

H1 series Compact Inverter



About StellarSpace

StellarSpace is a high-tech innovator founded by a core team from Tsinghua University, specializing in motion control algorithms and embodied core control systems. Built on advanced control technologies, we deliver an integrated architecture across the control, drive, and execution layers—enabling the next generation of industrial intelligence.

With a global vision, StellarSpace provides a full portfolio of PLCs, VFDs, HMIs, servo systems, and industrial motors. Our products are widely applied in emerging strategic industries, traditional industrial upgrading, and high-end equipment manufacturing. Leveraging the strong technical expertise of its Tsinghua-based team, StellarSpace deeply integrates advanced motion control algorithms with embodied core control systems into its offerings, providing customers with more intelligent, precise, and forward-looking application-oriented solutions.

StellarSpace is committed to advancing global industrial development and becoming an innovator in industrial civilization.

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OUR WORKSHOP



PRODUCT APPEARANCE INTRODUCTION

Compact & Flexible H1 Series Compact Inverter

Based on the industrial application demand of high stability, small size and easy debugging, StellarSpace has developed a new generation of compact inverter.

Support industry customization, widely used in woodworking machinery, fans and water pump, food filling, ceramic machinery, textile machinery and other equipment.




PRODUCT APPEARANCE INTRODUCTION

Compact design, Customized interface



Function Card

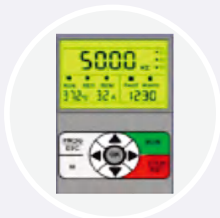
Press to remove it easily and can replace it with customized function card

 Plug and unplug with power is strictly prohibited



Abundant display

LED keypad, LCD keypad



External operation panel

parameter copy, fault diagnosis, operation optimization, cloud connection



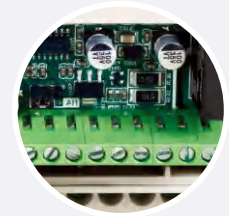
Easy detachable fan design

easy to replace, easy to clean, long life



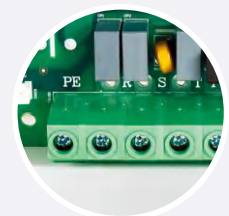
Independent air duct

Reliable heat dissipation
high protection level



Customized terminal

Customization cost rationalization according to industry characteristics and customer demands



European terminal

no need special tools.
easy connection, save time



PANEL INTRODUCTION

Value change key in programming mode
Increment/decrement select key(UP/DOWN)in non-programming mode



The status display interface is the status switch key, other interface is shift key

TECHNICAL SPECIFICATIONS

Category	Item	Description
Input	Rated voltage, frequency	Three phase: 380V~440V, 50Hz/60Hz; single phase: 200V~240V, 50Hz/60Hz
	voltage operating range	Three phase: 320V~460V; single phase: 180V~260V Voltage unbalance rate: <3%; frequency: ±5%
Output	voltage	0~rated input voltage
	frequency	0Hz~4000Hz
	overload capacity	150% rated current 60s, 180% rated current 2s
Main control performance	control mode	V/F; Sensorless vector control(SVC)
	modulation mode	Space vector PWM modulation
	motor type	Asynchronous motor, synchronous motor, single motor(Please consult the manufacturer when using)
	start torque	0.5Hz/150% rated torque
	speed adjusting range	1:100(speed sensorless)
	frequency accuracy	Digital setting: max.frequency ±0.01%; analog setting: max.frequency ±1%
	frequency resolution	Digital setting: 0.1Hz; analog setting: max.frequency 1%
	acceleration and deceleration curve	Line/S-curve
	current limiting	Automatic current limitation during operation to prevent frequent over current fault tripping
	instant power down	Support instant stop non-stop, automatic frequency reduction
	Operation function	command source	Keypad, terminal, communication
setting value source		Digital, analog, multi-step speed, communication
PID		Support main setting+PID
protection function		Over current, over voltage, under voltage, over heat, over load, phase loss, earth leakage, output short circuit protection, etc
communication		MODBUS RTU
Operation panel	digital tube display	Output frequency, output current, output voltage, bus voltage, displayed value 1, displayed value 2, current alarm, current fault
	external keypad	Support
Environment	applicable place	Indoor, no direct sunlight, no dust, corrosive gas, combustible gas, oil mist, water vapor, water drop or salt, etc
	altitude	Derating use if above 1000m, derating 10% for every 1000m increase
	environment temperature	-10°C ~+40°C (derating use if environment temperature is 40°C ~50°C)
	humidity	5%~95%RH, non-condensation
	store temperature	-40° C~+70° C
	vibration	<5.9m/s ² (0.6g)

EXCELLENT PERFORMANCE

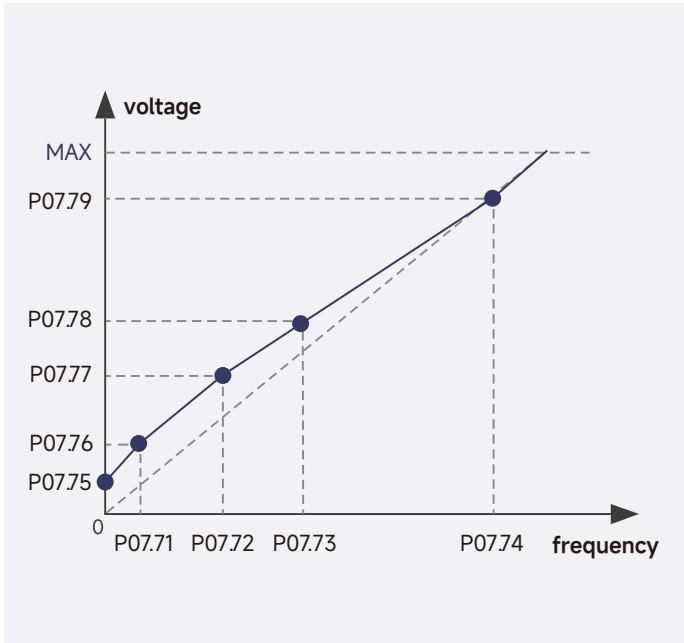
Compatibility drive:

Applicable to asynchronous motor, synchronous motor and single motor



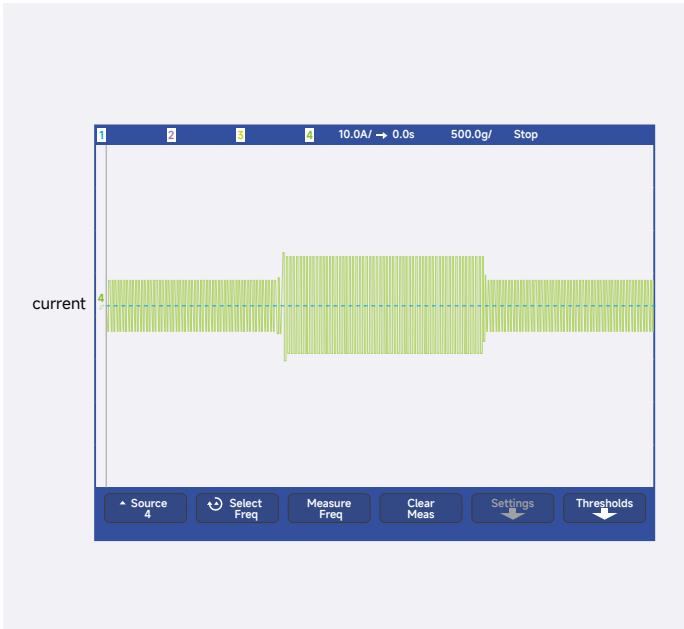
Adaptive vector control

Vector performance, VF convenience. The motor parameters are not sensitive and do not need self-learning



Wide range vector control

Frequency range 0~1000Hz, applicable to more motors, and ensures high performance when running with high speed



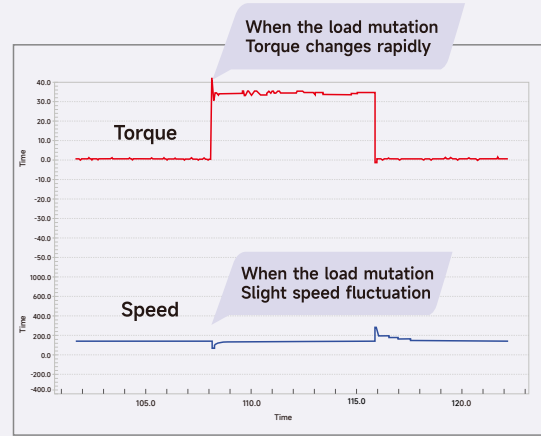
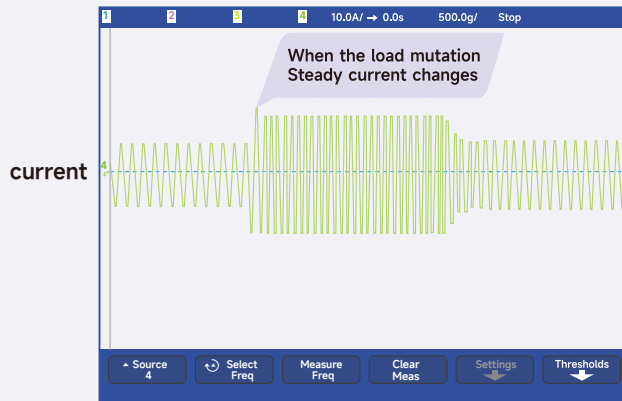
High carrier frequency

Max.16 kHz, motor can work more quietly



Fast current control

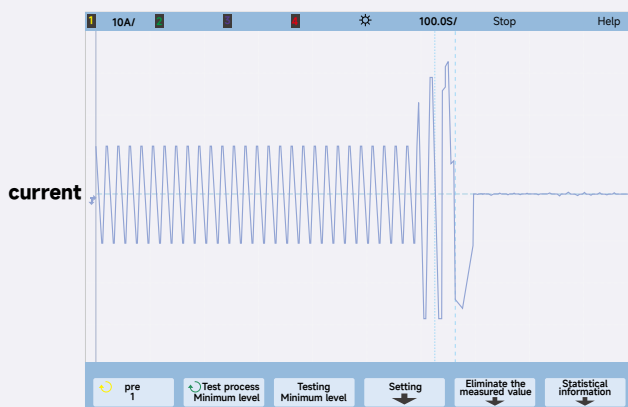
High dynamic response speed (15ms), fast start-up speed, small speed fluctuation.



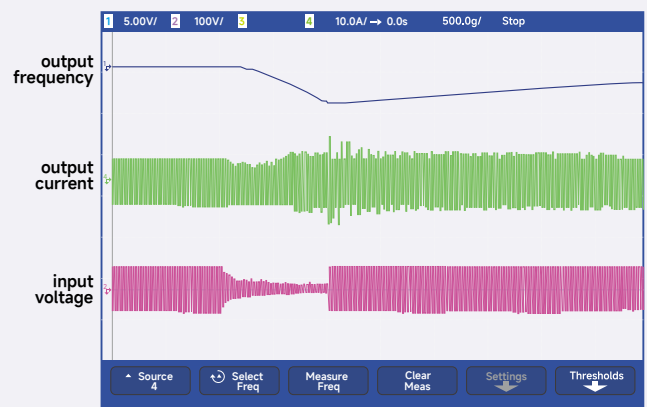
The waveform of current, torque and speed when add load suddenly and unload with 2Hz 100% rated load

Bus voltage control:

Over-voltage control ensures deceleration at the fastest speed, magnetic flux braking realizes rapid deceleration when there is no braking resistor, and under-voltage control realizes non-stop function when instantaneous power-off.



current waveform of magnetic flux brake, 50Hz 100% rated load deceleration time is 0.1s

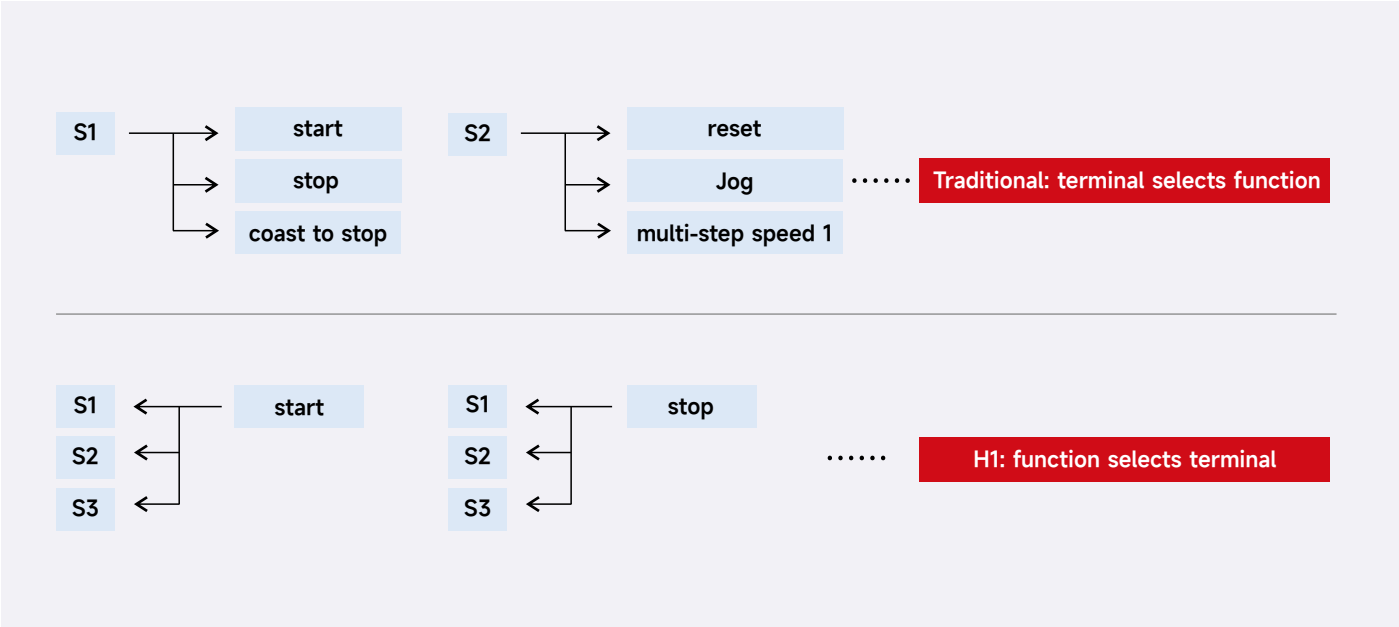


Instantaneous power non-stop waveform

POWERFUL FUNCTION

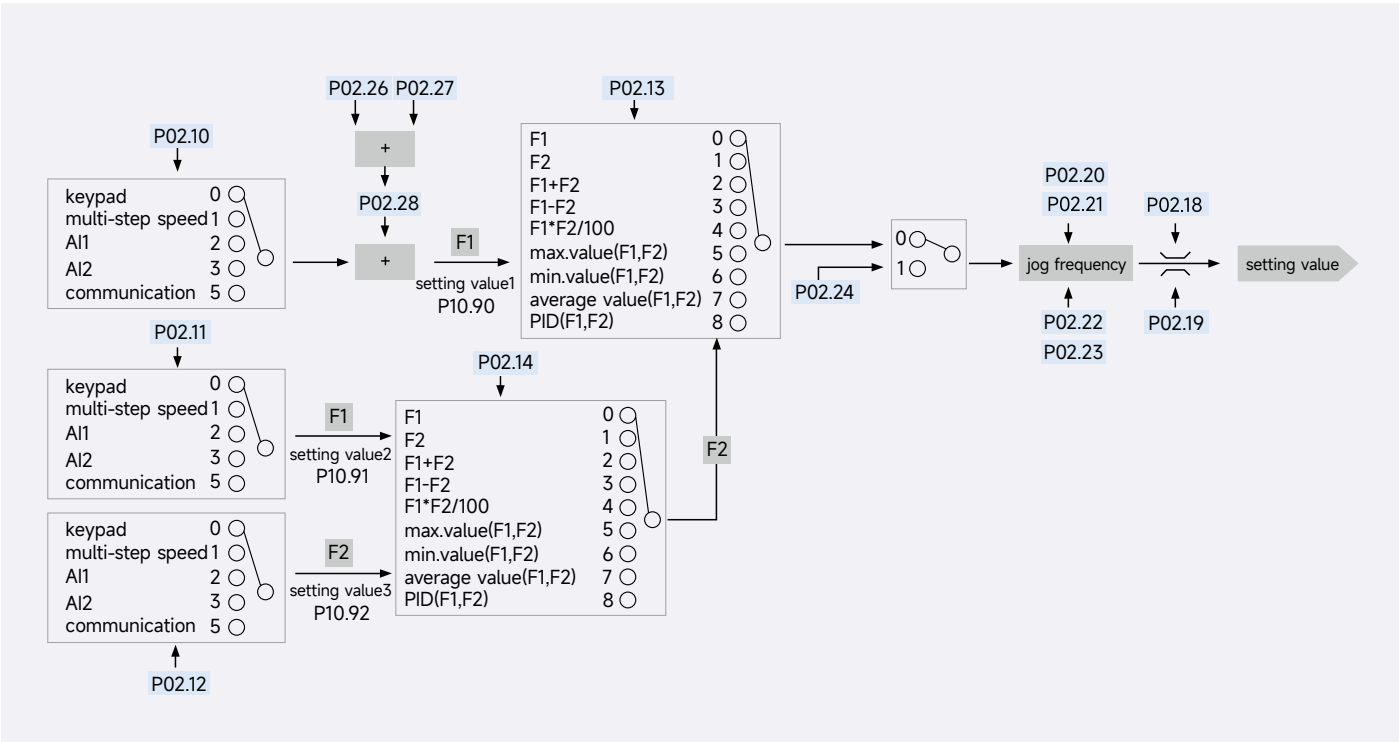
Easy to operate:

Select terminal source according to the required function, saving the number and type of terminal



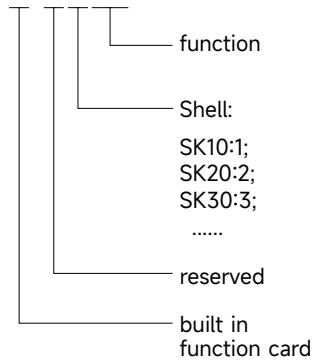
Flexible function:




Flexible combination of setting values and commands, easily adapt to different applications



Selection table

H 0 0 0 1



Module Name	H0100	H0101	H0102	H0103	H0104	H0110	H0120	H0130	H0131	H0200	H0201	H0300	H0310	H0320	H0350
Shell model	SK10					SK20					SK30				
Appearance															

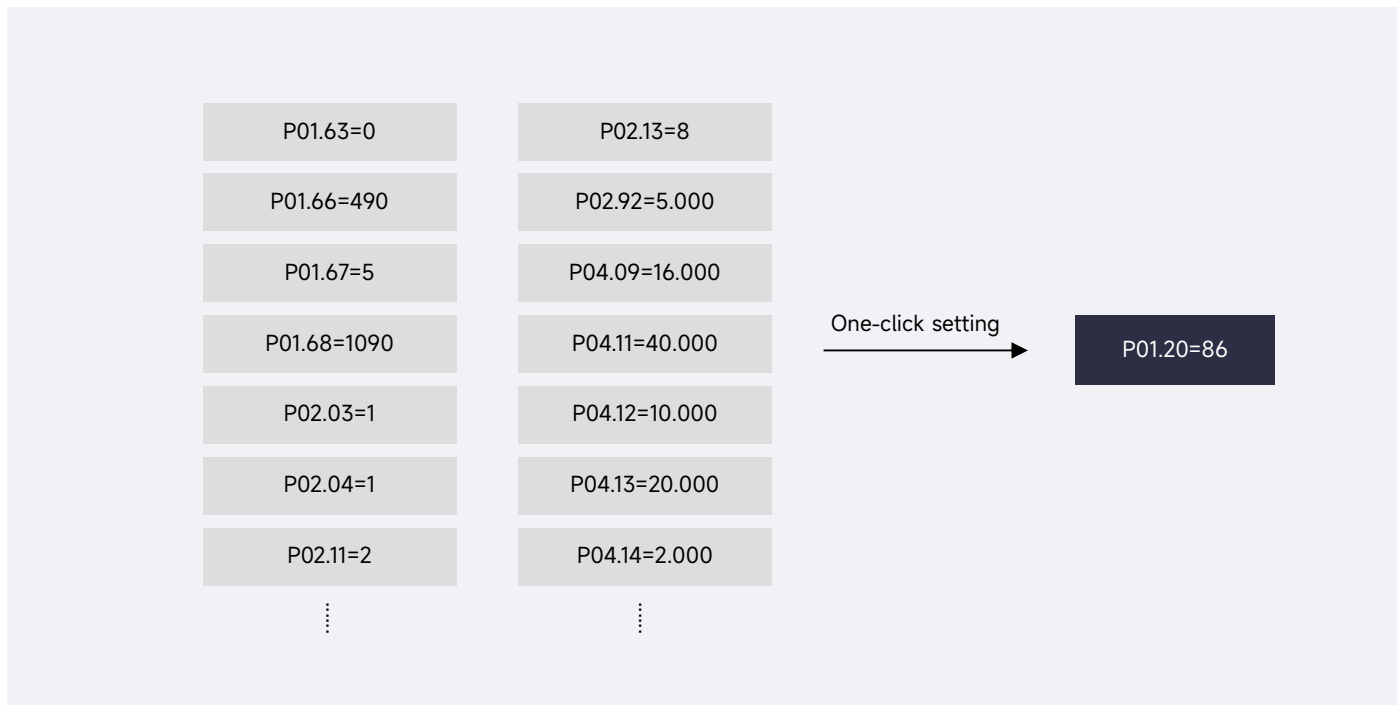
Physical characteristics	Function Card																		
	H0100	H0101	H0102	H0103	H0104	H0110	H0120	H0130	H0131	Continuous Updates	H0200	H0201	Continuous Updates	H0300	H0310	H0320	H0350	Continuous Updates	
Digital Input	2	4	1	4	2	5	10	5	1	.....	10	10	.....		4	5	3	.....
Digital Output							1			.....			.....					.....
Relay Output	1	1		3	1	2	2	2	1	.....	3	3	.....		1	1	1	.....
Analog Input	1	1		1	1	1	1	1		.....	2	2	.....		2	1		.....
Analog Output						2	1	2		.....	2	2	.....		2	2		.....
Pulse Input										.....			.....					.....
Pulse Output										.....			.....					.....
Encoder Input										.....			.....					.....
MODBUS	1	1	1	1	1	1	Optional	1	1	.....	1	1	.....		1	1	1	.....
STO										.....	1		.....					.....
Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	.....	Digital Display	Digital Display	.....		Digital Display	Digital Display	Digital Display	.....
Potentiometer	Analog	Analog		Analog	Analog	Analog	Analog	Analog		.....			.....		Analog	Analog		.....
Toggle Switch										.....			.....	1	2	2		.....
10V power supply		1		1	1	1	1	1		.....	1	1	.....		1			.....
12V power supply				1			1	1	1	.....	1	1	.....		1			.....

Remarks:

1. The built-in function card with STO function must be equipped with inverter of STO circuit, For example: H0200 built-in function card is equipped with H100T40040BT0 inverter (the second T represents built-in STO circuit).
2. If you need other types and quantity of terminals, contact our company for mass customization.

Application customization:

Complex application functions can be realized by programming, and customized function call can be realized by application macro



Maintenance tools:

PC upper computer, mobile app and other tools provide perfect monitoring, configuration, optimization and diagnosis services.



SOLID HARDWARE

Independent air duct:

No forced wind flows through the components, improving environmental adaptability.



Fast and tight protection:

Short circuit fault, input/output phase loss, overload, leakage, etc. , fully protect the inverter and motor.

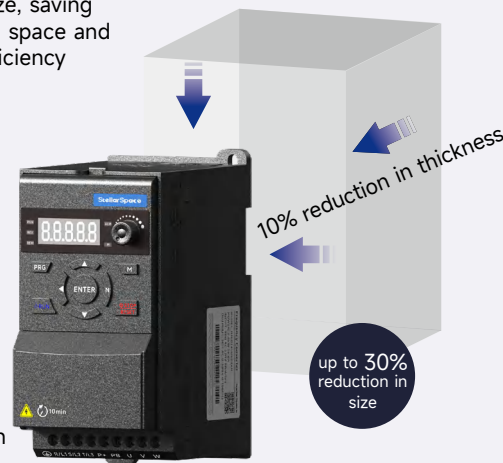


Delicate heat dissipation design:

Compact size and easy installation.

Picture 1

Compared with traditional inverters, the H1 series is smaller in size, saving up to 30% of the installation space and effectively improving the efficiency of space.



Picture 1

Picture 2

Support seamless installation side by side, provide high configuration flexibility and improve installation efficiency.



Picture 2

Abundant extended functions:

Provide various key-pad, communication, encoder, IO interface and other extension cards.

External operation panel type



OP-H102



OP-H101

Customization:

According to industry customization, remove redundant functions, cost is more reasonable, and quality is more stable.

function card

The function card is changeable
 It can be customized according to the characteristics of the industry, removing redundant hardware and functions, reducing unnecessary costs, improving product competitiveness and flexibility
 *Display panel can be customized
 *The number of terminals and functions can be customized
 *Parameter function can be customized

host

Host unchanged
 Stable quality, stronger reliability, faster reaction, stronger anti-interference ability



SOME APPLICATIONS

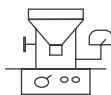
StellarSpace H1 series inverter is widely used in textile machine, packing machine, carving machine, printing machine, solar water pump, food machinery, woodworking machinery, water pump fan and ceramic machinery, providing better solutions



Textile machine



Packing machine



Carving machine



Printing machine



Solar water pump



Food machinery



Woodworking machinery



Water pump fan



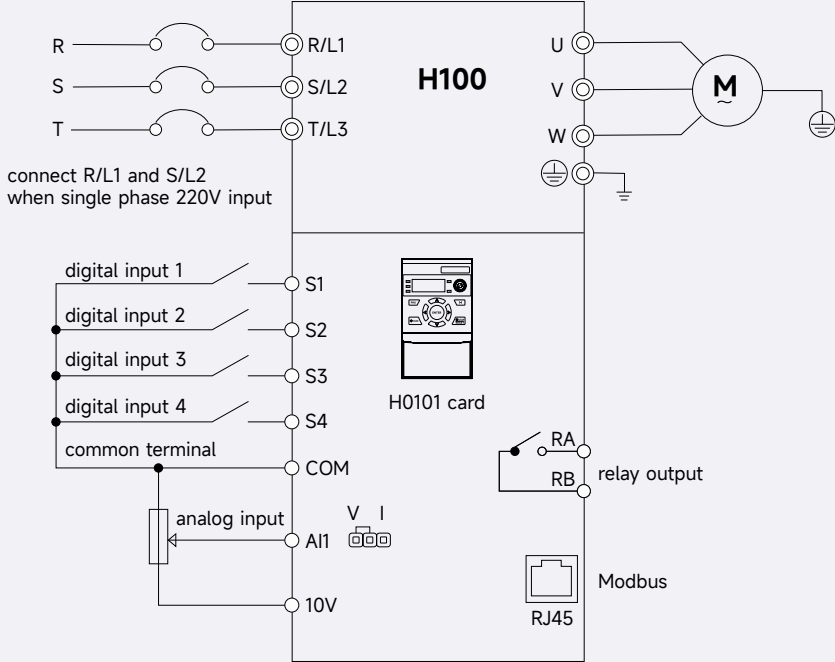
Ceramic machinery



Others

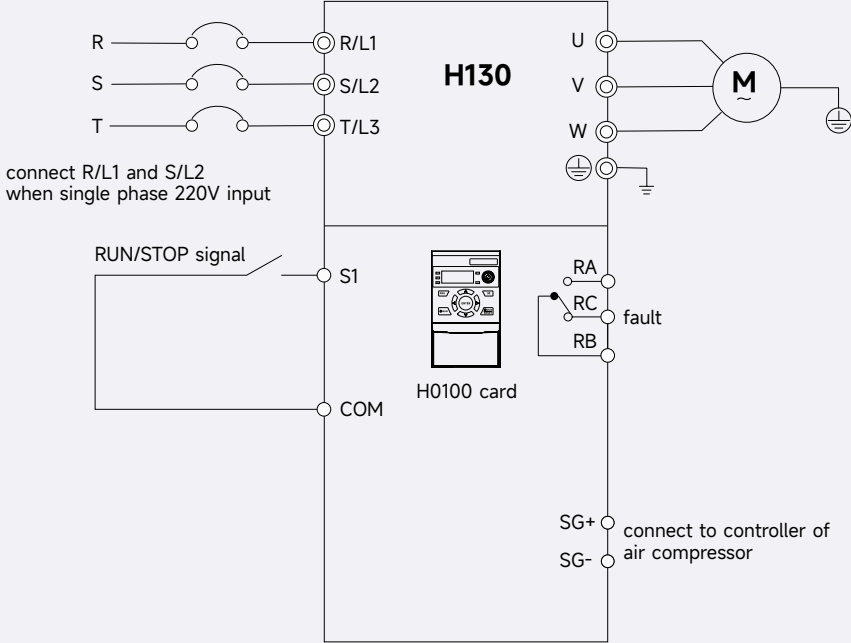
CONNECTION MODE

three phase input

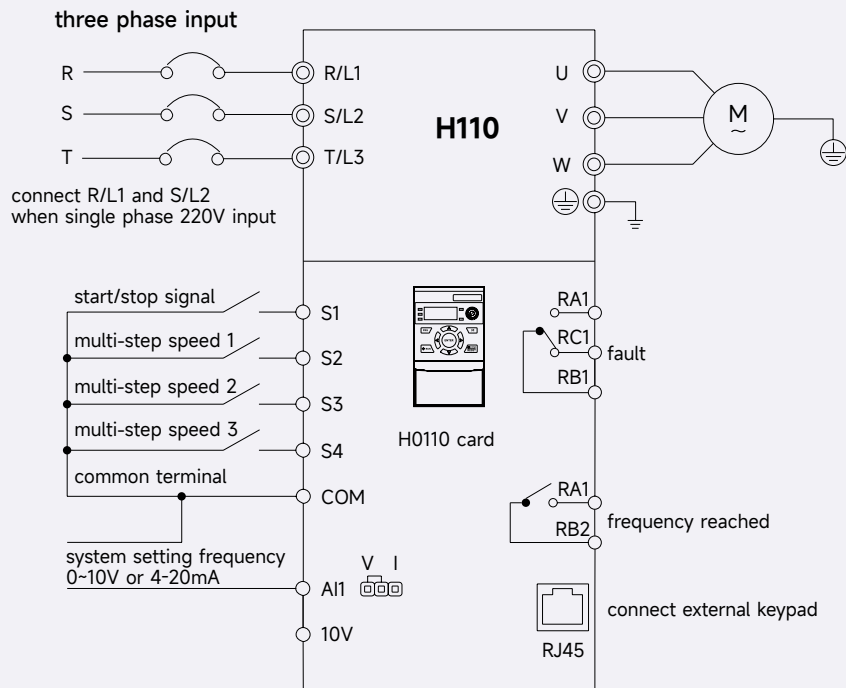


Standard wiring diagram

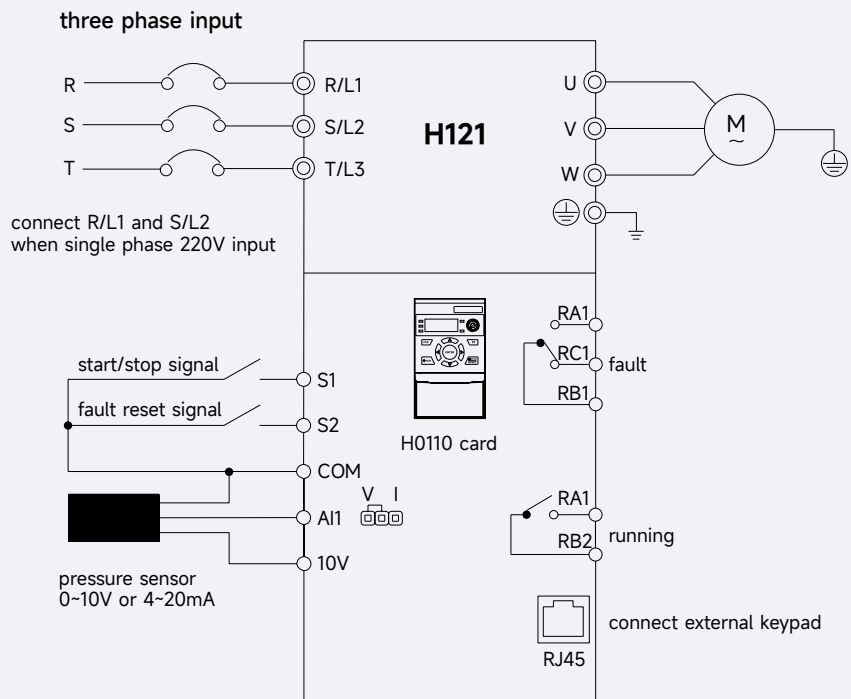
three phase input



Wiring diagram for air compressor



Wiring diagram for carving machine



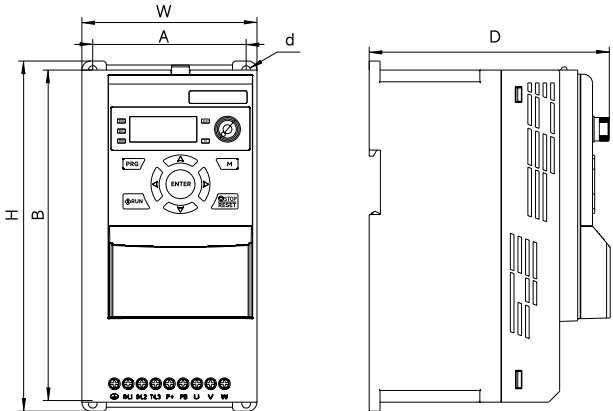
Wiring diagram for constant pressure water supply

NOMENCLATURE AND DIMENSIONS



H1 00 S2 0007 B T 0

- H1: Product model (H1 Series)
- 00: Customised product model
- S2: S/T: 1PH/3PH
2/4: 220/380V
- 0007: Power: kW
Top three: before decimal point
One decimal place: after decimal point
For example: 0007: 0.75kW
- B: Built-in brake unit
X: Without brake unit
- T: Built-in STO circuit
X: Without STO circuit
- 0: 0: no built-in reactor
1: built-in DC reactor
2: built-in AC reactor
3: built-in AC&DC reactor



INSTALLATION DIMENSIONS

Frame No.	Dimensions(mm)					
	W(Width)	H(Height)	D(Depth)	A	B	d
F1	85	170	124	67.3	158	5
F2	97	194	133	85	184	5
F3	126	237	147	112	223	5
F4	168	298	160	154	283	6
F5	198	355	177	183	338	6
F6	250	400	208	230	380	7
F7	280	545	292	200	526	9
F8	330	555	294	230	532	11
F9	400	670	304	280	646	11
F10	500	790	346	180*180	762	11

Models and specifications

Frame No.	Models	Input voltage	Input current(A)	Power(kW)	Output current(A)	Adaptive motor(kW)
F1	H100S20007BX0	single phase 220V	8.2	0.75	5.0	0.75
	H100S20015BX0	single phase 220V	14.0	1.5	7.0	1.5
F2	H100T20022BX0	single phase 220V	23.0	2.2	12.5	2.2
		three phase 220V	13.5			
F3	H100T20037BX0	single phase 220V	38.6	3.7	15.2	3.7
		three phase 220V	16.5			
F4	H100T20055BX0	three phase 220V	24	5.5	23	5.5
		H100T20075BX0	three phase 220V	37	7.5	31	7.5
F1	H100T20110BX0	three phase 220V	52	11	45	11
		H100T40007BX0	three phase 380V	4.0	0.75	3.0	0.75
F2	H100T40015BX0	three phase 380V	5.8	1.5	4.5	1.5
		H100T40022BX0	three phase 380V	6.5	2.2	5.6	2.2
F3	H100T40040BX0	three phase 380V	12.6	4.0	10.5	4.0
		H100T40055BX0	three phase 380V	16	5.5	14	5.5
F4	H100T40075BX0	three phase 380V	21	7.5	19	7.5
		H100T40110BX0	three phase 380V	28	11	26	11
F5	H100T40150BX0	three phase 380V	36	15	33	15
		H100T40185BX0	three phase 380V	42	18.5	40	18.5
F6	H100T40220BX0	three phase 380V	48	22	46	22
		H100T40300BX0	three phase 380V	62	30	58	30
F7	H100T40370BX0	three phase 380V	76	37	75	37
		H100T40450XX0	three phase 380V	92	45	90	45
F8	H100T40550XX0	three phase 380V	113	55	110	55
		H100T40750XX0	three phase 380V	157	75	150	75
F9	H100T40900XX0	three phase 380V	180	90	170	90
		H100T41100XX0	three phase 380V	214	110	210	110
F10	H100T41320XX0	three phase 380V	256	132	250	132
		H100T41600XX0	three phase 380V	307	160	300	160
F10	H100T41850XX0	three phase 380V	350	185	340	185
		H100T42000XX0	three phase 380V	385	200	380	200
F10	H100T42200XX0	three phase 380V	430	220	430	220
		H100T42500XX0	three phase 380V	468	250	465

StellarSpace

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Website QR Code



WeChat Official Account

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