

Variable Frequency Drive



S310 Series



Product Features

- ▶ With auto torque boost, 150% torque output at 6 Hz
- ▶ Output frequency up to 400Hz
- ▶ Ultra low noise operation with built-in SOFT-PWM
- ▶ Improved braking Capability by Built-in Braking Transistor
- ▶ Built-in RS485 communication
- ▶ 5 digit 7 segment removable keypad with standard RJ45 interface
- ▶ Natural cooling, eliminating noise from fan
- ▶ Economic blind type model (Without display/keypad) is available

Definition of model / filter

S310 - **2** **P5** - **H1BCD**

Series

Supply Voltage
2:200V

Horsepower
P5:0.5HP
01:1HP

Standard Type
Note:(Built-in)
B:Braking Unit
C:RS485 Communication
D:Display

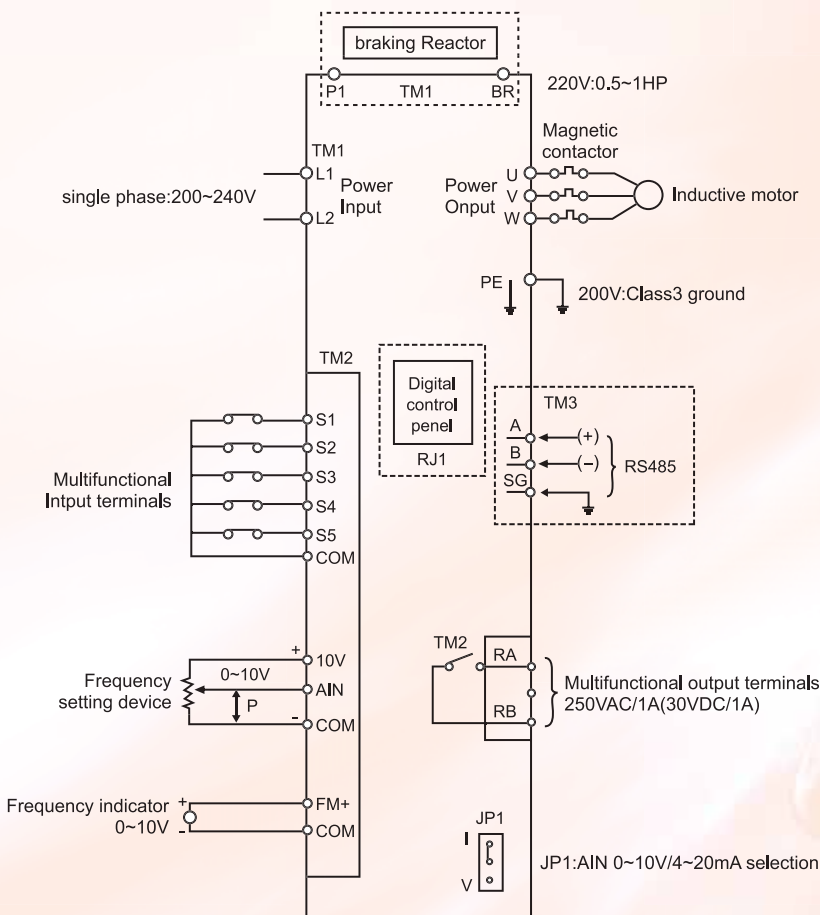
SF - **2** - **010**

Input voltage
2:220V
4:440V

Input current
10A

S310 series option filter

Wiring Diagram



Application

Application for Cutting Machine

- High Environment Immunity
 - Without fan
 - Heat sink outside designing for dusty environment
 - Less trip at low voltage
 - Coated PCB
- High Performance
 - High braking ability without braking resistor
 - High torque at low speed
 - Fast response time



Flat Knitting Machine



Cone Winding Machine



Gloves Knitting Machine



Socks Knitting Machine

Product Specifications

► Single / Three phase, 200-240V model

S310-□□□□-XXX	2P5	201
Horsepower (HP)	0.5	1
Max Applicable Motor Output (KW)	0.4	0.75
Rated Output Current (A)	3.1	4.2
Rated Capacity (KVA)	0.88	1.60
Max. Input Voltage	Single Phase: 200~240V +10% -15%, 50/60Hz ± 5%	
Max. Output Voltage	Single Phase: 200~240V	
Input Current (A)	5.4	10.4
Net Weight (KG)	0.97	0.97
Net Weight (KG)(keypad)	1.0	1.0
Allowable momentary power loss time (second)	1.0	1.0

► General Specifications

Item	S310 TYPE	
Control Mode	V/F	
Frequency Control	Range	0.01~400.00 Hz
	Setting resolution	Digital: 0.01Hz (Note*1), Analog: 0.06Hz/ 60Hz (10bits)
	Keypad setting	Set directly with ▲▼ keys or the VR on the keypad
	Display Function	Five digital LED and status indicator: display frequency / Inverter parameter/ Fault Log/ Program Version
	External signal setting	1. External potentiometer 0-10V/ 0-20mA 2. Provides up/down controls, speed control with multifunctional contacts on the terminal block (TM2)
	Frequency Limit Function	Upper/lower frequency limits
General Control	Carrier frequency	1 ~ 12 kHz
	V/F pattern	6 fixed patterns, 1 programable curve
	Acc/Dec control	Acc/Dec time (0.1 ~ 3,600 seconds)
	Multifunction analog output	4 functions (refer to description on 2-12)
	Multifunction input	9 functions (refer to description on 01-00~01-04)
	Multifunction output	3 functions (refer to description on 01-09)
	Other Functions	Momentary Power Loss Restart, Overload Detection, 8 preset speeds, 2/3-wire Control, torque boost, Slip Compensation, Frequency Upper/ Lower Limit, Modbus slave and PC/PDA Link, Auto Restart.
Communication Control	1. Control by RS485 2. One to one or one to many (RS485 ONLY) control. 3. BAUD RATE/STOP BIT/PARITY/bit can be set	
Braking Torque	About 20%, standard model the specified external braking resistors can provide 100%	
Operation temperature	14-120°F (-10 ~ 50°C) (Note*2)	
Storage temperature	4-140°F (-20 ~ 60°C)	
Humidity	0-95% Relative Humidity (Non-condense)	
Vibration	1G (9.8m/s ²)	
Enclosure	IP20	
Protective Functions	FUSE protection	The motor stops after FUSE melt
	Over Voltage	200V class: DC Voltage > 410V
	Under Voltage	200V class: DC Voltage < 190V
	Momentary Power Loss Restart	Restart can be initiated with spin start after momentary power loss in Max 2 sec.
	Other Function	Over torque detection, error contact control, reverse prohibit, prohibit for direct start after power up and error recovery.

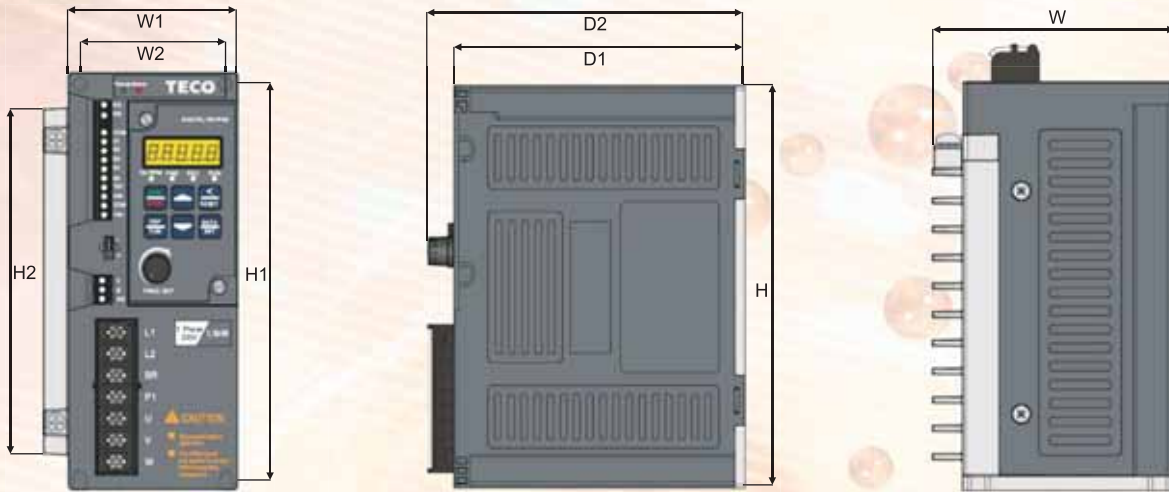
※ Note 1: Frequency control resolution up to 0.01 Hz.

※ Note 2: 14-120°F (-10 ~ 50°C) without dustproof cover, 14-104°F (-10 ~ 40°C) with dustproof cover.

Braking unit and braking resistor

Model	AC inductance at input side		Suitable Motor Capacity (HP)	Suitable Motor Capacity (KW)	Braking resistor Specification			Braking resistor Duty Cycle (%)	Braking torque (%)
	Current (A)	Inductance (mH)			(W)	(Ω)	Number used		
S310-2P5-H1BCD	5.2	4.2	0.5	0.375	60	200	-	8	218
S310-201-H1BCD	9.4	2.1	1	0.75	60	200	-	8	119

Dimension



Unit:mm(inch)

Model	W	W1	W2	H	H1	H2	D	D1
S310-20P5/2001-H1BCD	79(3.11)	69(2.71)	59(2.32)	160(6.29)	152(5.98)	133(5.23)	145(5.7)	133(5.23)

TECO INVERTER

- EV series : 0.25~1HP(110V),0.25~3HP(220V),1~3HP(440V)
- CV series : 0.5~40HP(220V),1~75HP(440V)
- MA series : 1~40HP(220V),1~75HP(440V)
- GS series : 25~100HP(220V),25~400HP(440V)



TECO PLC / PLR

- TP03 series : 14/20/26/30/36/40/60 I/O MAX256points
- SG2 series : 10/12/20points



Distributor

TECO SERVO

- JSDA series : 100W~15KW(220V)
- JSDE series : 50W~2KW(220V)



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