



TECO



F510

Fan & Pump Drive

IP 20 / NEMA 1
IP 55 / NEMA 12



TAIWAN
EXCELLENCE
2013

BASIC SPECIFICATIONS

220V Class

Inverter Capacity (HP)		5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	
Output Rated	Rated Output Capacity (KVA)	5.5	8	11.4	15.2	21.3	26.2	30	41.9	52.5	64.3	76.2	95.2	119	152	171	
	Rated Output Current (A)	14.5	22	30	42	56	69	79	110	138	169	200	250	312	400	450	
	Maximum Applicable Motor	(HP)	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175
		(KW)	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	130
	Maximum Output Voltage (V)	Three Phase, 200V~240V															
Maximum Output Frequency (Hz)	Based on parameter setting 0.1~400.0 Hz																
Input Power	Rated Voltage, Frequency	Three Phase, 200V ~ 240V, 50/60Hz															
	Allowable Voltage Fluctuation	-15% ~ +10%															
	Allowable Frequency Fluctuation	±5%															

440V Class

Inverter Capacity (HP)		5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	215	250	300	375	425	535	670	800		
Output Rated	Rated Output Capacity (KVA)	7	8.4	13	18	24	28.9	34	41	55	67	78	110	125	158	190	225	250	331	392	445	525	640	731		
	Rated Output Current (A)	9.2	12.1	18	23	31	38	44	54	73	88	103	145	168	208	250	296	328	435	515	585	690	840	960		
	Maximum Applicable Motor	(HP)	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	215	250	300	375	425	535	670	800	
		(KW)	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	280	315	400	500	600	
	Maximum Output Voltage (V)	Three Phase, 380V~480V																								
Maximum Output Frequency (Hz)	Based on parameter setting 0.1~400.0Hz																									
Input Power	Rated Voltage, Frequency	Three Phase, 380V ~ 480V, 50/60Hz																								
	Allowable Voltage Fluctuation	-15% ~ +10%																								
	Allowable Frequency Fluctuation	±5%																								

Notes :

1. Based on the standard 4-pole induction motor. Selecting inverter must have a higher output current rating than motor.
2. IP55 models is only for 440V class with LCD display, the capacity is from 5 to 100HP.
3. The maximum output frequency of each control mode is different, please refer to user manual for more details.

GENERAL SPECIFICATIONS

Control Characteristics	Display	LED keypad with 5-digits seven-segment display or LCD keypad (HOA LCD keypad option)all LCD keypad with parameter copy function
	Control Modes	V/F, SLV, PMSLV with Space Vector PWM Mode
	Output Frequency	0.1Hz ~ 400.0Hz
	Frequency Accuracy	Digital references : $\pm 0.01\%$ (-10 ~ +40°C), Analog references : $\pm 0.1\%$ (25°C $\pm 10^\circ\text{C}$)
	Speed Control Accuracy	$\pm 0.5\%$ (Sensorless Vector Control Mode) ^{*1}
	Frequency Setting Resolution	Digital references : 0.01Hz, Analog references : 0.06Hz/60Hz
	Output Frequency Resolution	0.01Hz
	Overload Tolerance	120% /1 min
	Frequency Setting Signal	DC 0 ~ +10V / -10V ~ +10V or 4 ~ 20mA
	Acceleration / Deceleration Time	0.0 ~ 6000.0 second (separately set acceleration and deceleration time)
Voltage / Frequency Characteristics	Can arbitrarily set V / F curve based on parameters	
Braking Torque	About 20%	
Main Control Functions	Auto Tuning, Soft-PWM, Over-Voltage Protection, Dynamic Braking, Speed Search, Momentary Power Loss Restart, 2 Sets of PID Control, Slide Difference Compensation, RS-485 Communication Standard, Simple PLC Function, 2 Sets of Analog Output, Safety Switch	
Other Functions	Records of Power On and Operation Time, 4 Fault History Records and Latest Fault Record State, Energy-Saving Function, Phase Loss protection, Smart Braking, DC Braking, Dwell, S Curve Acceleration and Deceleration, Up / Down Operation, Modbus, BACnet MS/TP, and Metasys N2 Communication Protocol, Display of Multi- Engineering Unit, Local / Remote Switch, SINK / SOURCE Input Selection, User Parameter Settings	
Protection Functions	Stall Protection	Current level can be set (in acceleration or constant speed, it can be set separately. In deceleration, it can be set with or without protection)
	Over Current (OC) and Output Short-circuit (SC) Protection	It stops when the current exceeds 160% of the inverter rated current
	Inverter Overload Protection (OL2)	Inverter will be stopped when the output higher than 120% rated current for 1 min, Carrier frequency is 2~4KHZ ²
	Motor Overload Protection (OL1)	Electrical overload protection curve
	Over Voltage Protection (OV)	If the main circuit DC voltage is over 410V (220V class) / 820V (440V class), the motor stops running
	Under Voltage Protection (UV)	If the main circuit DC voltage is under 190V (220V class) / 380V (440V class), the motor stops running
	Momentary Power Loss Restart	Power loss exceeds 15ms. You can set the function of momentary power loss restart up to 2sec
	Overheat Protection(OH)	Thermistor sensor on heatsink
	Ground Fault Protection(GF)	Protection by current detection circuit
	Charge Indicator	When main circuit DC voltage $\geq 50\text{V}$, the CHARGE LED is on
Output Phase Loss Protection (OPL)	If the OPL function acts, the motor stops rotation automatically	
Environment Specification	Location	Indoor (protected from corrosive gases and dust)
	Ambient Temperature	-10 ~ +40°C (IP20/NEMA1 and IP55/NEMA12), -10 ~ +50°C (IP00), with de-rating, its maximum operation temperature is 60°C
	Storage Temperature	-20 ~ +70°C
	Humidity	95%RH or less (no condensation)
Altitude and Vibration	Altitude of 1000 meters or lower, 1.0G, in compliance with IEC 60068-2-6	
Communication Function	Built-in RS-485 as standard (Modbus protocol with RJ45 / BACnet / Metasys N2)	
PLC Function	Built-in	
Electromagnetic Interference (EMI)	Meet EN61800-3 Standard, IP20 400V 75HP or below and IP55 400V 60HP can be built in	
Electromagnetic Susceptibility (EMS)	Meet EN61800-3 Standard	
Certification	CE	Meet EN61800-3(CE & RE) and EN61800-5-1(LVD)
	UL	UL508C
Option Card	1 to 8 Pump card, HOA LCD keypad, Profibus card	

Notes :

- 1.Speed control accuracy will be influenced when the motor and installation condition are different.
- 2.The default setting of carrier frequency is different from models.

WIRING DIAGRAM

