



TECO

E510

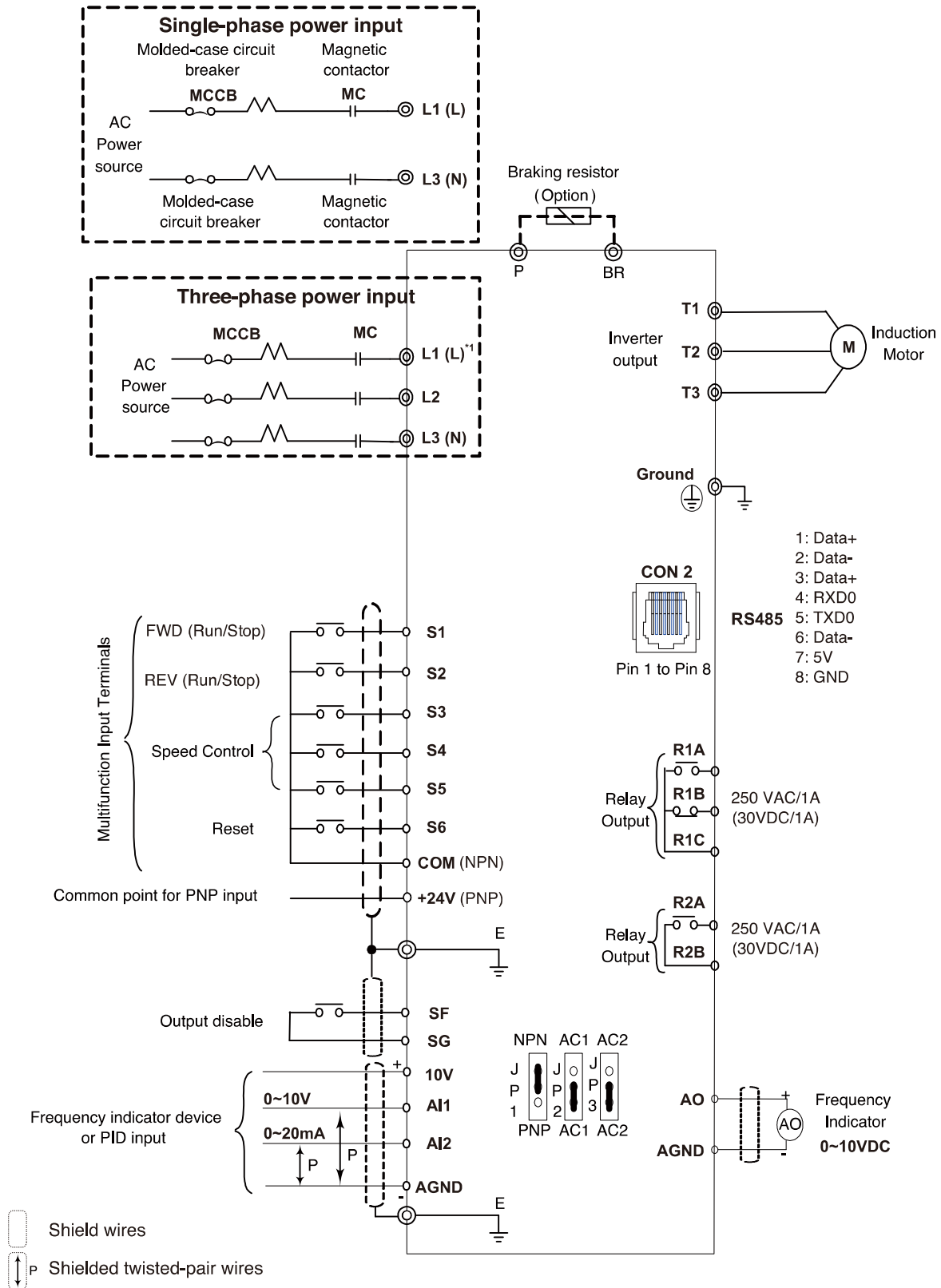
IP 20/NEMA 1 & IP 66/NEMA 4X
Compact Vector Control Drive



**TAIWAN
EXCELLENCE
2012**

WIRING DIAGRAM

Single-phase/ Three-phase



*1: Power input terminal is L1, L2, L3 in models of 200V 7.5HP~20HP/ 400V 7.5HP~25HP.

GENERAL SPECIFICATIONS

Item		E510
Control Mode		V/F Control, Vector Control
Frequency	Output Frequency	0.01~650.00Hz
	Starting Torque	150%/3Hz(V/F), 150%/1Hz(Vector)
	Speed Control Ratio	1:50
	Setting Resolution	Digital input: 0.01Hz
		Analog input:0.06Hz/60Hz
	Setting	Keypad: Set directly with▲▼ keys or the VR on the keypad
External Input Terminlas: AI1(0/2~10V), AI2(0/4~20mA)input Multifunction input up/down function(Group3)		
Setting frequency by communication method.		
Frequency Limit	Lower and upper frequency limits 3 jump frequency settings.	
Run	Operation Set	Keypad run, stop button
		External terminals: Multi-function operation mode (2 or 3 wire selection) Jog operation
		Run signal by communication method.
Main Control Features	V/F Curve Setting	18 fixed curves and one customized curve
	Carrier Frequency	1~16KHz
	Acceleration and Deceleration Control	2 sections of acceleration/ deceleration time setting (0.1~3600.0 Sec.) 4 sections of S curve setting
	Multifunction Input	29 functions (refer to group 3 in the manual)
	Multifunction Output	21 functions (refer to group 3 in the manual)
	Multifunction Analog Output	5 functions (refer to group 4 in the manual)
Main Features	Overload Detection,16 preset speeds, Auto-run, Acc/Dec Switch, Main/Alt Run Command Select, Main/Alt Frequency Command Select ,PID control, Torque Compensation, V/F Start Frequency, Slip Compensation, Fault Reset.	
Display	LED	Display: parameter / parameter value / frequency / line speed / DC voltage / output voltage / output current / PID feedback / input and output terminal status / Heat sink temperature / Program version / Fault Log.
	LED Status Indicator	Run / Stop / Forward / Reverse ,and etc.
Protective Functions	Overload Protection	The relays to protect the motor and the inverter. (150%/1min)
	Over Voltage	200V class: >410V , 400V class: >820V
	Under Voltage	200V class: <190V , 400V class: <380V
	Momentary Power Loss Restart	Inverter auto-restart after a momentary power loss.
	Stall Prevention	Stall prevention for Acceleration/ Deceleration/ Operation.
	Short-circuit Output Terminal	Electronic Circuit Protection
	Grounding Fault	Electronic Circuit Protection
	Other Protection Functions	Protection for overheating of heat sink, the carrier frequency decreasing with the temperature function, fault output, reverse prohibit, prohibit for direct start after power up and error recovery ,parameter lock up
All frames include brake transistor		
Communication control		Standard built-in RS485 communication (Modbus), One to one or One to many control.
Environment	Operating temperature	IP 20 : -10~50°C (without dustproof cover/ paster) ; IP 66 / NEMA 4X : -10~50°C -10~40°C (with dustproof cover/ paster)
	Storage temperature	-20~60°C
	Humidity	95% RH or less (no condensation)(Compliance with IEC 60068 - 2-78)
	Shock	1.0G, in compliance with IEC 60068-2-6
	Enclosure	IP 20 / NEMA 1 and IP 66 / NEMA 4X

BASIC SPECIFICATIONS IP 20 / NEMA 1

Model	200V Class: Single-phase			
	E510-□□□- H1F			
	2P5	201	202	203
Horse Power (HP)	0.5	1	2	3
Suitable Motor Capacity (KW)	0.4	0.75	1.5	2.2
Rated Output Current (A)	3.1	4.5	7.5	10.5
Rated Capacity (KVA)	1.2	1.7	2.9	4.0
Input Voltage Range(V)	Single-phase 200~240V, 50/60HZ			
Allowable Voltage Fluctuation	-15%~+10%			
Output Voltage Range(V)	Three-phase 0~240V			
Input Current (A)	8.5	12	16	23.9
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0	
Enclosure	IP 20 / NEMA 1			
Frame Size	1		2	

Model	200V Class: Single-/Three-phase			
	E510-□□□- H			
	2P5	201	202	203
Horse Power (HP)	0.5	1	2	3
Suitable Motor Capacity (KW)	0.4	0.75	1.5	2.2
Rated Output Current (A)	3.1	4.5	7.5	10.5
Rated Capacity (KVA)	1.2	1.7	2.9	4.0
Input Voltage Range(V)	Single-/Three-phase 200~240V, 50/60HZ			
Allowable Voltage Fluctuation	-15%~+10%			
Output Voltage Range(V)	Three-phase 0~240V			
Input Current (A)	8.5/4.5	12/6.5	16/11	23.9/12.5
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0	
Enclosure	IP 20 / NEMA 1			
Frame Size	1		2	

Model	200V Class: Three-phase					
	E510-□□□- H3					
	202	205	208	210	215	220
Horse Power (HP)	2	5	7.5	10	15	20
Suitable Motor Capacity (KW)	1.5	3.7	5.5	7.5	11	15
Rated Output Current (A)	7.5	17.5	26	35	48	64
Rated Capacity (KVA)	2.9	6.7	9.9	13.3	20.6	27.4
Input Voltage Range(V)	Three-phase 200~240V, 50/60HZ					
Allowable Voltage Fluctuation	-15%~+10%					
Output Voltage Range(V)	Three-phase 200~240V					
Input Current (A)	11	20.5	33	42	57	70
Allowable Momentary Power Loss Time (Sec.)	2.0	2.0	2.0		2.0	
Enclosure	IP 20 / NEMA 1					
Frame Size	1	2	3		4	

Model	400V Class: Three-phase								
	E510-□□□- H3 (F)								
	401	402	403	405	408	410	415	420	425
Horse Power (HP)	1	2	3	5	7.5	10	15	20	25
Suitable Motor Capacity (KW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5
Rated Output Current (A)	2.3	3.8	5.2	8.8	13.0	17.5	24	32	40
Rated Capacity (KVA)	1.7	2.9	4.0	6.7	9.9	13.3	19.1	27.4	34
Input Voltage Range(V)	Three-phase 380~480V, 50/60HZ								
Allowable Voltage Fluctuation	-15%~+10%								
Output Voltage Range(V)	Three-phase 0~480V								
Input Current (A)	4.2	5.6	7.3	11.6	17	23	31	38	48
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0		2.0		2.0		
Enclosure	IP 20 / NEMA 1								
Frame Size	1		2		3			4	

IP 66 / NEMA 4X

Model	200V Class: Single-phase			
	E510-□□□- H1F(N4)(S)			
	2P5	201	202	203
Horse Power (HP)	0.5	1	2	3
Suitable Motor Capacity (KW)	0.4	0.75	1.5	2.2
Rated Output Current (A)	3.1	4.5	7.5	10.5
Rated Capacity (KVA)	1.2	1.7	2.9	4.0
Input Voltage Range(V)	Single-phase 200~240V, 50/60HZ			
Allowable Voltage Fluctuation	-15%~+10%			
Output Voltage Range(V)	Three-phase 0~240V			
Input Current (A)	8.5	12	16	23.9
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0	
Enclosure	IP 66 / NEMA 4X			
Frame Size	1		2	

Model	200V Class: Single-/Three-phase			
	E510-□□□- H(N4R)			
	2P5	201	202	203
Horse Power (HP)	0.5	1	2	3
Suitable Motor Capacity (KW)	0.4	0.75	1.5	2.2
Rated Output Current (A)	3.1	4.5	7.5	10.5
Rated Capacity (KVA)	1.2	1.7	2.9	4.0
Input Voltage Range(V)	Single-/Three-phase 200~240V, 50/60HZ			
Allowable Voltage Fluctuation	-15%~+10%			
Output Voltage Range(V)	Three-phase 0~240V			
Input Current (A)	8.5/4.5	12/6.5	16/11	23.9/12.5
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0	
Enclosure	IP 66 / NEMA 4X			
Frame Size	1		2	

Model	200V Class: Three-phase				
	E510-□□□- H3(N4)				
	205	208	210	215	220
Horse Power (HP)	5	7.5	10	15	20
Suitable Motor Capacity (KW)	3.7	5.5	7.5	11	15
Rated Output Current (A)	17.5	26	35	48	64
Rated Capacity (KVA)	6.7	9.9	13.3	20.6	27.4
Input Voltage Range(V)	Three-phase 200~240V, 50/60HZ				
Allowable Voltage Fluctuation	-15%~+10%				
Output Voltage Range(V)	Three-phase 0~240V				
Input Current (A)	20.5	33	42	57	70
Allowable Momentary Power Loss Time (Sec.)	2.0	2.0		2.0	
Enclosure	IP 66 / NEMA 4X				
Frame Size	2	3			

Model	400V Class: Three-phase									
	E510-□□□- H3 (F)(N4)(S)									
	*N4S 400V class to 15HP only									
	401	402	403	405	408	410	415	420	425	
Horse Power (HP)	1	2	3	5	7.5	10	15	20	25	
Suitable Motor Capacity (KW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	
Rated Output Current (A)	2.3	3.8	5.2	8.8	13.0	17.5	24	32	40	
Rated Capacity (KVA)	1.7	2.9	4.0	6.7	9.9	13.3	19.1	27.4	34	
Input Voltage Range(V)	Three-phase 380~480V, 50/60HZ									
Allowable Voltage Fluctuation	-15%~+10%									
Output Voltage Range(V)	Three-phase 0~480V									
Input Current (A)	4.2	5.6	7.3	11.6	17	23	31	38	48	
Allowable Momentary Power Loss Time (Sec.)	2.0		2.0		2.0		2.0		2.0	
Enclosure	IP 66 / NEMA 4X									
Frame Size	1		2		3					