CV20 Series

CNA Function Table of Connector Terminal

Category	Terminal silk screen	Name	Description of terminal function	Specification
Shield	PE	Earth shield	GND for the shield layer of terminal. Shield layer of the analog signal cable , 485 communication cable , motor power cable can be connected here	Connect the PE terminal of internal main circuit
Power supply	+10	+10V Power	Provide +10V reference power	Provide 5mA current at most
Communication	RS+	RS485 communication	RS485 difference signal positive	Standard RS485 communication connector
Communication	RS-	connector	RS485 difference signal negative	(Use twisted-pair or shield cable please)
Analog input	Al1	Analog single-ended input Al1	Receive the analog voltage or current single-ended input, they are selected by jumper AI1 (Reference ground:COM)	Input voltage range: -10V~+10V (Input resistor: 45kΩ)
	AI2	Analog single-ended input Al2	Receive the analog voltage or current single-ended input, they are selected by jumper AI2 (Reference ground:COM)	Resolution: 1/2000 Input current range: 0mA~20mA, Resolution: 1/2000(Jumper to select)
Analog output	AO1	Analog output 1	Providing analog voltage or current output, they are selected by the jumper AO1. The default setting is output voltage, see to description of function code A6.28. (Reference ground: COM)	Voltage output range: 0V~10V
	AO2	Analog output 2	Providing analog voltage or current output, they are selected by the jumper AO2. The default setting is output voltage, refer to the function code A6.29 (Reference ground: GND)	Current output range: 0/4~20mA
Multi-function input terminal	X1~ X5	Multi-function input terminal	Can be defined as multi-function digital input terminal. Please see to description of function code A6.00~A6.04 (A6 group).	Optocoupler isolation input Input resistor: R=3.3kΩ Input voltage range of X1~X5: 2~30V
Multi-function output terminal	Y1	Bi-direction open collector output	Can be defined as multi-function digital output terminal Please see to description of function code A6.14 (A6 group) (Com port: COM)	Optocoupler isolation output Maximum working voltage: 30V Maximum output current: 50mA
Power supply	OP	+24v power supply	Providing +24V power	Maximum output current: 200mA
Common port	СОМ	Common port of 24V power supply	Cooperate with other terminals	



Technical Specification

Item		Description
Input	Rated voltage and frequency	4T: 3-phase, 380 ~ 440VAC, 50Hz
	Allowable voltage range	4T: 320V ~ 460V AC; 2S: 180
	Rated voltage	2S/4T: 0~Rated input volta
Output	Frequency	0Hz~300Hz (Customized 0
	Overload capacity	150% 1 minute, 180% for 7
	Control mode	V/F control
Control	Starting torque	0.5Hz 150%rated torque
Characteristics	Speed regulation range	1:100
	Speed stablizing acurracy	±0.5%
	Operation Command	Operation Panel, Terminal, C
Basic Function	Starting mode	Start from starting frequen
	Stopping mode	Dec-to-stop; Coast-to-stop
	V/F pattern	4 patterns: 1 V/F curve mod
	Acc/Dec curve	Linear Accn/Dec, S curve A
Protection funct	tion	Overcurrent protection, over
		overheat protection, over-l
	Operating site	Indoor, installed in the envi
	operating site	oil mist, steam and drip.
	Altitude	Derated above 1000m, the
Environment	Ambient temperature	-10°C~40°C, derated at 40°
	Humidity	5%~95%RH, non-condensi
	Vibration	Less than 5.9m/s ² (0.6g)
	Storage temperature	- 40°C ~ + 70°C
Structure	Protection class	IP20
	Cooling method	Air cooling, with fan contro
Installation met	hod	DIN-rail mounting and wal
Efficiency		≥93%

Product Characteristics:

- Output frequency 0~300Hz
- V/F control and setable V/F curves
- Carrier frequency up to 6kHz
- Auto torque boost and auto slip compensation function
- Standard equiped Modbus(RS485 baud rate up to 19200bps)

z/60Hz; 2S: Single-phase, 200~240V, 50Hz/60Hz; 1S: Single-phase, 100~120V, 50/60Hz 80V~260VAC; 1S: 90~132VAC; Voltage tolerance≤3%; Frequency: ±5% age; 1S: 0~twice of rated input voltage

0Hz~800Hz)

1 second, 200% FOR 0.5 second

Communication Control, Support switching between these control channels. ncy; Brake first and then start; Speed tracking.

p; Dec-to-stop+DC injection braking

ode set by user and 3 kinds of torque-derating modes Acc/Dec

vervoltage protection, miss phase protection, under-voltage protection, load protection, short curcuit protection and so on.

vironment free from directsunlight, dust, corrosive gas, combustible gas,

e rated output current , shall be decreased by 10% for every rise of 1000m $^{9}\mathrm{C}{\sim}$ 50°C

ing

ol. Il-mounting

CV20 Series

Model Specifications

Model _		CV20-1S-□□□G			CV20-2S-000G			CV20-4T-□□□□G		
		0002	0004	0007	0004	0007	0015	0007	0015	0022
The	power of suitable motor(kW)	0.2	0.4	0.75	0.4	0.75	1.5	0.75	1.5	2.2
Q	Voltage (V)	3-phase, 0	3-phase, 0~rated input voltage							
utp	Rate current (A)	2.5	4.0	7.5	2.5	4.0	7.5	2.3	3.7	5.5
ft	Overload capacity	150% 1m	inute, 180%	1second, 2	200% 0.5second					
	Rated Voltage/frequency	Single-phase, 100~120V; 50/60Hz			Single-phase, 200V~240V; 50Hz/60Hz			3-phase, 38	30V~440V AC	; 50Hz/60Hz
Inp	Allowable voltage range	90~132V			180V~260V			320V~460V AC		
		Voltage tolerance<3%; Frequency: ±5%								
	Rated current (A)	6.0	9.0	18.0	5.3	8.2	14.0	3.4	5.0	5.8
Protection class		IP20								
Cooling method		Air cooling	a							

External Dimension

CV20-1S-000G, CV20-2S-000G





External Dimension

Models of Inverter (G : Constant torque load	External dimension (mm)								Weight
L: Draught fan and water pump load)	w	н	D	W1	H1	D1	T1	Installation hole " d "	(kg)
CV20-1S-0002G				56	120	- 1	12	5	0.8
CV20-1S-0004G	68								
CV20-1S-0007G		122	132 131						
CV20-2S-0004G		132							
CV20-2S-0007G									
CV20-2S-0015G									
CV20-4T-0007G			128			0 -	9		
CV20-4T-0015G	100	151		89	140			5	1.0
CV20-4T-0022G									

Terminal Description

Control board terminal arrangement RA RC

PIN definition of RS-485

PIN Definition

Category	Terminal silk screen	Name	Description of terminal function	Specification	
	RA			RA - RC : Normally open ;	
Relay output	RC	Relay output	relay output terminal	Contact capacity : AC250V/2A(COSØ=1) AC250V1A(COSØ=0.4) ; DC30V/1A	
Power supply	+10V	+10V power supply	Providing +10V power	Maximum output current: 20mA	
Analog input	AV1	Analog input	Analog voltage/current input, Current/ voltage signal type is selected by rotary switch on control board	Input voltage range: -10~+10V Resolution: 1/4000	
	X1	Multi-function input terminal			
	X2		Can be defined as multi-function digital input terminal	Optocoupler isolation input Input resistor:R=3.3kΩ Maximum input frequency:200kHz	
Digital input	X3				
	X4				
Common port	СОМ	Common port of digital terminals and +10V power supply	Common port of digital input terminals and +10V power supply		
Communication	RS-485	RS485 communication port	Modbus communication port,6-wire, 2-PIN type socket	Standard RS485 communication port, please use twisted shielded pair	

CV20-4T-0000G





10V	AV1	X1	X2	X3	X4	СОМ	RS-485	

/						
	6	5	4	3	2	1
123456	N/A	GND	485-	485+	+5V	N/A

Terminal Description





EC Series-Electric Forklift Driver Efficient walking and steering drive solution

Efficient walking and steering drive solution

1. Walking drive is compatible with synchronous motor resolver, synchronous motor encoder, and asynchronous motor encoder; Steering drive is compatible with DC brush motor and Brushless DC motor mode. 2. Support terminal communication, CANopen communication; 3. Various reserved I/O terminals, to meet system control requirements to the maximum extent.

4. Advanced PWM technology to ensure efficient use of batteries, reducing motor energy consumption and loss of torque conversion.

5. Modular design, profound product series to meet customization requirements.

Model Description



(1) Kinco Electric Forklift Drive

(2) Driver generation : 3 (1st generation) 5 (2nd generation)

- (3) Structure : 0 (Sheet metal shell) 1 (Die-casting shell) 2 (Injection molded shell)
- (4) Moduler Type: 00(No accessories) 01(Main motor drive) 02(Steering drive) 03(Air pump motor drive) 04(DC to DC inverter) 05(Main motor drive+steering dirv

Spe	cification	Description
Input	Rated voltage	DC 24V、48V
	Rated current	Three-phase , 100~150A ; 0~300Hz $$
Output	Max. current	Three-phase , 200~300A ; 0~300Hz
	Max. voltage	Three-phase , 16V、32V ; 0~301Hz

0	1 1	$\begin{array}{c} \mathbf{A} - \mathbf{I} - \frac{\mathbf{*}}{\mathbf{*}} \\ \hline \\ \hline \\ \hline \\ \hline \end{array} \end{array}$
	() Rated voltage:40Z: 400VDC input (Rounding rule: 366VDC:37Z)
	() Capacity:0110 : 11kW 1100 : 110kW
	() Cooling method:A(Cooling by fan) L(Liquid cooling) N(Air cooling)
	()Power moduler type :I(IGBT) M(mos)
ve)	() Custom code