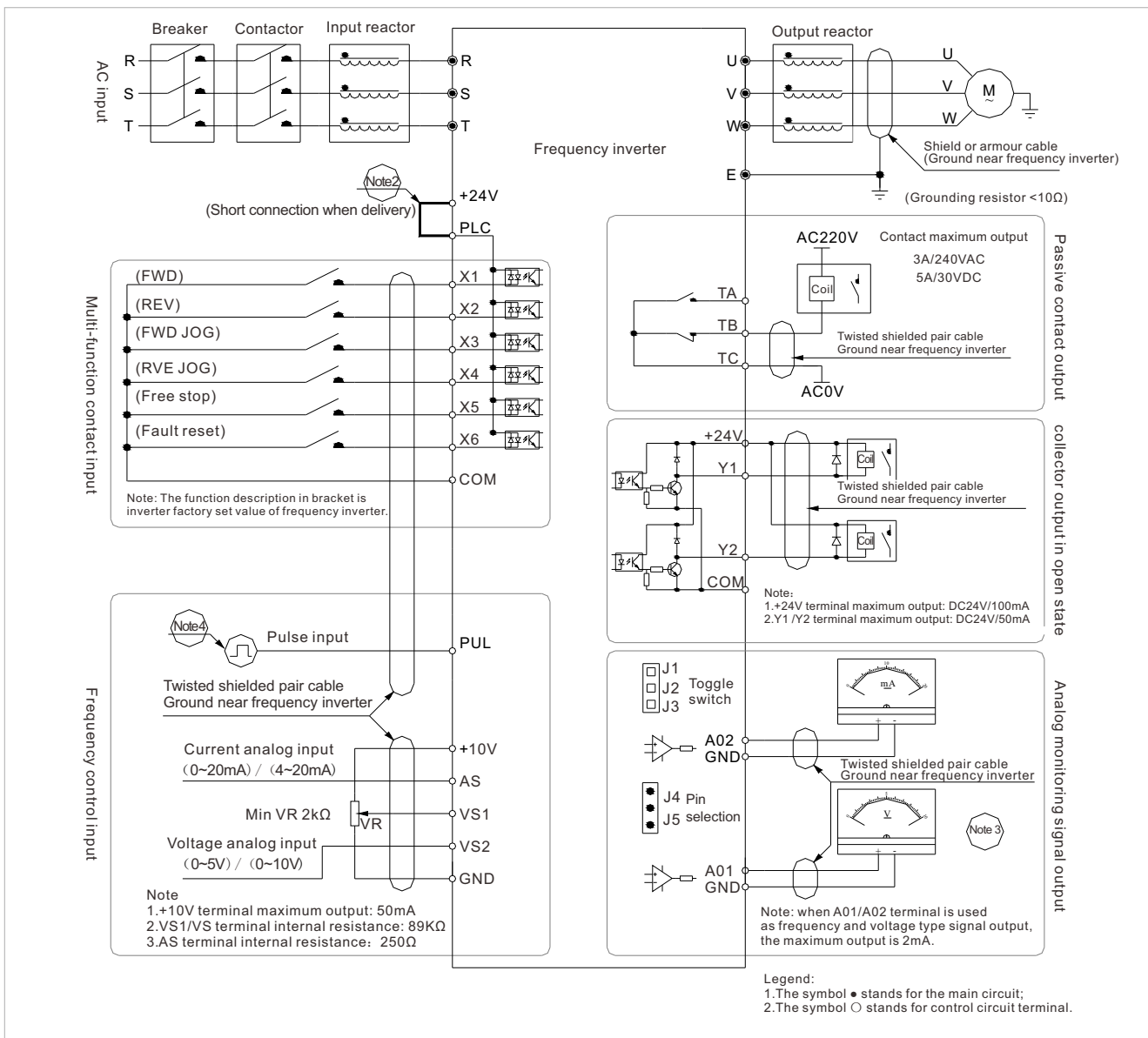


Long life design

- PCB three anti-paint treatment: according to different circuit board, the three anti-paint automatic spraying equipment can design different spraying strategies, and it can ensure three anti-paint coating thickness uniformity and batch consistency.
- With sealed design, it has good protection capability in serve environment such as high resistance to humidity, dust and vibration.



AC70-C wiring diagram



Selection table

Model	Motor power (KW)	Rated current (A)	Brake resistor
AC70-T3-R75C	0.75	2.5A	750Ω/150W
AC70-T3-1R5C	1.5	3.7A	400Ω/300W
AC70-T3-2R2C	2.2	5A	250Ω/400W
AC70-T3-004C	3.7	10A	150Ω/500W
AC70-T3-5R5C	5.5	13A	100Ω/600W
AC70-T3-7R5C	7.5	16A	75Ω/780W
AC70-T3-011C	11	25A	50Ω/1200W
AC70-T3-015C	15	32A	40Ω/1500W
AC70-T3-018C	18.5	38A	32Ω/2000W
AC70-T3-022C	22	45A	28Ω/2200W

02 AC100-CS Spindle Servo

Product overview

AC100-CS spindle servo system is a high-end product specific to the machine tool industry developed by Shenzhen Veichi Electric Co., Ltd. It adopts software and hardware platform to achieve full-closed-loop servo control of motor, and high precision speed control and position control of motor as well. As it can meet multiple control requirements of spindle, it has wide application in machine tool industry.



Product features

- Speed range 1:5000 with excellent low frequency torque.
- Steady speed accuracy ± 1 rpm and position accuracy ± 1 puls.
- Achieve special functions such as spindle indexing, rigid tapping and tread cutting etc. of machine tool.

Adaptive motor

Spindle servo motor, electric spindle and common three-phase asynchronous motor etc.

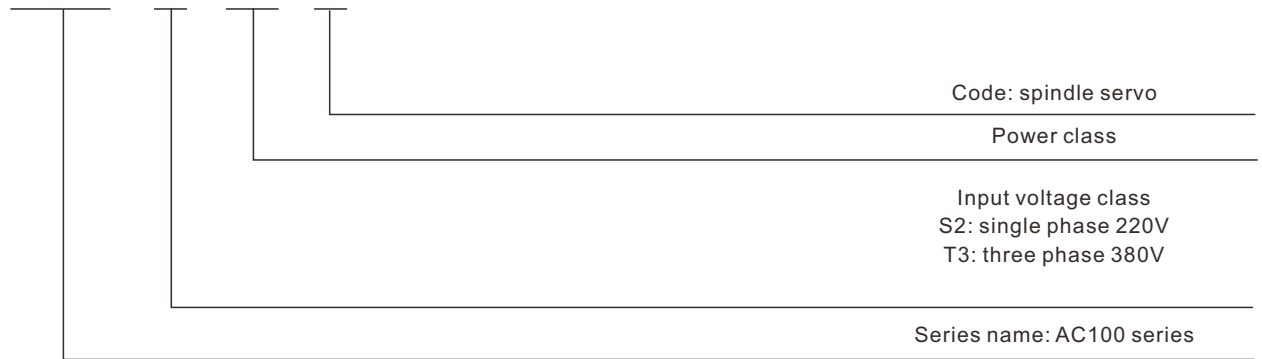
Applications

CNC lathe, machining center, gantry milling, deep hole drilling and NC boring machine etc.



Drive model

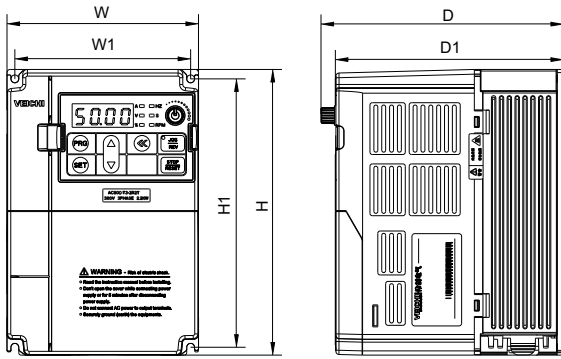
AC100 - T3 - 004 CS



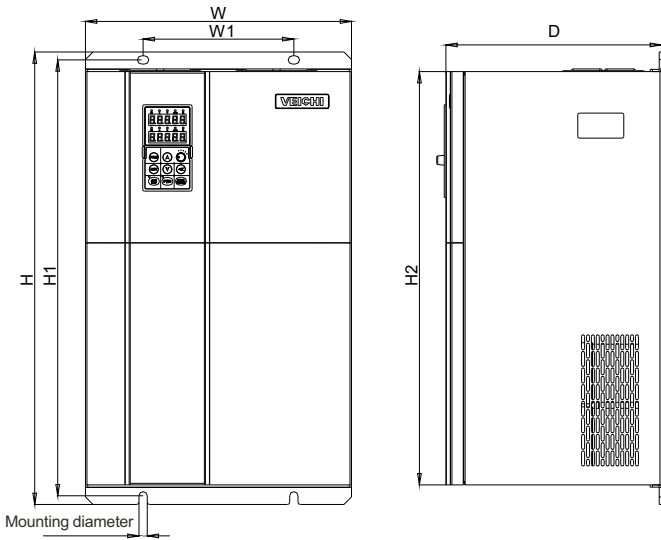
Technical specifications

Items		Specifications
Power input	Voltage and frequency	Three-phase 380V 50/60Hz
	Allowable fluctuation	Voltage: 320~440V; Voltage imbalance: <3%; Frequency: ±5% The deformation rate meets the requirements of IEC61800-2.
	Switching impulse current	Less than rated current
	Power factor	≥0.94 (with DC reactor)
	Inverter efficiency	≥96%
Main circuit output	Output voltage	Rated output: three phase, 0~380V input voltage, error less than 5%
	Output frequency range	0-650Hz
	Overload capacity	150% rated current in 1 minute, 180% rated current in 10 seconds, 200% rated current in 0.5 seconds
Signal input and output	Digital input/output	7 transistor input channels, 1 transistor output channel, 2 relay output channels
	Analog input	3 input channels, VS channel 0 ~ 10V, AS channel 0 ~ 20Ma, AI channel current and voltage input are optional
	Analog output	2 input channels, 0~10V, 0~20Ma, 4~20mA optional
Spindle functions	Speed control	0~12000rpm
	Spindle indexing	Achieve multiple position control (terminal has 8 points index at most) through terminal or external pulse
	Rigid tapping	Achieve tapping function with feed axis and the error is 2%
	Other functions	Thread cutting, electronic gears and position carry etc.
Main control performance	Motor control mode	VC without PG, VC with PG, V/F without PG, V/F with PG
	Modulation mode	Optimize space vector PWM modulation
	Carrier frequency	0.6~15.0kHz, random carrier modulation
	Speed control range	VC with PG, rated load 1:5000
	Steady speed accuracy	VC with PG: ≤0.01% rated synchronous speed
	Start torque	Flux VC without PG: 180% rated torque at 0.5Hz Flux VC with PG: 200% rated torque at 0Hz
Keyboard display	Protection function	Over voltage, under voltage, current limit, over current, over load, electronic thermal relay, over heating, over voltage stall, data protection
	Status monitoring	Output frequency, given frequency, output current, input voltage, output voltage, motor speed, PID feedback value, PID given value, module temperature, input and output terminal status etc.
Ambient	Fault alarm	Over voltage, under voltage, over current, short circuit, loss phase, over load, over heat, over voltage stall, current limit, data protection damage, current fault operation status, history fault
	Installation site	Indoor; the altitude is not more than 1000m; non-corrosive gases and direct sunlight
	Temperature and humidity	-10 ~ +40℃ 20%~95% RH (not frost)
	Vibration	Less than 0.5g below 20H
	Storage temperature	-25 ~ +60℃
	Installation	Wall mounted, vertical cabinet
	Protection grade	Ip20
Cooling method	Forced-air cooling	

Drive dimension



Drive model	Outline dimension				Mounting hole		Mounting diameter
	W	W1	H	H1	D	D1	
AC100-T3-1R5CS	122	112	182	171	154.5	145	Φ5
AC100-T3-2R2CS							
AC100-T3-004CS	159	147.2	246	236	157.5	148	Φ5.5
AC100-T3-5R5CS							
AC100-T3-7R5CS	195	179	291	275	167.5	158	Φ7
AC100-T3-011CS							

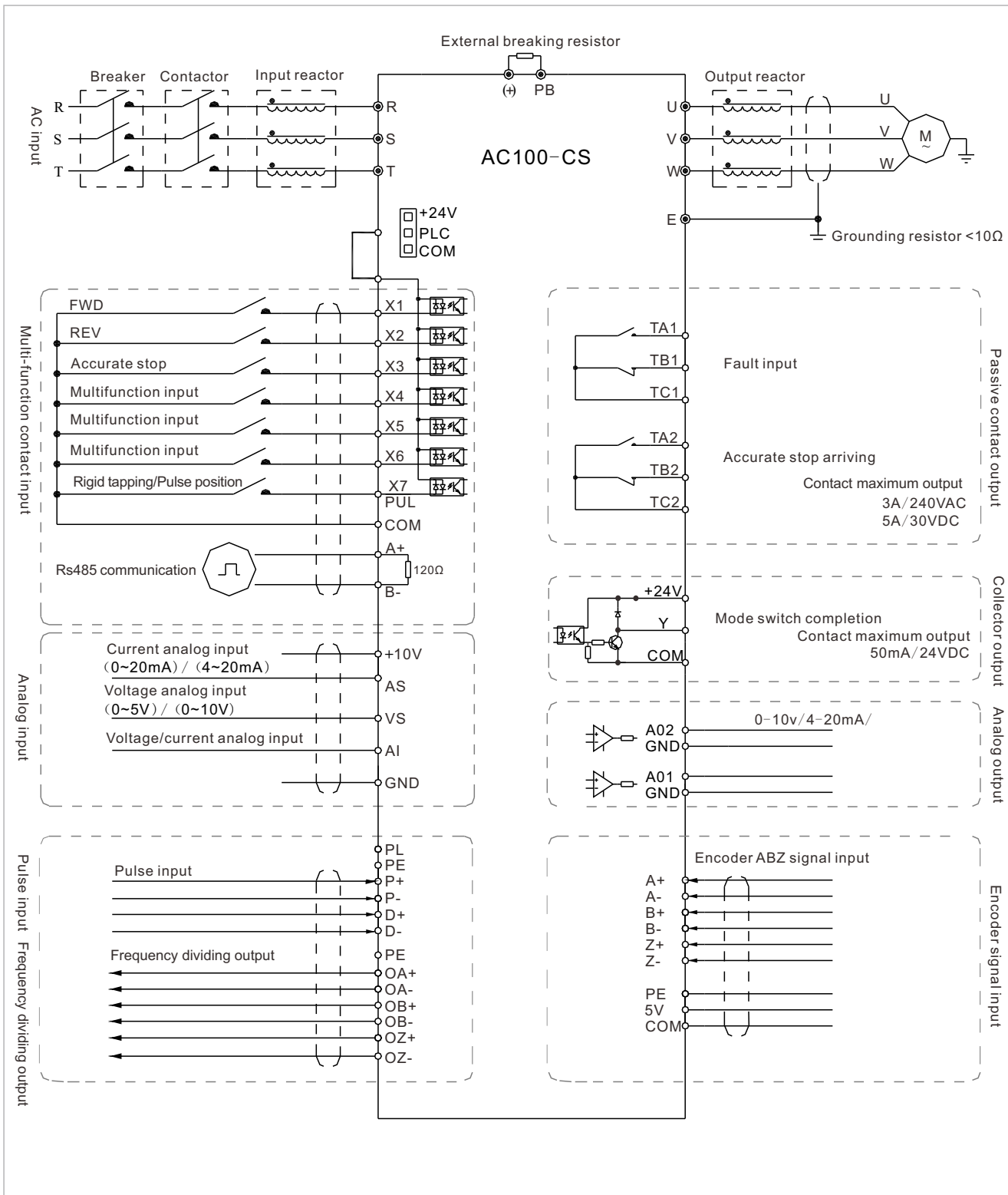


Drive model	Outline dimension				Mounting hole		Mounting diameter
	W	H	D	D1	W1	H1	
AC100-T3-015CS	235	345	200	311	160	331.5	Φ7
AC100-T3-018CS							
AC100-T3-022CS	255	410	225	370	180	395	Φ7
AC100-T3-030CS							
AC100-T3-037CS	305	570	260	522	180	550	Φ9
AC100-T3-045CS							
AC100-T3-055CS							

AC100-CS selection table

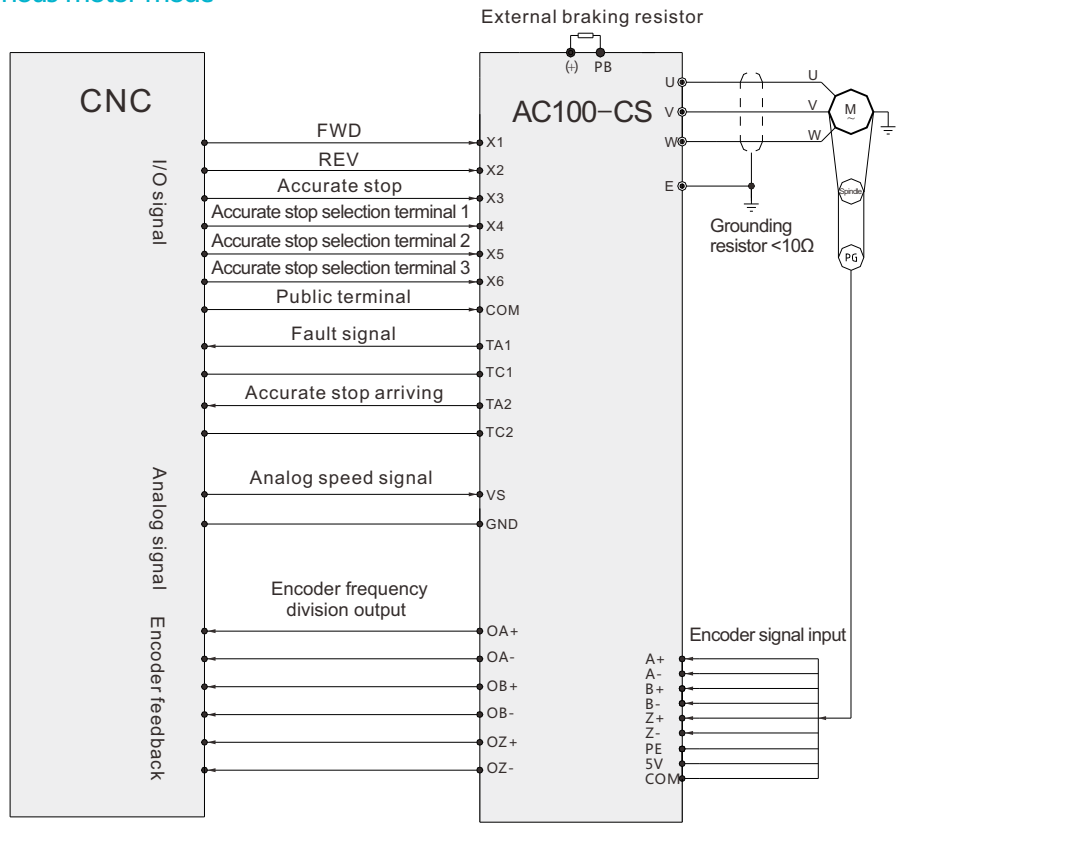
Model	Motor power (KW)	Rated current (A)	Braking resistor
AC100-T3-1R5CS	1.5	3.7A	250Ω/400W
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AC100-T3-011CS	11	25A	40Ω/1500W
AC100-T3-015CS	15	32A	32Ω/2000W
AC100-T3-018CS	18	38A	28Ω/2200W
AC100-T3-022CS	22	45A	24Ω/3000W

AC100-CS wiring diagram

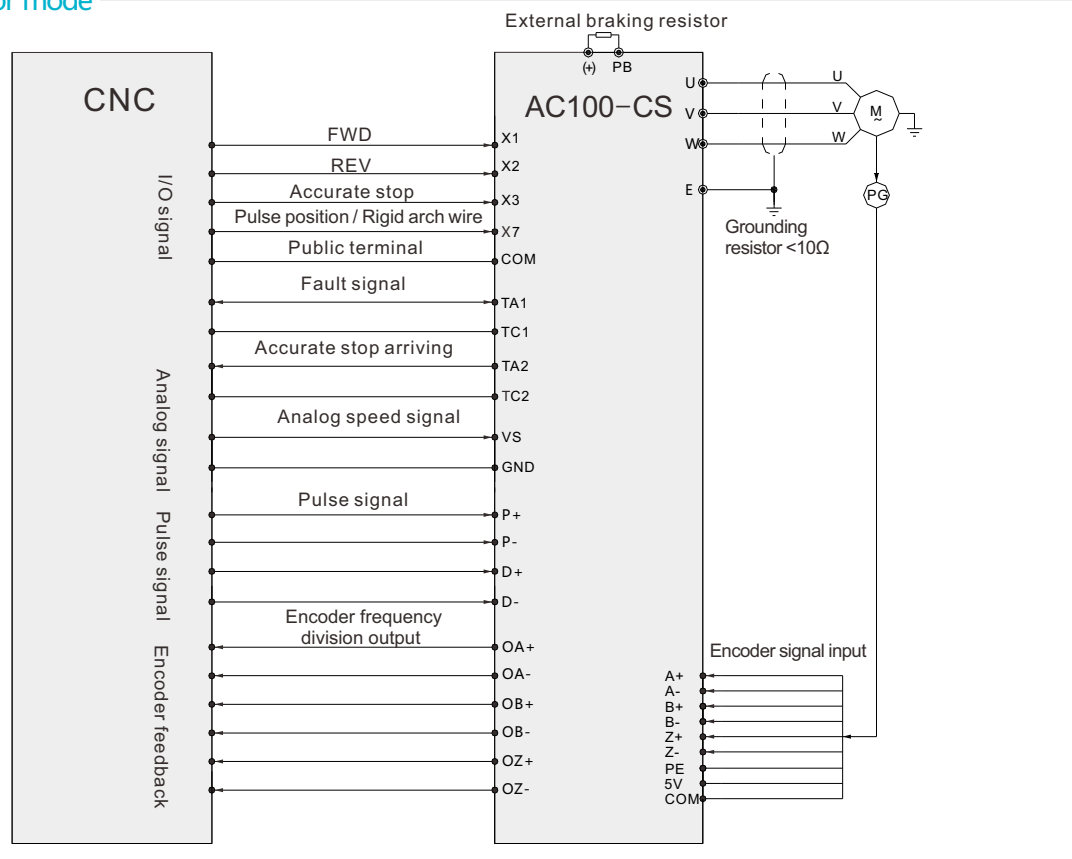


AC100-CS application solution

Common asynchronous motor mode



Spindle servo motor mode



Domestic Marketing Service Network



Veichi Electric was established in 2005 and headquartered in Shenzhen, China. In October 2013, Suzhou Veichi Electric Co., Ltd. was founded in Suzhou, Jiangsu province which formed two major production bases. Our sales and service network spread all over the country including more than 40 offices and service centers to ensure timely response of customer needs.

International Sales Network



VEICHI

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