



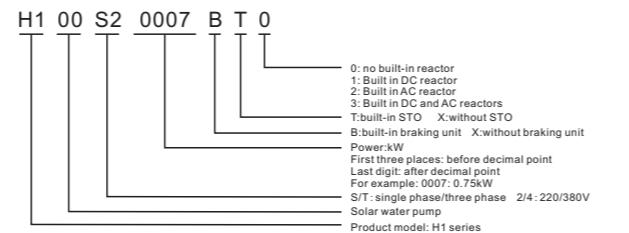
H1 Series Inverter USER MANUAL

NO.1 Product introduction

1.1 Technical Features

Items	Description
input	Rated voltage /frequency 3ph: 380V~440V , 50Hz/60Hz 1ph: 200V~240V , 50Hz/60Hz
output	Allowed voltage 3ph: 320V~460V ; 1ph: 180V~260V; voltage Imbalance rate: <3% ; frequency: ±5%
control performance	Voltage 0~rated input voltage Frequency 0Hz~1000Hz Overload capacity 150% rated current 60s, 180% rated current 2s Control mode V/F, SVC Modulation Mode SVPWM Motor type asynchronous motor, synchronous motor, single phase motor (consult factory before using) Start torque 1Hz/150% Speed range 1:100(SVC) Frequency accuracy digital setting: maximum frequency±0.01%; analog setting: maximum frequency±1%; Frequency resolution digital setting: 0.1Hz; analog setting: maximum frequency±1%; Acceleration/deceleration curve line/ S-curve Rapid current limit limit current rapidly within the current protection value, to ensure the safety of the equipment Non-stop when instantaneous power off non-stop when instantaneous power off, automatic frequency drop Command source keypad, terminal, communication Set value source digital, analog,multi-speed,communication PID support main setting+PID LED display Can display: output frequency,output voltage,output current , Bus voltage, display value 1 , display value 2 , error, alarm External keypad YES Protection function over-current protection, over-voltage protection, under-voltage protection, overheating protection, over-load protection, phase lose protection, earth leakage, etc Store environment indoor, away from direct sunlight, no dust, no corrosive gas, no inflammable gas, no oil mist, no vapour, no drip and no salinity, etc Altitude derating use above 1000M, derating 10% per 1000M Environment temperature -10°C~+40°C(environment temperature around 40°C~50°C please derating use) Humidity 5%~95%RH, no condensation Store temperature -40°C~+70°C Vibration <5. 9M/S (0.6g)

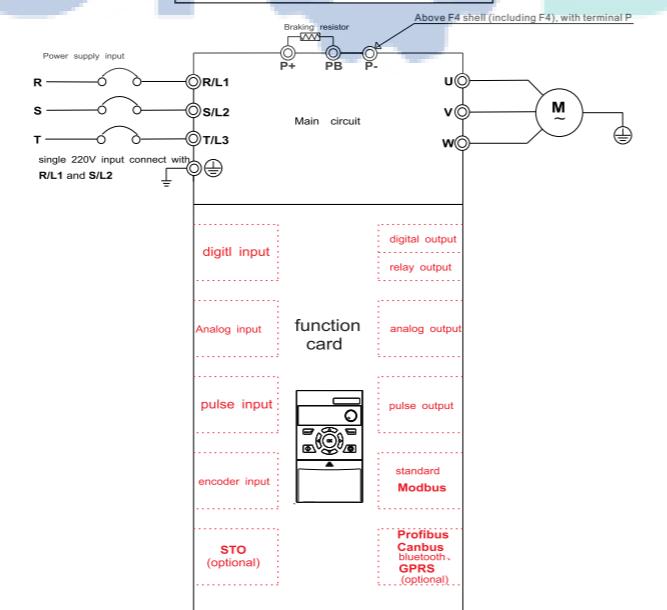
1.2 H1 nameplate



1.3 H1 series specifications and models

Base.No	Models	Input voltage	input current (A)	Power (kW)	output current (A)	Adaptive motor(kW)
F1	H100S20007BX0	1 phase 220V	8.2	0.75	5.0	0.75
	H100S20015BX0	1 phase 220V	14.0	1.5	7.0	1.5
F2	H100T20022BX0	1 phase 220V	23.0	2.2	12.5	2.2
		3 phase 220V	13.5			
F3	H100T20037BX0	1 phase 220V	38.6	3.7	15.2	3.7
		3 phase 220V	16.5			
F4	H100T20075BX0	3 phase 220V	37	7.5	31	7.5
	H100T20110BX0	3 phase 220V	52	11	45	11
F1	H100T40007BX0	3 phase 380V	4.0	0.75	3.0	0.75
	H100T40015BX0	3 phase 380V	5.8	1.5	4.5	1.5
F2	H100T40022BX0	3 phase 380V	6.5	2.2	5.6	2.2
	H100T40040BX0	3 phase 380V	12.6	4.0	10.5	4.0
F3	H100T40055BX0	3 phase 380V	16	5.5	14	5.5
	H100T40075BX0	3 phase 380V	21	7.5	19	7.5
F4	H100T40110BX0	3 phase 380V	28	11	26	11
	H100T40150BX0	3 phase 380V	36	15	33	15
F5	H100T40185BX0	3 phase 380V	42	18.5	40	18.5
	H100T40220BX0	3 phase 380V	48	22	46	22
F6	H100T40300BX0	3 phase 380V	62	30	58	30
	H100T40370BX0	3 phase 380V	76	37	75	37
F7	H100T40450XX0	3 phase 380V	92	45	90	45
	H100T40550XX0	3 phase 380V	113	55	110	55
F8	H100T40750XX0	3 phase 380V	157	75	150	75
	H100T40900XX0	3 phase 380V	180	90	170	90
F9	H100T41100XX0	3 phase 380V	214	110	210	110
	H100T41320XX0	3 phase 380V	256	132	250	132
	H100T41600XX0	3 phase 380V	307	160	300	160

NO.2 Main circuit and function card



Notice: different function card corresponding to different terminals. Except standard function card, can customize any type of card.

Reset parameters when using different function cards. An AC drive only can use one function card.

Warning: Do not use function card when power is on!

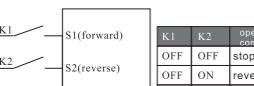
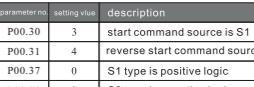
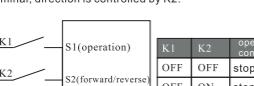
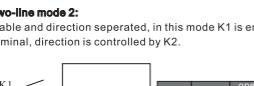
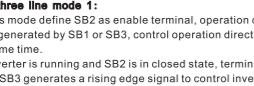
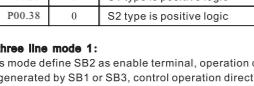
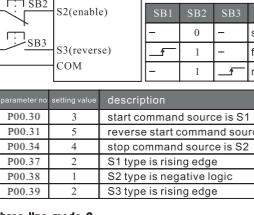
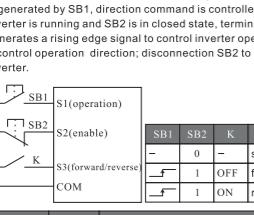
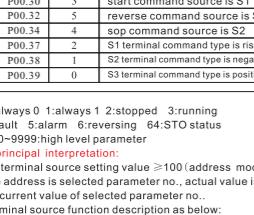
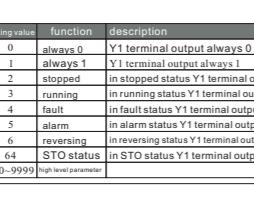
2.1 Main circuit terminal description

Terminal identification	Name	Function description
(G)	Grounding terminal	Safety grounding
R/L1、S/L2、T/L3	Main circuit power input terminal	Connect three phase power supply, single phase power supply connect to R/L1, S/L2
P+、PB	Braking terminal	Connect to external braking resistor
P+、P-	DC bus terminal	Two sets or more inverters use a common DC bus (Above F4 shell (including F4), with terminal P)
U、V、W	output terminal	Connect to three phase motor

2.2 Function card configuration table

H 0001		Function configuration									
Name		H0100 H0101 H0102 H0103 H0104 H0110 H0120 H0130 H0131 H0200 H0201 H0300 H0310 H0320 H0350									
Housing		SK10 SK20 SK30									
Function card		Physical characteristics									
Digital input		H0100 2 4 1 4 2 5 10 1 10 4 5 3									
Digital output		H0101 1 1 3 1 2 2 1 3 1 1 1									
Relay output		H0102 1 1 1 1 1 1 2 2 2 1 1 1									
Analog input		H0103 1 1 1 1 1 1 2 2 2 1 1 1									
Pulse input		H0104 1 1 1 1 1 1 2 2 2 1 1 1									
Pulse output		H0110 1 1 1 1 1 1 2 2 2 1 1 1									
Encoder input		H0120 1 1 1 1 1 1 2 2 2 1 1 1									
Modbus		H0130 1 1 1 1 1 1 2 2 2 1 1 1									
STO		H0131 1 1 1 1 1 1 2 2 2 1 1 1									
Display		H0200 1 1 1 1 1 1 2 2 2 1 1 1									
Potentiometer		H0201 1 1 1 1 1 1 2 2 2 1 1 1									
Toggle switch		H0300 1 1 1 1 1 1 2 2 2 1 1 1									
12V power supply		H0310 1 1 1 1 1 1 2 2 2 1 1 1									
10V power supply		H0320 1 1 1 1 1 1 2 2 2 1 1 1									
H0350		H0350 1 1 1 1 1 1 2 2 2 1 1 1									

Note:
1. the built-in function card with STO function must be equipped with AC drive of STO circuit, for example: H0200
built-in function card is equipped with AC drive with model H100T40040

Function code	Function	Description(setting range)	Factory default	Function code	Function	Description(setting range)	Factory default	Function code	Function	Description(setting range)	Factory default	Function code	Function	Description(setting range)	Factory default																																																																																																				
P00.37	S1 type	One place: 0: Positive logic 1: Reverse logic 2: Rising edge 3: Falling edge Tens place: 1: Rising edge toggle 2: Falling edge toggle Hundreds place: 1: The edge signal is not cleared by other edge signals Thousands place: 1: The edge signal is not cleared by the stop signal Function: select external terminal trigger type * Principle explanation: One place: 0: positive logic, High level is valid state, low level is invalid state; 1: Reverse logic, High level is invalid state, low level is valid state; 2: Rising edge, the rising edge is valid; 3: Falling edge, falling edge is valid; Tens place: 1: Rising edge ping-pong key; 2: Falling edge ping-pong key; The tens position can control the edge signal and realize a reset button to control start and stop. Hundreds place: 1: The edge signal is not cleared by other edge signals; Thousands place: 1: The edge signal is not cleared by the stop signal. *two-line mode 1: the mode is most commonly used two-line mode, enable and direction combined, K1 and K2 control forward/reverse of motor	0	P00.41	AI1 low side voltage(current)	-999999.000~999999.000 ◎function: analog input AI1 setting *AI1 low side voltage/current: set the lowest voltage/current of input signal *AI1 high side voltage/current: set the highest voltage/current of input signal *AI1 low side setting: set corresponding value of low side voltage/current. *AI1 high side setting: set corresponding value of high side voltage/current.	0.000V(mA)	P00.42	AI1 high side voltage(current)	-999999.000~999999.000 ◎function: analog input AI1 setting *AI1 low side voltage/current: set the lowest voltage/current of input signal *AI1 high side voltage/current: set the highest voltage/current of input signal *AI1 low side setting: set corresponding value of low side voltage/current. *AI1 high side setting: set corresponding value of high side voltage/current.	10.000V(mA)	P00.43	AI1 low side setting	range setting A11 high side setting P00.44 A11 terminal setting A11 low side setting P00.43 P00.41 P00.71 P00.42 voltage (current) input 0 100.000% P3.04 0:voltage input 1:current input	0.000%	P00.44	AI1 high side setting	range setting A11 high side setting P00.44 A11 terminal setting A11 low side setting P00.43 P00.41 P00.71 P00.42 voltage (current) input 0 100.000% A11 AI terminal input A11 low side voltage (current) high side voltage (current)	100.000%																																																																																																
				P00.45	AO1 signal source	0:always 0 1:always 10V/20mA 2:output frequency 3:motor current 4:output voltage 5:motor torque 6:output power 7:setting frequency 100~9999:high level parameter ** Principle interpretation: AO1 signal source function description as below:	2	P00.46	AO1 low side setting	-999999.000~999999.000 *AO1 low side setting: set AO1 source minimum value. *AO1 high side setting: set AO1 source maximum value. *AO1 low side voltage/current: set the lowest voltage/current of output signal. *AO1 high side voltage/current: set the highest voltage/current of output signal.	0.000	P00.47	AO1 high side setting	voltage current output P00.49 AO1 high side voltage current P10.75 AO1 terminal setting P00.48 AO1 low side voltage current P00.46 P00.45 P00.47 range setting P03.60 0:voltage output 1:current output 0 100.000% P00.49 AO1 high side voltage(current) P00.46 P00.45 P00.47 range setting P00.48 AO1 low side voltage (current)	50.000	P00.48	AO1 low side voltage(current)	0.000V(mA)	P00.49	AO1 high side voltage(current)	10.000V(mA)	P00.50	PID proportional gain	0.000%~10.000% Determine the adjustment intensity of the whole PID regulator, bigger proportional gain is, bigger adjustment intensity is.	0.010%																																																																																										
				P00.51	PID integral gain	0.001~9999.000s Determine PID regulator to the integral speed adjustment of the deviation of PID feedback quantity and given quantity, smaller integral gain is, greater adjustment intensity is.	10.000s	P00.52	PID output upper limit	-1000.000%~1000.000% PID adjust the output maximum value, if higher than maximum value, then output PID output upper limit, relative to P0.11 maximum setting value percentage.	100.000%	P00.53	PID output lower limit	-1000.000%~1000.000% PID adjust the output minimum value, if lower than minimum value, then output PID output lower limit, relative to P0.11 maximum setting value percentage.	0.000%	P00.54	PID range	0.001%~9999.000% set according to actual feedback value, if lower than feedback value, then PID invalid.	100.000	P00.55	PID dormancy frequency	0.000%~500.000% set dormancy accurate frequency, relative to P0.11 maximum setting value percentage.	0.000%	P00.56	PID enter dormancy time	0.000s~3600.000s inverter reach enter dormancy time and meet to dormancy time, enter dormancy.	0.000s	P00.57	PID wakeup deviation	0.000%~100.000% percentage based on setting value.	0.000%	P00.58	PID enter wakeup time	0.000s~3600.000s inverter reach wakeup deviation and meet to wakeup time, operation again.	0.000s	P00.59	PID dormancy action	0:no dormancy: 2:decelerate to stop: 4:stop: 5:operate in lowest frequency PID enter dormancy according to setting dormancy action.	0																																																																												
				P00.60	startup function	0:start frequency operation 1:speed start 2:DC injection	0	P00.61	startup time	0.000s~60000.000s ** Principle interpretation: 0: no frequency output startup mode, meet to P00.61 startup time setting, P00.62 start frequency start to startup operation. 1:speed start, search rotating motor speed, smooth start without impact from search speed. 2:DC injection, inverter startup by "DC injection before startup" mode.	0.000s	P00.62	start frequency	0.000Hz~100.000Hz ** Principle interpretation: start function finish, if setting frequency bigger than start frequency, system start from start frequency; if setting frequency smaller than start frequency, system start from setting frequency.	0.000Hz	P00.63	DC injection current	0.000%~200.000% ◎function: set magnitude of DC injection current. (set P00.60=2 as DC injection) ** Principle interpretation: start mode is DC injection, need to set magnitude of DC braking current, 100% corresponding to inverter rated current.	100.000%	P00.64	stop function	units:0:free stop ; 1:DC braking; tens:1:accurate stop * Principle interpretation: during stop process, stop function starts work when output frequency smaller than stop frequency, and the required motor rotation turns are same, realize consistent repeatability of stop position. To get the best efficiency, deceleration time not to trigger over pressure and over loss rate prevention function as long as possible.	0	P00.65	stop frequency	0.000Hz~1000.000Hz interpretation refer to 0.64	0.000Hz	P00.66	DC braking current	0.000%~300.000% set DC braking current.	100.000%	P00.67	DC braking time	0.000s~1000.000s set DC braking time.	0.000s	P00.68	braking resistor mode	0:invalid 1:valid function: braking resistor braking mode parameter set	1																																																																												
				P00.69	control mode	0:VF 1:vector control 1 function:select motor control algorithm	1	P00.70	carrier frequency	2kHz~16kHz ◎function: set carrier frequency	*kHz	P00.71	motor power	0.000kW~100000.000kW ◎function: set motor parameters	*kW	P00.72	motor voltage	0V~1000V ◎function: set motor parameters	*V	P00.73	motor frequency	1Hz~3000Hz ◎function: set motor parameters	*Hz	P00.74	motor current	0.00A~1000.00A ◎function: set motor parameters	*A	P00.75	motor speed	10rpm~65535rpm ◎function: set motor parameters	*rpm	P00.76	VF curve-F1	0.0Hz~3000.0Hz set V/F curve under V/F control mode. When vector control 1 is adopted, set the corresponding frequency points of V/F curve to adjust control characteristics of the corresponding control points.	50.0Hz	P00.77	VF curve-F2	* Principle interpretation: set V/F curve under V/F control mode. When vector control 1 is adopted, set the corresponding frequency points of V/F curve to adjust control characteristics of the corresponding control points.	50.0Hz	P00.78	VF curve-F3	50.0Hz	P00.79	VF curve-F4	50.0Hz	P00.80	VF curve-V0	0V~10000V * Principle interpretation: set V/F curve under V/F control mode. When vector control 1 is adopted, set the corresponding voltage points of V/F curve to adjust control characteristics of the corresponding control points.	0V	P00.81	VF curve-V1	* Principle interpretation: set V/F curve under V/F control mode. When vector control 1 is adopted, set the corresponding voltage points of V/F curve to adjust control characteristics of the corresponding control points.	*V	P00.82	VF curve-V2	*V	P00.83	VF curve-V3	*V	P00.84	VF curve-V4	*V	P00.85	VF curve-V5	*V	P00.86	VF curve-V6	*V																																															
				P00.87	local address	MAX P00.86 P00.85 P00.84 P00.83 P00.82 P00.81 voltage		P00.88	current limit	output current exceed setting limit threshold.		P00.89	Input power down	The input voltage is lower than the power down standard value (P05.86)		P00.90	ST0	Safe torque output stop function operation		P00.91	ST1	Alarm of ST1 internal circuit diagnosis		P00.92	ST2	Alarm of ST2 internal circuit diagnosis		P00.93	ST3	Alarm of internal circuit diagnosis		P00.94	user fault	user defined fault(P03.08)																																																																																	
				P00.95	baud rate	0:2400bps 1:4800bps 2:9600bps 3:19200bps 4:38400bps 5~10:reserved ◎function: Communication port configuration	3	P01.41	baud rate	0~24 ◎function: set inverter local address	1	P01.42	baud rate	0.2400bps 1:4800bps 2:9600bps 3:19200bps 4:38400bps 5~10:reserved ◎function: Communication port configuration	3																																																																																																				
				P00.96	fault code	NO.6 Fault code		P00.97	fault code	Fault Code	Description	E0001	protection function	inverter components fault or software fault		E0004	ground fault	Abnormal resistance to ground, cause electric leakage		E0005	short circuit to ground	short circuit to ground		E0006	output short circuit	inverter cut off output when inverter output current is 250% larger than inverter rated current.		E0007	output over current	inverter cut off output when inverter output current is 200% larger than inverter rated current.		E0008	DC bus over voltage	inverter cut off output if main circuit DC voltage is higher than 400V(220V motor type) or 800V(380V motor type) when motor decelerates.		E0009	DC bus low voltage	input voltage decrease, inverter cut off output if main circuit DC voltage too low.		E0010	inverter over heat	inverter cut off output if cooling fin is over heat.		E0011	self-learning failure	self-learning parameter wrong or motor abnormal.		E0013	rectifier over heat	rectifier module over heat.		E0014	U phase loss	output U phase loss.		E0015	V phase loss	output V phase loss.		E0016	W phase loss	output W phase loss.		E0019	no motor connect	motor lost connection during operation.		E0020	input phase loss	power input phase loss.		E0021	inverter over load	inverter cut off output when inverter output current exceed inverter rated level (150% 60S).		E0022	over torque	motor over torque		E0024	motor over heat	motor temperature is over heat.		E0025	motor over load	inverter cut off output when inverter output current exceed motor rated level (150% 60S).		E0026	current limit	output current exceed setting limit threshold.		E0027	Input power down	The input voltage is lower than the power down standard value (P05.86)		E0033	ST0	Safe torque output stop function operation		E0034	ST1	Alarm of ST1 internal circuit diagnosis		E0035	ST2	Alarm of ST2 internal circuit diagnosis		E0036	ST3	Alarm of internal circuit diagnosis		E0063	user fault	user defined fault(P03.08)	
				P00.98	fault code	Note: The alarm code is compared to the above table, for example: the keyboard displays "A0025" which means the motor overload alarm.																																																																																																													
				P00.99	fault code																																																																																																														
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