

# **TECO INVERTER** **7200GS**



**380 to 460V 25HP~400HP(18.5~300KW)**  
**200 to 230V 25HP~100HP(18.5~75KW)**



# TECO INVERTER 7200GS



## F FEATURES

- V/F control mode (General purpose V/F control mode)
- Sensorless vector control mode.
- PID with auto energy saving control mode.
- V/F+ PG closed loop control mode.
- LCD keypad (Chinese & English Language), (Big size LED keypad optional)
- C.M. noise reduction
- RS-485 communication - MODBUS (SI-M) PROFIBUS (GS-P)
- Multi-Function analog output
- Motor parameter auto tuning
- Global Standards:CE. UL

## M MODEL DESIGNATION

JNTE	BG	BA	0075	JK	-U-
Inverter Series	Keypad	Enclosures and mountings	Applicable maximum motor output(HP)	Voltage	Others
7200GS	BG: LCD digital operator	BA:Open chassis type(IEC IP00)	0025 : 25HP } } 0400 : 400HP	JK:220V, 60Hz (200V, 50Hz)	-U- UL applied
	BC: LED digital operator	BB:Enclosed, wall-mounted type(NEMA1)		AZ:440V, 60Hz (380V,50Hz)	





### (a) 220V CLASS

INVERTER (HP)		25	30	40	50	60	75	100
MAX. APPLICABLE MOTOR OUTPUT HP (KW)*1		25 (18.5)	30 (22)	40 (30)	50 (37)	60 (45)	75 (55)	100 (75)
Output Characteristics	Inverter Capacity (KVA)	34	41	54	57	67	85	128
	Rated Output Current (A)	80	96	130	160	183	224	300
	Max. Output Voltage	3-Phase, 200/208/220/230V (Proportional to input voltage)						
	Rated Output Frequency	Up to 400Hz available						
Power Supply	Rated Input Voltage And Frequency	3-Phase, 200/208/220V, 50Hz 200/208/220/230V, 60Hz						
	Allowable Voltage Fluctuation	+10% ~ -15%						
	Allowable Frequency Fluctuation	±5%						

### (b) 440V CLASS

INVERTER (HP)		25	30	40	50	60	75	100	125	150	175	215	250	300	400
MAX. APPLICABLE MOTOR OUTPUT HP (KW)*1		25 (18.5)	30 (22)	40 (30)	50 (37)	60 (45)	75 (55)	100 (75)	125 (90)	150 (110)	175 (132)	215 (160)	250 (185)	300 (220)	400(300) 500(375)*2
Output Characteristics	Inverter Capacity (KVA)	34	41	54	68	82	110	138	180	195	230	260	290	385	513
	Rated Output Current (A)	40	48	64	80	96	128	165	192	224	270	300	340	450	600
	Max. Output Voltage	3-Phase, 380/400/415/440/460V (Proportional to input voltage)													
	Rated Output Frequency	Up to 400Hz available													
Power Supply	Rated Input Voltage And Frequency	3-Phase, 380/400/415/440/460V, 50/60Hz													
	Allowable Voltage Fluctuation	+10% ~ -15%													
	Allowable Frequency Fluctuation	±5%													

\*1 : Based on 4 pole motor.

\*2 : Based on TECO 460/60Hz, 4-pole motor only.

# TECO INVERTER 7200GS

## CHARACTERISTICS

Control Characteristics	Control Method	Sine wave PWM Four control mode (switched by parameter) – V/F control – V/F+PG control – PID&Auto Energy Saving control – Sensorless vector control (With Auto-tuning)
	Starting Torque	V/F control: 150% at 3Hz Sensorless Vector control: 150% at 1Hz
	Speed Control Range	V/F control 1 : 10 Sensorless Vector control 1 : 60
	Speed Response	5Hz(Sensorless Vector)
	Speed Control Accuracy	V/F control: $\pm 1\%$ (with slip compensation) V/F + PG Control : $\pm 0.03\%$ Sensorless Vector control: $\pm 0.5\%$
	Frequency Control Range	0.1 ~ 400.0Hz
	Frequency Setting Resolution	Digital reference: 0.01Hz (100Hz Below); Analog reference: 0.06Hz/60Hz
	Frequency Accuracy	Digital reference: $\pm 0.01\%$ (-10 ~ +40°C); Analog command: $\pm 0.1\%$ (25°C $\pm$ 10°C)
	Output Frequency Resolution	0.01Hz (1/30000)
	Frequency Setting Signal	0~10VDC (20K $\Omega$ ), 4~20mA (250 $\Omega$ )
	Overload Capacity	150% rated output current for 1 minute.
	Accel/Decel Time	0.1 ~ 6000.0 sec (Accel/Decel time settings independently)
	Efficiency at Rated Freq.	0.95 above
	Braking Torque	Approx. 20% (Approx. 125% when using braking resistor) Inverter of 440V 25HP (18.5KW) has a built-in braking transistor
Protective Functions	Motor Overload Protection	Electric thermal overload relay
	Instantaneous Overcurrent (OC) and Short Circuit Protection	Motor coasts to stop at approx. 200% rated output current.
	Inverter Overheat Protection (OL2)	150% inverter rated output current for 1 min.
	Overvoltage (OV)	Motor coasts to stop if the main circuit voltage exceeds 410VDC for 220V class(820VDC for 440V class)
	Undervoltage (UV)	Motor coasts to stop if the main circuit voltage drops to 190VDC for 220V class(380VDC for 440V class)
	Momentary Power Loss	Immediately stop after 15 ms or longer power loss (at factory setting) Continuous operation during power loss less than 2 sec. (standard)
	Fin Overheat (OH)	Thermostat
	Stall Prevention	Stall prevention during acceleration/deceleration and constant speed operation.
	Ground Fault (GF)	Provided by electronic circuit.
Power Charge Indication	Indicates until main circuit voltage reaches 50V.	
Environmental Conditions	Location	Indoor (Protected from corrosive gases and dust)
	Humidity	95% RH (non-condensing)
	Storage Temperature	-20 ~+60°C (for short period during shipping)
	Ambient Temperature	-10 ~+50°C (Derating above +40°C for NEMA1 type) (Derating above +45°C for open chassis type)
	Altitude	1000m or below
Communication Function	MODBUS, PROFIBUS(option)	
EMI	Meet EN61800-3 with Specified EMI Filter	
EMS	Meet EN61800-3	



## M MAIN CIRCUIT TERMINALS

HP Range	440V:25HP	220V: 25~100HP 440V: 30~400HP
Terminals		
R / L1	Main Circuit Input Power Supply	
S / L2		
T / L3		
U / T1	Inverter Output	
V / T2		
W / T3		
B1/P	B1/P - B2: Braking Resistor B1/P - ⊖: DC power supply	—
B2		
⊖	—	⊕ ~ ⊖: DC Power Supply or Braking Unit
⊕		
E ( PE, $\frac{1}{2}$ )	Grounding (3rd Type Grounding)	

## C CONTROL CIRCUIT TERMINALS

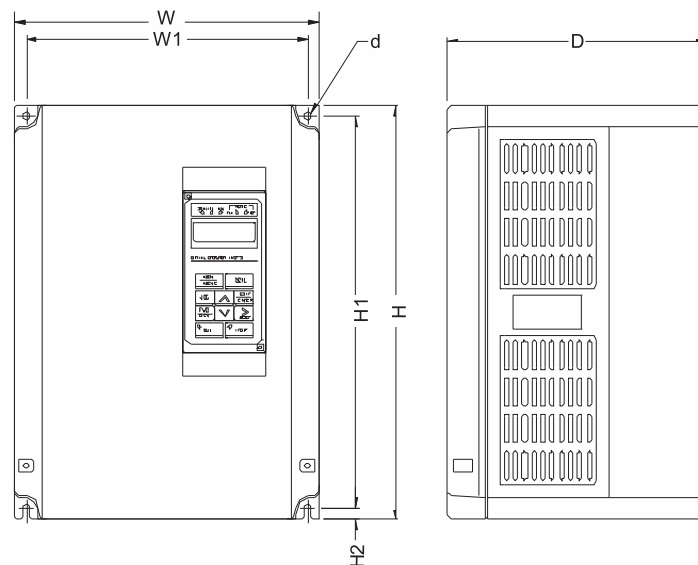
Terminal	Functions	
1	Forward operation-stop signal	
2	Reverse operation-stop signal	
3	External fault input	
4	Fault reset	
5	Multi-function contact input:the following signals available to select.	
6	Forward/reverse select, run mode select, multi-speed select, jog frequency select,	
7	accel/decel time select, external fault, external coast to stop, hold command,	
8	inverter overheat prediction, DB command, aux. input effective, speed search, energy-saving operation.	
9	Multi-function contact output: one of the following signals available to output.	
10	Output during running, zero speed, synchronized speed, arbitrary speed agreed, frequency detection, overtorque, undervoltage, run mode, coast to stop, braking resistor overheat, alarm, fault.	
11	Sequence control input common terminal.	
12	Connection to shield sheath of signal lead.	
13	Master speed voltage reference (0 to 10V).	
14	Master speed current reference (4 to 20mA).	
15	+15V	
16	Aux. analog command: one of the following signals available to select. Frequency command, frequency gain, frequency bias, overtorque detection level, voltage bias, accel/decel rate, DB current.	
17	Common terminal for control circuit (0V).	
18	Fault contact output a (Closed at fault).	
19	Fault contact output b (Open at fault).	
20	Fault contact output common.	
21	Multi-function analog monitor (+).	Output current or output frequency is selectable.
22	Multi-function analog monitor (-).	
25	Multi-function Photo Coupler output 1.	The same as terminals 9 and 10
26	Multi-function Photo Coupler output 2.	
27	Multi-function Photo Coupler output common.	

# TECO INVERTER 7200GS

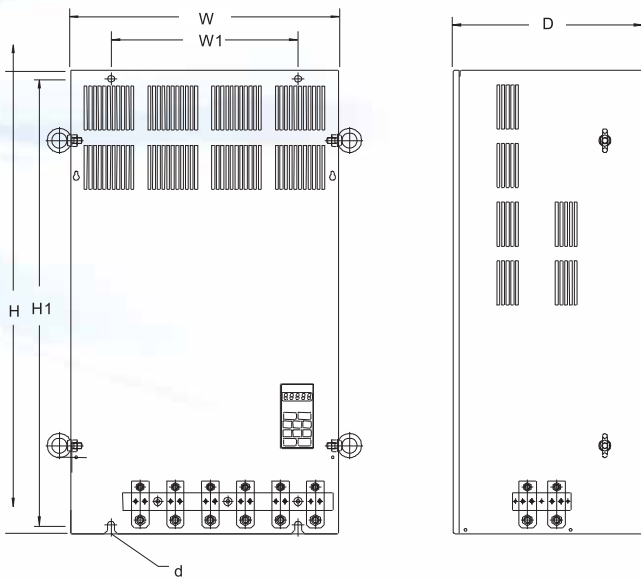
## D DIMENSIONS

Voltage (V)	Inverter Capacity (HP)	Open Chassis Type (IP00) mm						Weight (Kg)	Enclosed Type (NEMA1) mm						Weight (Kg)	ACL/DCL	Reference Figure
		W	H	D	W1	H1	d		W	H	D	W1	H1	d			
220V	25	283.5	525	307	220	505	M8	30	291.5	685	307	220	505	M8	33	DCL Built-in (Standard)	(b)
	30							75							81		
	40							76							82		
	50	459	790	324.6	320	760	M10	79	462	1105	324.6	320	760	M10	85		
	60							79							88		
	75							79							88		
	100	599	1000	381.6	460	960	M12	120	602	1305	381.6	460	960	M12	130		
440V	25	265	360	225	245	340	M6	12	265	360	225	245	340	M6	12	External ACL (option)	(a)
	30	283.5	525	307	220	505	M8	36	291.5	685	307	220	505	M8	38	DCL Built-in (Standard)	(b)
	40							36							38		
	50	344	630	324.5	250	610	M8	47	352	790	324.5	250	610	M8	50	DCL Built-in (Standard)	
	60							47							50		
	75							47							50		
	100							62							65		
	125	459	790	324.6	320	760	M10	80	462	1105	324.6	320	760	M10	85	DCL Built-in (Standard)	
	150							81							86		
	175							81							86		
	215	599	1000	381.6	460	960	M12	132	602	1305	381.6	460	960	M12	139	DCL Built-in (Standard)	
	250							132							139		
	300	730	1230	382	690	930	M12	170	730	1330	382	690	930	M12	176	External ACL (option)	
400	190							196									

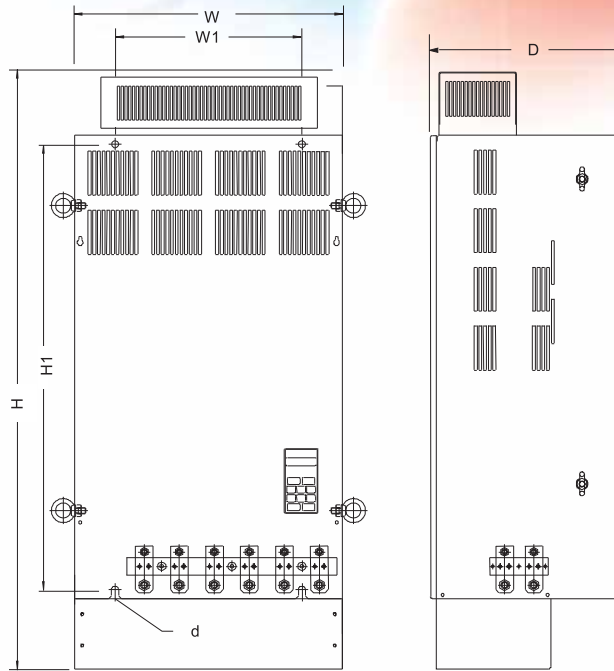
(a) 440V : 25HP



**(b) 220V:25HP-100HP  
440V:30HP-250HP**

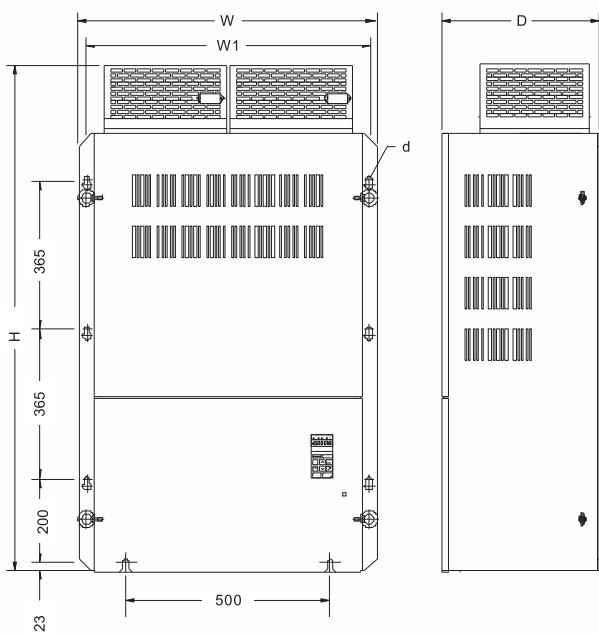


(Open Chassis Type-IP00)

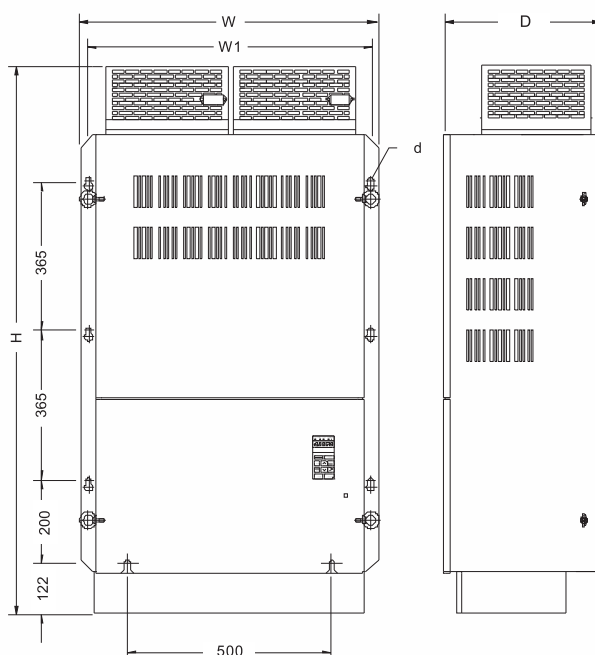


(Wall-mounted Type-NEMA1)

**(c) 440V:300HP, 400HP**



(Open Chassis Type-IP00)



(Wall-mounted Type-NEMA1)



# STANDARD CONNECTION DIAGRAM

(440V 25HP Example)

