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Be tolerant to diversity willing to innovation

Selection Guide

SCK300 Series High Performance AC Drive

SCK300 Series High Performance AC Drive

SCK300 Series High Performance AC Drive

- Chinese and English LCD display, easy to install and debug;
- the Japanese wide and large structure, the product margin is large, can be used in hot weather occasions;
- with speed tracking function, can be a good application of fan secondary start;
- can do 220V, 380V, or 220/380 and other voltages;
- with short circuit, grounding and other protection;
- can add master/slave control card, communication expansion card, PG card;
- asynchronous motor, synchronous motor optional;

0.75KW- 4KW

5.5KW-11KW

15KW-22KW

30KW-400KW

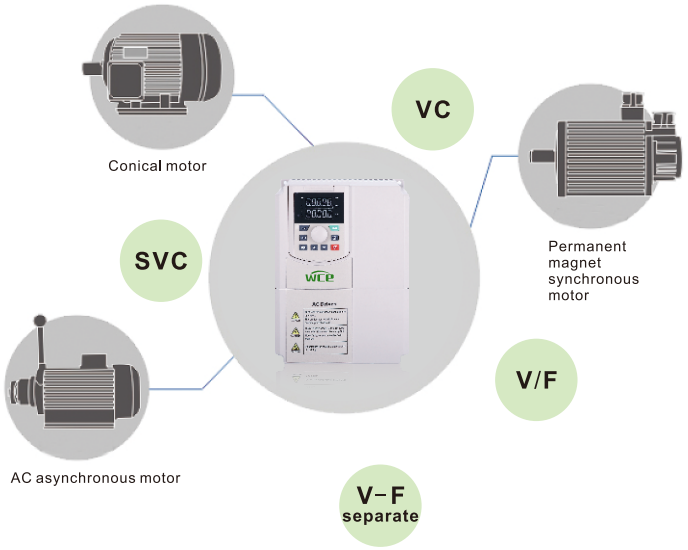
SCK300 Series High Performance AC Drive

product features

TI latest moto-control specific digital signal processors (DSP) with clock frequency reaching up to 150Hz are adopted.

Asynchronous motors and permanent magnet synchronous motors control are supported, with accurate autotuning.Two independent motor profiles are programmed, and the switch over of the two motors control can be realized by parameter setting or terminal input.

In V/Fcontrol mode ,accurate current limited control function makes sure of no over-curmernt fault occurred no matter the drives are running at acceleration/deceleration, or rotor locked status, well protecting the drves. h vector control mode, acurate torque limited control pledges powerful or moderate torque complying with application requirements , protecting machinery well



In V/F separated control mode,output frequency and cutput voltage can be set respectively ft for applications,such as variable frequency power sources , torque motors , etc.

Control mode	Starting torque	Speed range	Speed accur acy	Torque response
V/F control	0.5Hz 180%	1:100	±0.5%	
Speed-sensorless control 1	0.5Hz 180%	1:100	±0.2%	<10ms
Speed-sensorless control 2	0.25Hz 180%	1:200	±0.2%	<10ms
Speed-senso control	OHz 200%	1:1000	±0.02%	<5ms

Model explanation of SCK300

□□□ G 3 - 018 B

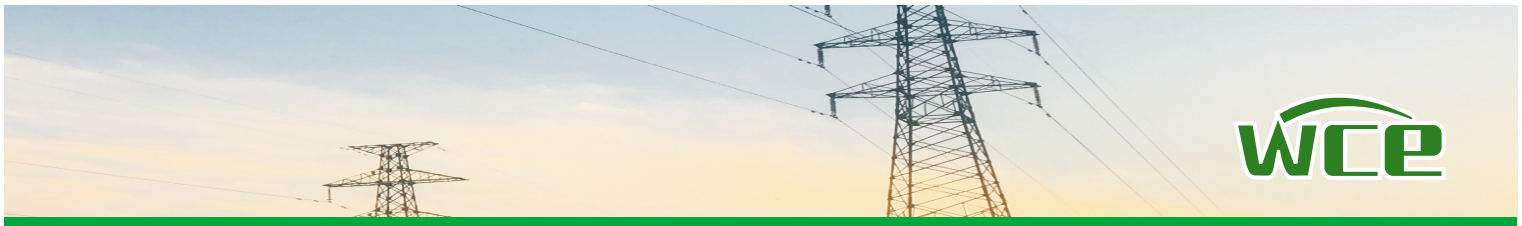
Equipped with B built-in brake unit

ENTERPRISE CODE

code	Adapted motor
5d5	5.5KW
018	18.5KW

code	product type
G	General
P	Fan and water pump type
H	Heavy duty type

code	Voltage level
1	Single phase 220V
3	Three phase 380V
2	Three phase 220V
4	Three phase 480V



Model and technical parameters of SCK300

Three-phase power supply 380V 50/60Hz				
Model	Power capacity	Input current	Output current	Applicable motor
SCK300 G3-0D75	1.5	3.4	2.5	0.75kW
SCK300 G3-1D5	3	5	3.7	1.5kW
SCK300 G3-2D2	4	5.8	5	2.2kW
SCK300 G3-004	5.9	13.5	9.5	4kW
SCK300 G3-5D5/P3-7D5	8.9	19.5	14	5.5kW/7.5kW
SCK300 G3-7D5/P3-011	11	25	18.5	7.5kW/11kW
SCK300 G3-011/P3-015	17	32	25	11kW/15kW
SCK300 G3-015/P3-018	21	40	32	15kW/18.5kW
SCK300 G3-018/P3-022	24	47	38	18.5kW/22kW
SCK300 G3-022/P3-030	30	56	45	22kW/30kW
SCK300 G3-030/P3-037	40	70	60	30kW/37kW
SCK300 G3-037/P3-045	57	80	75	37kW/45kW
SCK300 G3-045/P3-055	69	94	92	45kW/55kW
SCK300 G3-055/P3-075	85	128	115	55kW/75kW
SCK300 G3-075/P3-090	114	160	150	75kW/90kW
SCK300 G3-090/P3-110	134	190	180	90kW/110kW
SCK300 G3-110/P3-132	160	225	215	110kW/132kW
SCK300 G3-132/P3-160	192	265	260	132kW/160kW
SCK300 G3-160/P3-185	231	310	305	160kW/185kW
SCK300 G3-185/P3-200	231	345	340	185kW/200kW
SCK300 G3-200/P3-220	250	385	380	200kW/220kW
SCK300 G3-220/P3-250	280	430	425	220kW/250kW
SCK300 G3-250/P3-280	355	485	480	250kW/280kW
SCK300 G3-280/P3-315	396	545	530	280kW/315kW
SCK300 G3-315/P3-350	445	610	600	315kW/350kW
SCK300 G3-350/P3-400	500	625	650	350kW/400kW
SCK300 G3-400/P3-450	565	715	720	400kW/450kW

Model and technical specification of SCK300

Power input

Rated input voltage	Rated input current	Frequency	Allowable voltage range
3-phase 380VAC/400VAC/415VAC 440VAC/460VAC/480VAC	SEE the table “Model and technical parameters of SCK300 series’	50HZ/60Hz,tolerarce ±5%	Voltage consecutive fluctuation ±10%,short fluctuation -15%~10 % ie.323V~ 528V Voltage out-of-balance rate:<3%,THD meets the standards of IEC61800-2

Power output

Applicable motor	Rated current	Output voltage	Output frequency	Over load capability
See the table "Model and technical parameters of SCK300 ceriau. F	See the table "Model andtechnical parametersof SCK300 series”	3-phase; 0 ~ rated input voltage, error less than ±3%	0.00HZ- 600Hz Resolution o.01HZ	150% 1min; 180% 10s; 200% 0.5s, once per 10min.

Control characteristics

Contol pattern	V/F control	Speed-sensor less control 1	Soeed-sensor less control 2	Speed-sensor control position control
Starting torque	0.5Hz 180%	0.5Hz 180%	0.25H 180%	0Hz 200%
Speed range	1:100	1:100	1:200	1:100
Speed accuracy	±0.5%	±0.2%	±0.2%	±0.02 %
Speed ripple	—	±0.3%	±0.3%	±0.1%
Torque control	NO	NO	Yes	yes
Torque accuracy	—	—	±7.5%	±5%
Torque response	—	<10ms	<10ms	<.5ms
Positioning accuracy	—	—	—	±1Line pulse±1

Basic functions

Start frequency	0.00Hz~600.00Hz
Accel/Decel time	0.00s~3600s
Carrier fequency	1.0KHz~ 15.0KHz
Freguency command mod	Digital setting +Keypad Up/Down; Digital setting+terminal Up/Down.Communication setting. Analogsetting: AI1/AI2/AB.Terminal pulse setting.
start methods	Start from starting frequency. DC injection braking at start; Flying start.
Stop methods	Ramp to stop. Coast to stop. DC injection braking at ramp stop.
Dynamic brake capability	Braking unit triggered voltage:650 ~ 750V. Service time:0.0 ~100.0s. Brake units of SCK300G3-037 and below areopti onally inbuilt.
DC braking capability	DC braking start frequency: 0.00~600.00Hz. DC braking current: constart torque 0.0~100%. DC braking time: 0.0~ 100s.
Input terminals	Eight switching input terminals, one high speed pulse input terminal. Support dry node, active PIP, NP input mode; Two analog input terminals, one of which can only be used as a voltage input and the other is optional.
output terminals	One high-speed pulse output(0~50kHZ square wave output and two analog outputs(voltage/current programmable)can output signals such as command frequency, output frequency, etc one digital output. Two relay outputs.
Ercode input terminal	Support 5V/12V voltage grade. Support OC push-pull, differential signal inputsand such.

Environment

Field	Altitude	Temperature	Humidity	Vibration	Storage temperature
In doors,no direct sunlight, freeform dust, corrosive gases,flammable gases, oil mist,watervapo- , water crop, salt,etc.	0m~2000m:de-rate 1%for every100m whenabove1000 meters.	-10C-+40℃ 40℃ ~ 50℃ rated output current de-rates1% for every 1 .	5%~95%, no cond ensation.	Less thar 5.9rrls2(0.6g)	-40℃~+70℃

Others

Eff1c iency	Installation	Protection grade	Cooling method
At rated power, power levels of 7.5kW and below: ≥ 93%:11kW to 45kW power level: ≥ 95%;	Wall-mounted type(500kW and below)Cabinet type(560kW and 630kW)	IP20	Forced air cooling

Description of SCK300 control terminals function

Category	Analog input	
Terminal	Terminal designation	Specification
+10V	Analog input reference voltage	Voltage:10.3V±3% Maximum output current: 25mA, ad resistance of external potentiometer should be larger than 400Ω
GND	Analog ground	Isolated from COM interior ly
AI2	Ana log input 2	The voltage and current can be 0~10V/0~20mA, which can be switched by route switch J4. Input impedance: voltage input is 20kΩ, current input is 500kΩ Resolution: When 10V corresponds to 50Hz, the minimum resolution is 5mV Error ±1%, 25°C
AI3	Ana log input 3	-10V~10V voltage Input impedance: 20kΩ at voltage input Resolution: When 10V corresponds to 50Hz, the minimum resolution is 5mV Error ±1%, 25°C

Category	Analog output	
Terminal	Terminal designation	Specification
AO1	Analog output 1	0mA~20mA; impedance 200~500Ω,0~10V; impedance⩾10kΩ2. 0mA~20mA; input impedance 500Ω, maximum input current 25mA. Switch J1 on control board for jumping between 0 ~20mA and0~10V.Factory default:0~10V.
AO2	Analog output 2	0mA ~20mA;impedance 200~500Ω,0~10V; impedance⩾10kΩ. 0mA~20mA;input impedance 500Ω2, maximum input current 25mA. Switch J2 on control board for jumping between0~20mA and 0~10V. Factory default 0 ~10V.
GND	Analog ground	Isolated from COM interior ly

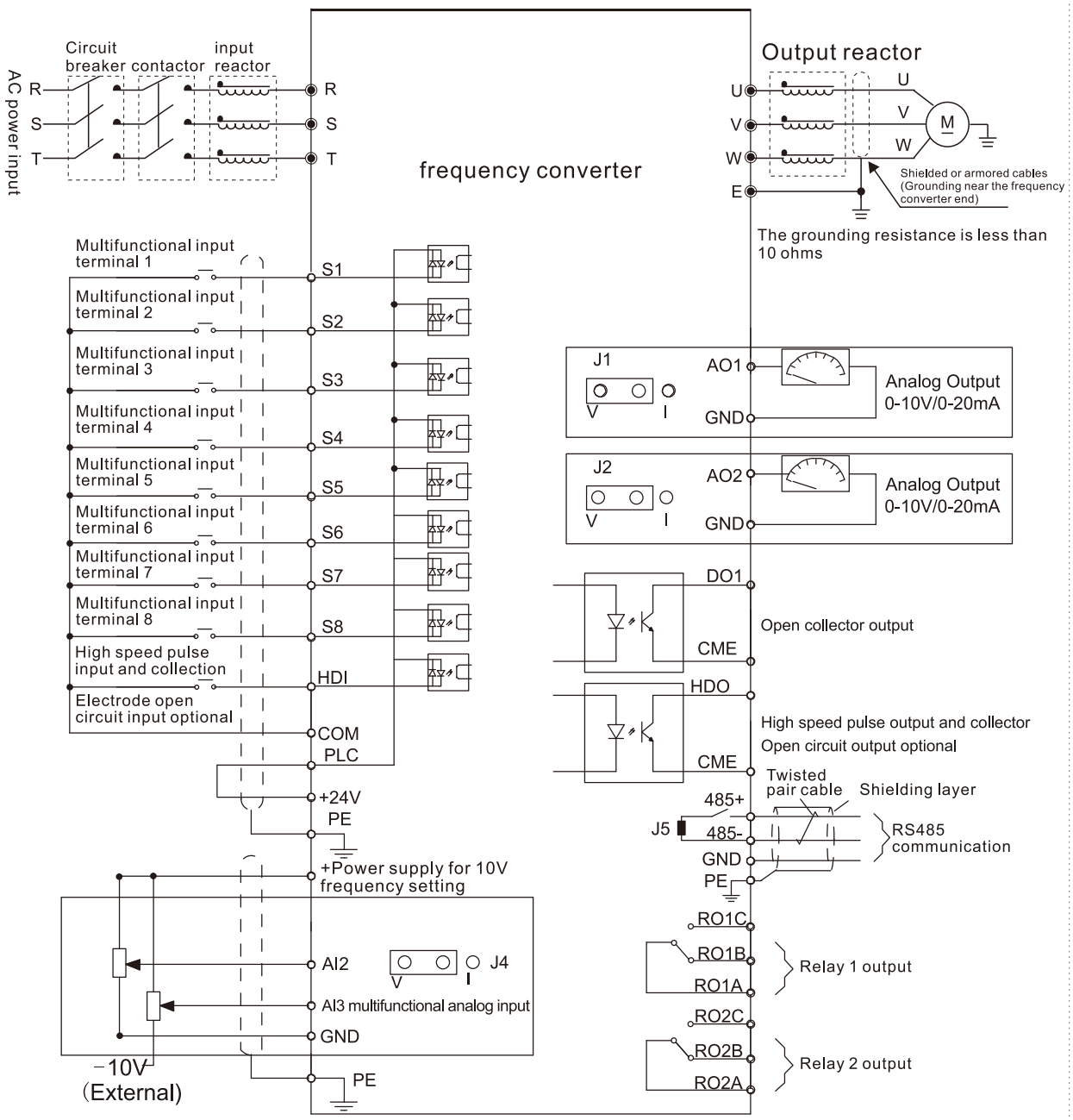
Description of SCK300 control terminals function

Category	Terminal	Terminal designation	Specification	
Digital output	DO1	open collector autput	voltage range:0-24V	Current range:0~50mA
	HDO	open collector out/Pulse out	Open collector output: same as DO1	Pulse output:0~50KHz
Relay output	RO1A/RO1B/RO1C RO2A/RO2B/RO2C	Two sets of relay outputs	RO1A common end, RO1B normally closed, RO1C normally open RO2A common end, RO2B normally closed. RO2C is always on	Contact capacity: 250VAG3A,30VDC1A.

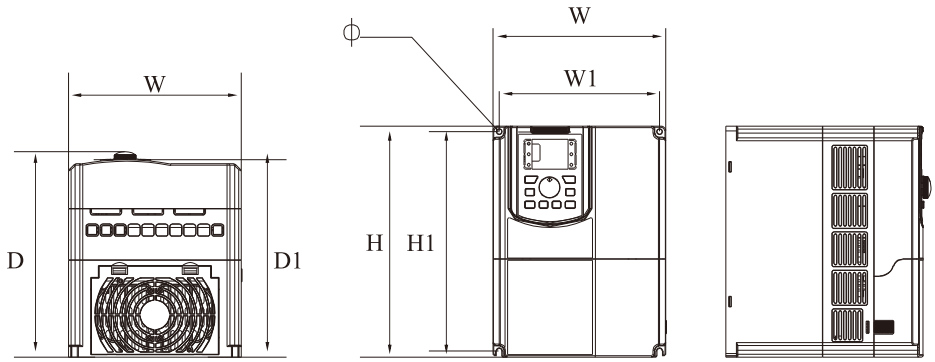
Category	Switching input	
Terminal	Terminal designation	Specification
+24V	+24V	24V±10%,isolated from GFNID inter iorly Maximun load 200mA
PLC	Digital input common terminal	Switch between high level and low level.Short-circuited with ±24V at delivery, low value of digital irput valid, external power input.
COM	+24V ground	Isolated from GNID interiorly
S1~S8	Digital input terminals1~8	Input:24VDC,5mA Frequency range: 0~200Hz Voltage range: 10~30V
HDI	Digital input/Pulse input	Voltage range: 10~30V Digital input: same as S1~S8 Pulse input: 0.1~ 50kHz;

Cate gory	Terminal 485 interface	Keypad 485 interface
Terminal	Terminal designation	Specification
485+	Differential signal 485+	Rate: 1200/2400/4800/9600/19200/38400/57600bps
485-	Differential signal 485-	Maximum distance: 500m(use standard network cable)
GND	485 communication shielded ground	Isolated from COM inter iorly

SCK300 –ining diagram of 380V single–phase AC Drive



Overall and installation dimension



Model	SCK300 series appearance and installation dimensions (mm) outline and mounting dimensions						
	W	W1	H	H1	D	D1	Φ
SCK300 G3-0D75	108	96	134	118	149	140	5
SCK300 G3-1D5							
SCK300 G3-2D2							
SCK300 G3-004							
SCK300 G3-5D5/P3-7D5	180	167	240	228	214	205	5.5
SCK300 G3-7D5/P3-011							
SCK300 G3-011/P3-015							
SCK300 G3-015/P3-018	225	200	354	330	211	205	6
SCK300 G3-018/P3-022							
SCK300 G3-022/P3-030							
SCK300 G3-030/P3-037	240	165	450	433	236	230	7
SCK300 G3-037/P3-045							
SCK300 G3-045/P3-055	240	160	560	545	331	321	7
SCK300 G3-055/P3-075							
SCK300 G3-075/P3-090	270	195	640	617	378	368	10
SCK300 G3-090/P3-110							
SCK300 G3-110/P3-132							
SCK300 G3-132/P3-160	352	220	800	777	418	408	10
SCK300 G3-160/P3-185							
SCK300 G3-185/P3-200	360	200	940	912	494.5	484.5	17.5
SCK300 G3-200/P3-220							
SCK300 G3-220/P3-250							
SCK300 G3-250/P3-280	370	200	1140	1112	575.5	565.5	17.5
SCK300 G3-280/P3-315							
SCK300 G3-315/P3-350	400	240	1250	1222	560	550	17.5
SCK300 G3-350/P3-400							
SCK300 G3-400/P3-450							

Note: the above dimensions are subject to change without prior notice.