

Variable Frequency Drive **TECO**

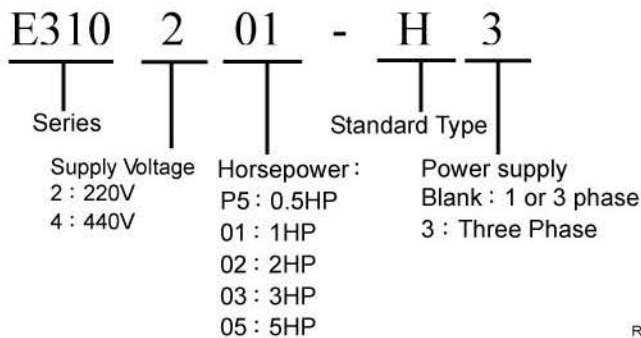
E310 Series



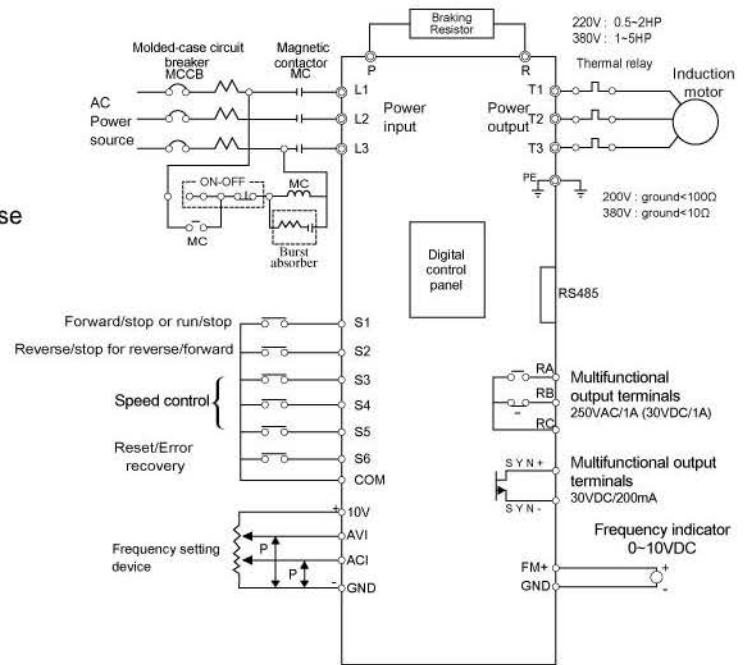
Product Feature

- With auto torque boost, 150% torque output at 1 Hz
- Output frequency up to 400Hz
- Speed Control / Precision is 1:100(Vector) / $\pm 0.5\%$ (Vector)
- Improved braking Capability by Built-in Braking Transistor
- Built-in RS485 communication
- 5 digit 7 segment removable keypad with standard RJ45 interface
- Cooling by heat sink, eliminating noise from fan

Definition of model



Wiring Diagram



Application

Application for Industrial Machine

■ High Environment Immunity

- Without fan
- Heat sink outside designing for dusty environment
- Less trip at low voltage

■ High Performance

- High braking ability with built-in braking transistor
- High torque at low speed
- Fast response time
- Built-in RS485 communication

Edge Bonding Machine



Bar Feeder Machine



Sander Machine



CNC Machine



Packaging Machine



Die casting Machine



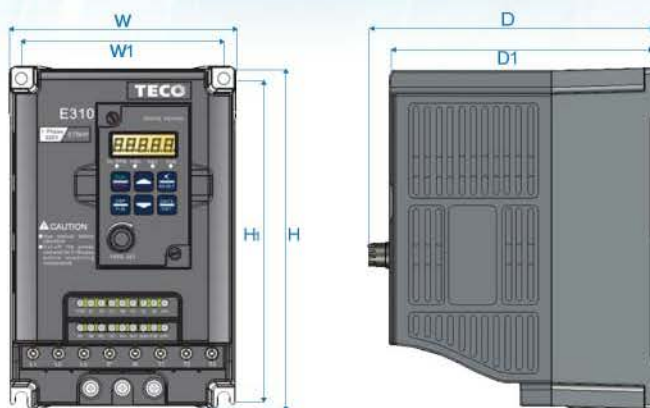
Product Specifications

E310-□□□-XX	2P5	201	202	401	402	403	405
Horsepower (HP)	0.5	1	2	1	2	3	5
Max Applicable Motor Output (KW)	0.4	0.75	1.5	0.75	1.5	2.2	3.7
Rated Output Current (A)	3.1	4.5	7.5	2.3	3.8	5.2	8.8
Rated Capacity (KVA)	1.2	1.7	2.9	1.7	2.9	4.0	6.7
Max. Input Voltage	Single or Three phase 200~240V +10%-15% , 50/60Hz± 5%			Three phase 380~480V +10%-15% , 50/60Hz± 5%			
Max. Output Voltage	Three phase 200~240V			Three phase 380~480V			
Input Current (A)(Singel/Three phase)	8.5/4.5	12/6.5	16/11	4.2	5.6	7.3	11.6
Net Weight (KG)	1.37	1.37	1.47	1.33	1.35	2.22	2.25
Allowable momentary power loss time (Sec)	1.0	1.0	2.0	1.0	1.0	2.0	2.0

General Specifications

Item	E310
Control Mode	V/F or Vector Control
Range	0.01~400.00 Hz
Start control torque	150%/1Hz (Vector)
Speed control range	1:100 (Vector)
Speed Control Precision	±0.5% (Vector)
Setting resolution	Digital: 0.01Hz, 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/ line speed/ DC voltage/ Output voltage/Current/ Rotation direction/Inverter parameter/ Fault Log/ Program Version / Heat sink temperature/PID feed back
External signal setting	1.External potentiometer 0-10V/ 0-20mA 2.Provides up/down controls, speed control or automatic procedure control with multifunctional contacts on the terminal block (TM2)
Frequency Limit Function	Upper/lower frequency limits and three programmable skip frequencies
Carrier frequency	1 ~ 12 kHz
V/F pattern	18 fixed patterns, 1 programable curve
Acc/Dec control	Two-stage Acc/Dec time (0.1 – 3,600 seconds) and four-stage S curves (refer to descriptions on 10-07..)
Multifunction analog output	5 functions (refer to description on 2-12)
Multifunction input	22 functions (refer to description on 01-00~01-05)
Multifunction output	14 functions (refer to description on 01-09~01-10)
Other Functions	Momentary Power Loss Restart, Speed Search, Overload Detection, 8 preset speeds, Acc/Dec Switch (2 Stages), S Curves, 3-wire Control, PID control, torque boost, Slip Compensation, Frequency Upper/Lower Limit, Auto energy saving, Modbus slave and PC/PDA Link, Auto Restart, Encoder input.
Overload protection	The relays to protect the motor (the curve can be set) and the inverter(150%/1min)
Over Voltage	200V class: DC Voltage>410V, 400V class: DC Voltage>820V
Under Voltage	200V class: DC Voltage<190V, 400V class: DC Voltage>380V
Momentary Power Loss Restart	Restart can be initiated with spin start after momentary power loss in Max 2 sec.
Stall Prevention	Stall prevention for Acceleration/ Deceleration/Operation.
Short-circuit output terminal	Electronic Circuit Protection
Grounding Fault	Electronic Circuit Protection
Other Function	Protection for overheating of heat sink, over torquedetection, errorcontact control, reverse prohibit, prohibit for direct start after power up and errorrecovery, parameter lock up.
Communication Control	1.Control by RS485 2.One to one or one to many control. 3.Baud rate/stop bit/parity bit can be set.
Braking Torque	About 20%, with built-in braking transistor and the specified external braking resistors can provide 100%
Operation temperature	14-120°F (-10 ~ 50°C)
Storage temperature	4-140°F (-20 ~ 60°C)
Humidity	0 – 95% Relative Humidity(Non-condense)
Vibration	1G (9.8m/S ²)
Enclosure	IP20

Dimension



Unit:mm(inch)

Model	W	H	D	W1	H1	D1
E310-2P5-H	107(4.21)	162(6.37)	149.9(5.9)	96(3.78)	150(5.9)	139(5.47)
E310-201-H	107(4.21)	162(6.37)	149.9(5.9)	96(3.78)	150(5.9)	139(5.47)
E310-202-H	107(4.21)	162(6.37)	149.9(5.9)	96(3.78)	150(5.9)	139(5.47)
E310-401-H3	107(4.21)	162(6.37)	149.9(5.9)	96(3.78)	150(5.9)	139(5.47)
E310-402-H3	107(4.21)	162(6.37)	149.9(5.9)	96(3.78)	150(5.9)	139(5.47)
E310-403-H3	149(5.87)	184(7.24)	162.1(6.38)	138(5.43)	174(6.85)	151(5.94)
E310-405-H3	149(5.87)	184(7.24)	162.1(6.38)	138(5.43)	174(6.85)	151(5.94)

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)
- N310 series : 0.5~3HP(220V),1~215HP(440V)
- S310 series : 0.25~1HP(220V)



TECO PLC / PLR

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



TECO SERVO

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



Distributor

3.7 Outline Dimensions (unit: mm)

(1) Frame1 : single /Three phase: E310-2P5/201/202 Three phase: E310-401/402

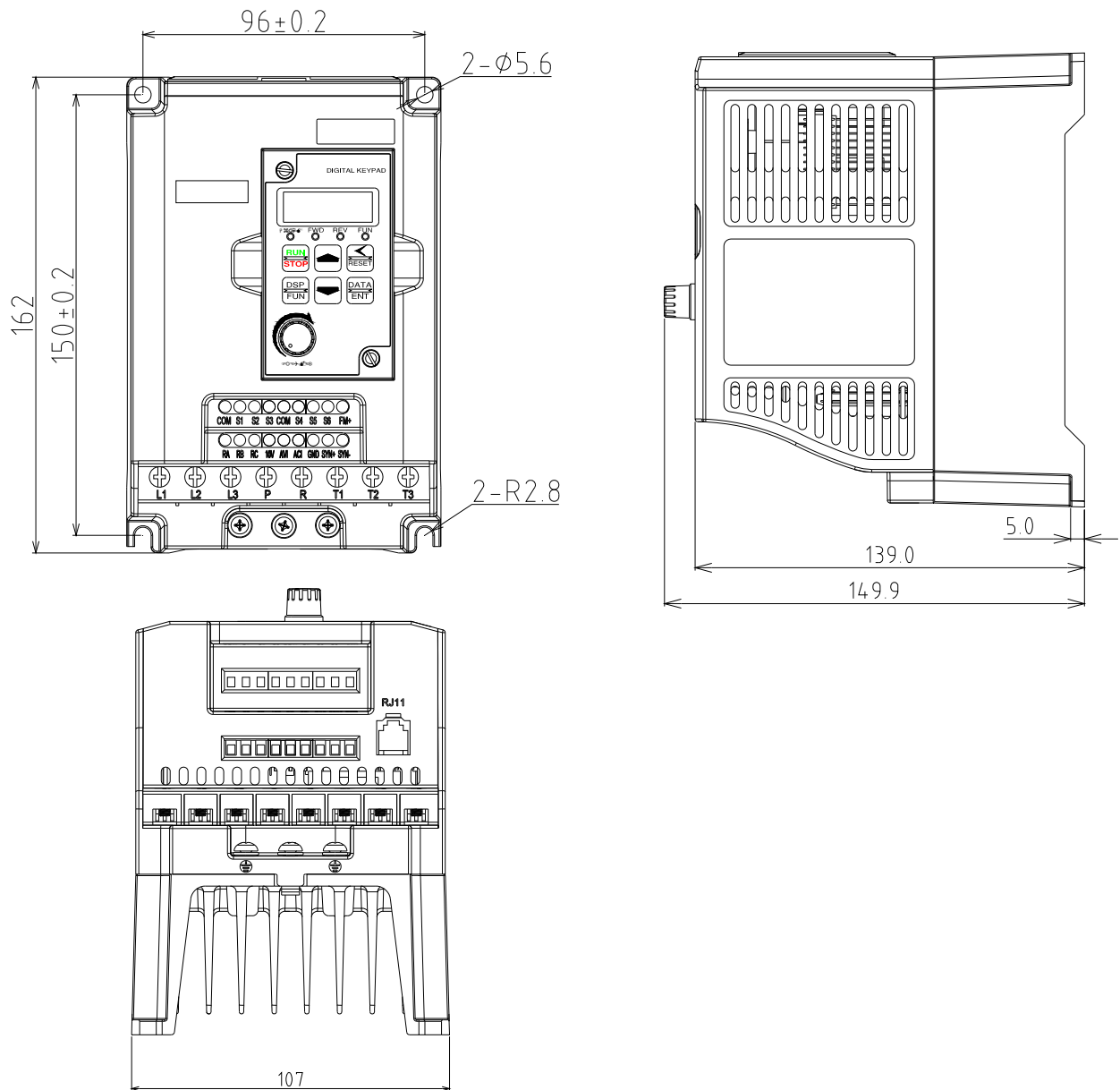


Figure 3-8 Frame size 1 Dimensions

E310-2P5/201/202/401/402

(2) Frame2 : Three phase E310-403/405

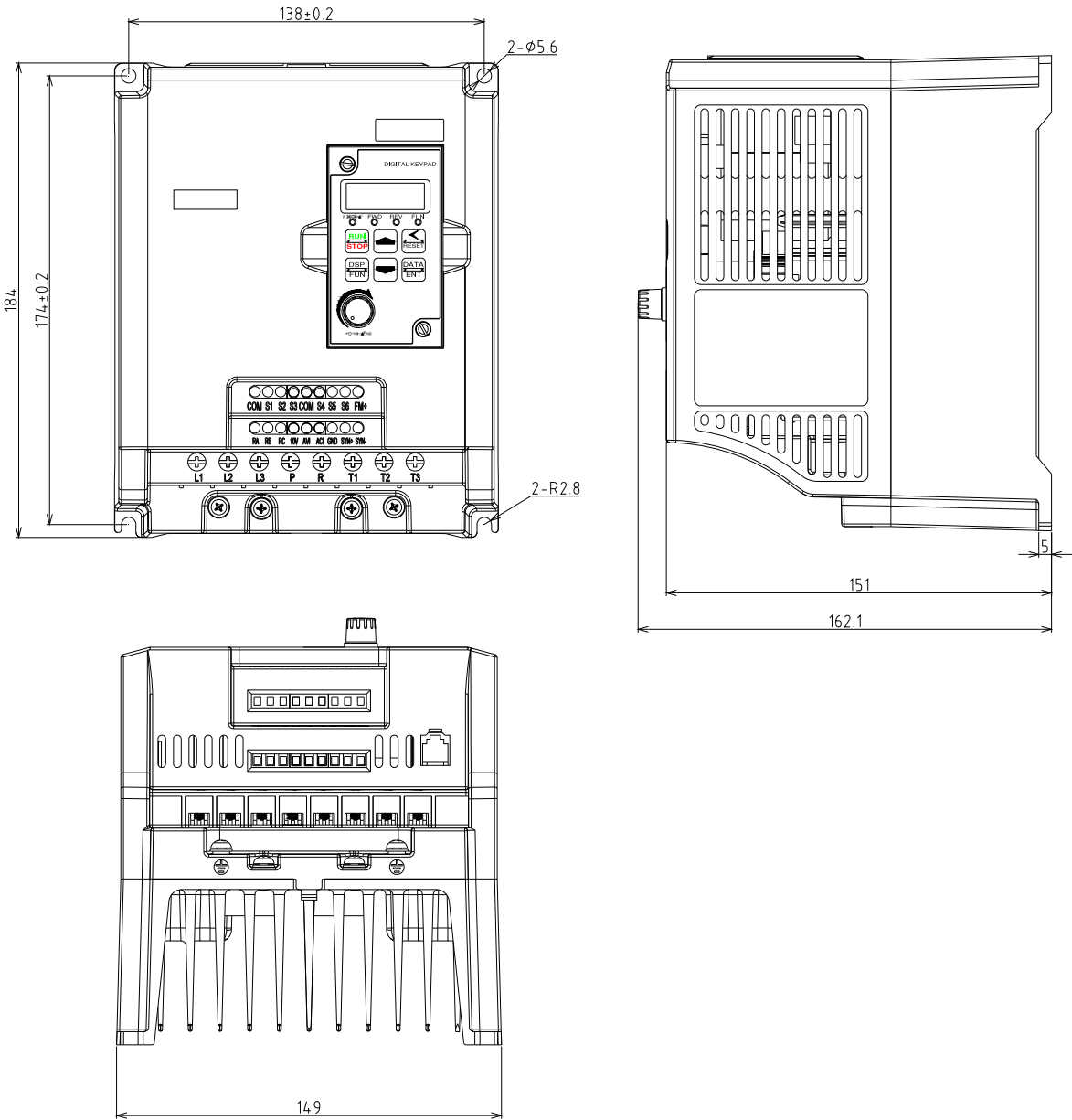


Figure 3-9 Frame size 2 Dimensions

MODEL : E310-403/405