通用变频器 | AC Drives

PI7600/PI7800 Series

Product orientation:

POWTRAN Technology PI7800 series of medium voltage inverter is mainly used on power plants and mining related industries, considering of the international market demand, popularize 480V, 575V, 660V, 690V and other medium voltage inverter, satisfy various voltage levels of working conditions.

Performance profile:

New hardware and software design, excellent performance, higher quality assurance, fashional industry appearance.

Technical Features:

- Using DSP (digital signal processor) as the core control unit, achieve optimal SPWM control technology.
- Intergrate V / F control, V / F + PG control, vector control + PG control, three methods for space voltage vector waveform generating.
- Slip compensation function make stable operation of the motor.
- Built-in automatic torque compensation function, torque control function make constant torque operation of the motor.
- Ten ways to set the frequency, analog terminals can receive customized signals within the range of 0 ~ 10V, 0 ~ 20mA.
- Achieve up to seven sections of the speed and eight acceleration control, built-in PID function enable high-performance closed-loop control.
- Support 0 ~ 10V, 1 ~ 5V, 0 ~ 20mA, 4 ~ 20mA feedback signal.
- Revolving speed tracking start and recover running after instant power-off function.
- Powerful communication capabilities to support standard RS485 and Can Bus, meanwhile offer remote keyboard control function.
- Humanized menu, highlighted LED display, simultaneous display of three groups of state parameters.
- Unique design, minimize the pollution of drives to power supply.

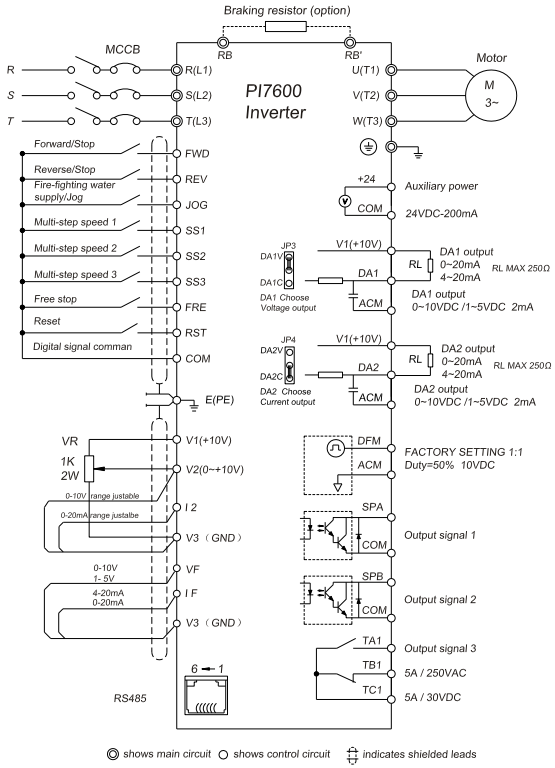
Capacity range:

Power range :0.4-7.5kW Frequency range: 0.00 ~ 800. 00Hz
Voltage: three phase 460V/575V/660V/690V

Application fields:

Metallurgy, petroleum, chemical, electric power, building materials, coal, lifting, sewage treatment, etc.

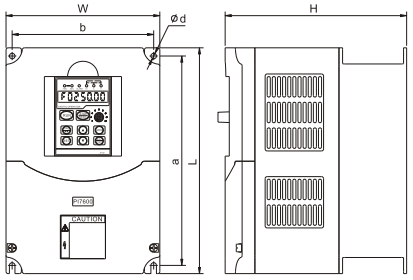
Circuit diagram:



7.5KW the following

PI7600 Series

Specification and Size:



Model	Power (KW)	Voltage (V)	Current (A)	Shape dimensions (mm) L	W	H	Installation dimensions (mm) a	b	d	Structure Item	Net weight (Kg)
PI7600 R75G1	0.75	220	4	172	127	164	160	112	Ø5	4N1	2.4
PI7600 1R5G1	1.5	220	7								
PI7600 2R2G1	2.2	220	10								
PI7600 004G1	4	220	16	222	153	172	206	138	Ø5.5	4N2	3.5
PI7600 R75G3t	0.75	380	2.5	170	125	162	160	112	Ø5	4N2B	2.4
PI7600 1R5G3t	1.5	380	3.7								
PI7600 2R2G3t	2.2	380	5								
PI7600 004G3t	4	380	8.5	220	150	178	205	138	Ø5.5	4N3B	3.5
PI7600 5R5G3t	5.5	380	13								
PI7600 7R5G3t	7.5	380	16	300	218	212	288	203	Ø6.5	4N4B	7

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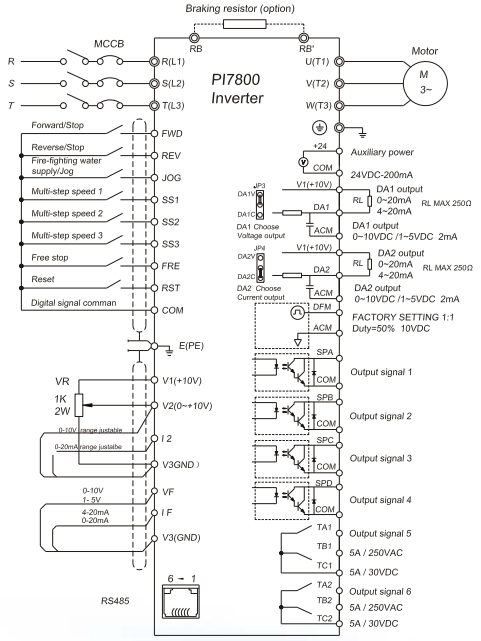
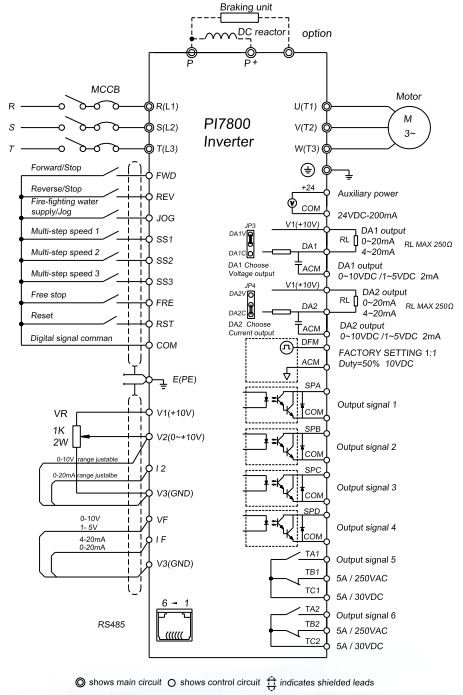
PI7800 Series

Circuit diagram:



7.5KW~15KW



18.5KW~630KW

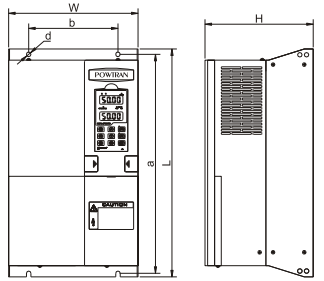
Tips:

Environment requirements for installation of frequency inverter

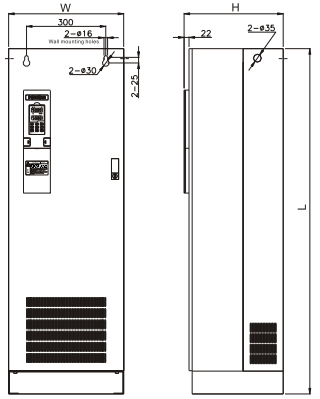
If you use analog signals for remote operation, the control cable between the frequency inverter and analog operation or operating model can not be longer than 50M. in order not subject to interference from surrounding equipment, the cable trace should be separated from strong electric circuits (main circuit and instant-empty loop).

Specification and Size:

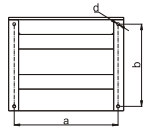
Model	Power (KW)	Voltage (V)	Current (A)	Shape dimensions (mm) L	W	H	Installation dimensions (mm) a	b	d	Structure Item	Net weight (Kg)
PI7800 011G32/015F32	11/15	380	25/32	360	235	207	340	150	Ø10	1N2	11
PI7800 015G32/018F32	15/18	380	32/38								
PI7800 018G3/022F3	18/22	380	38/45	410	264	242	390	160	Ø10	1N3	15.5
PI7800 022G3/030F3	22/30	380	45/60								
PI7800 030G3/037F3	30/37	380	60/75	560	300	243	340	200	Ø10	2N1	23.5
PI7800 037G3/045F3	37/45	380	75/90								
PI7800 045G3/055F3	45/55	380	90/110	660	365	283	640	250	Ø10	2N2	48
PI7800 055G3/075F3	55/75	380	110/150								
PI7800 075G3/093F3	75/93	380	150/170								
PI7800 093G3/110F3	93/110	380	170/210	710	455	283	690	350	Ø10	2N3	68
PI7800 110G3/132F3	110/132	380	210/250								
PI7800 132G3/160F3	132/160	380	250/300	910	480	342	890	350	Ø10	2N4	86
PI7800 160G3/187F3	160/187	380	300/340								
PI7800 187G3/200F3	187/200	380	340/380	1540	515	443	465	367	Ø13	3N1	190
PI7800 200G3/220F3	200/220	380	380/415								
PI7800 220G3/250F3	220/250	380	415/470								
PI7800 250G3/280F3	250/280	380	470/520	1700	850	492	640	260	Ø13	3N2	350
PI7800 280G3/315F3	280/315	380	520/600								
PI7800 315G3/355F3	315/355	380	600/640								
PI7800 355G3/400F3	355/400	380	640/690								
PI7800 400G3/450F3	400/450	380	690/740	2200	1000	600				GGD	
PI7800 450G3/500F3	450/500	380	740/860								
PI7800 500G3/560F3	500/560	380	860/920	2200	1200	600				GGD	
PI7800 560G3/630F3	560/630	380	920/980								

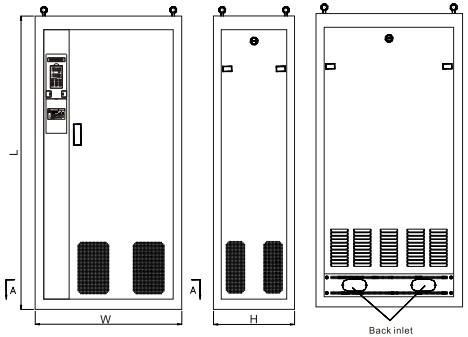


1N2~2N4



3N1





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通用变频器 AC Drives PI7600/PI7800 Series

键盘说明：

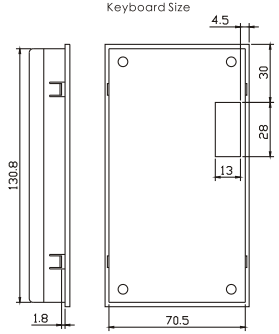
JP6E7800 Keyboard

Dual LED display
Options: (for PI7800/7600 series)

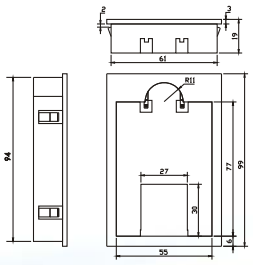
JP6C7800 Keyboard

Dual LED display with potentiometer
Options: (for PI7800/7600 series)

Keyboard Size

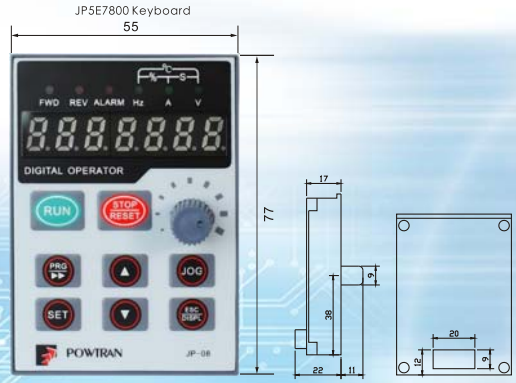


Square hole size for installing keyboard on panel
(131±0.1) X (70.8±0.1)



The dimension of aperture for installing keyboard in panel :
(75.5±0.1) X (122.5±0.1)

JP5E7800 Keyboard



Dual LED display
Options: (for PI7600 series)

external keyboard
(for PI7600 series)

Standard Specification:

items		specifications
Voltage and frequency		Single-phase 200~240V,50/60Hz Three-phase 200~240V,50/60Hz Three-phase 380~415V,50/60Hz Three-phase 440~460V,50/60Hz Three-phase 575V,50/60Hz Three-phase 660V,50/60Hz Three-phase 1140V,50/60H
Allowable Fluctuation range		voltage: ±15% frequency: ±5%
Control system		high performance vector control inverter based on DSP
Output frequency		G/F/Z/S/T/M:0.00~800.0Hz,the maximum frequency range is 10.00~800.0Hz H:0.00~2000.0Hz,the maximum frequency range is 10.00~2000.0Hz.
control method		V/F control, V/F+ PG control, vector + PG control
waveform produce methods		asynchronous space vector PWM, step less and subsection synchronous space vector PWM,2 phase optimized vector PWM
Auto torque boost function		Realize low frequency (1Hz) and large output torque control under the v/f control mode.
Acceleration /decelerate control		Acceleration/Deceleration S curve subsection set mode. The maximum running time is 26 hours.
Program running control		7 step speed program running, the maximum running time is 88 hours.
frequency setting accuracy		Digital references:0.01Hz(300 Hz and below),0.1 Hz(above 300 Hz)Analog references:0.05Hz/60Hz
frequency accuracy		Speed control tolerance 0.01%(25℃±10℃)
V/F curve mode		Linear,square,8 V/F curve set by user
Over load capability		G/S:150% for one minute, 200% for 0.1 second F:120% for one minute, 150% for 0.1 second Z/M/T:180% for one minute, 250% for 0.1 second H:250% for one minute, 300% for 0.1 second
slip compensation		0~10% automatic slip compensation
Input signal	running method	Keypad/Terminal/Communication mode
	frequency setting	There are 11 frequency setting modes, including DC 0~10V,DC 0~20mA, DC 4~20mA, potentiometer on the keyboard.
	start signal	forward, reverse
	Multi-segment speed	can set 7 steps speed at most(using multi-function or program running)
	Multi-segment acceleration	At most 8 steps acceleration can be set (using multi function terminals or program running.)
	instant stop	Interrupt controller's output.
	traverse running	Program control running
	jog	running in low speed
	fault reset	When the protection function is affective, system can reset fault state automatically.
	PID feedback	DC 0~10V, DC 1~5V, DC 0~20mA, DC 4~20mA
Output signal	running state	motor state display, stop, accelerate/decelerate, seven-speed,program running state
	fault output	relay fault output: AC 250V 5A, DC 30V 5A
	analog output	2 analog output. 8 signals could be selected:frequency, current, voltage, temperature, etc, the output signal range is 0~10V/0~20Ma.
	output signal	6 output signals, each one with 32 signals for option.
running function		Limit frequency, skip frequency, torque difference compensate, reverse protection, automatic adjustment, PID control
DC brake		On base of non-OC, internal PID can regulate braking current to ensure enough braking torque.
inverter protection		Over voltage, under voltage, over current, over load, overheat, over current stall, over voltage stall, phase loss (options), external fault, communication fault, PID feedback abnormity, PG fault.
IGBT temperature display		Display of current IGBT temperature
inverter fan control		Temperature of starting the fan can be set. (options)
restart after momentary power loss		less than 15ms:continue running .ore than 15ms:automatic inspection of motor's speed, restart after transient power down.
speed starting pursue mode		inverter pursue motor speed automatically before starting
parameter protection function		protect inverter's parameter by setting password and decode
LCD English Display + LED keyboard	running message	Totally 66 running monitor objects: set frequency, actual frequency, actual current, actual current percentage, DC bus voltage, actua output voltage, actual motor's speed, total running time, IGBT temperature, PID set value, PID feedback value, motor output power percentage, excitation heft set value, excitation heft actual value, torque heft set value, torque heft actual value. Display of 3parameters simultaneity at most: set frequency + actual frequency+ the monitored running message. Select by F00, F65、F66.
	fault message	Store 5 fault messages at most, and can inquire about fault style, voltage, current, frequency and the work state at the same time
Rs485		Completely isolated RS485 communication module (options),realizes the communication with the host computer.
CAN BUS		CAN BUS module(options)
environment temperature		-10℃~40℃
storage temperatur		-20℃~65℃
environment humidity		Less than 90 % RH
Height / libration		less than 1,000 m, less than 5.9m/s² (=0. 6g)
application place		where there is no rust gas, no flammability gas, no grease and dust
cooling methods		Forced air cooling and natural cooling

中压变频器 Medium Voltage Frequency Inverter PI7800G6 Series

Product orientation:

POWTRAN Technology PI7800 series of medium voltage inverter is mainly used on power plants and mining related industries, considering of the international market demand, popularize 480V, 575V, 660V, 690V and other medium voltage inverter, satisfy various voltage levels of working conditions.

Performance profile:

New hardware and software design, excellent performance, higher quality assurance, fashional industry appearance.

Technical Features:

- Using DSP (digital signal processor) as the core control unit, achieve optimal SPWM control technology.
- Intergrate V / F control, V / F + PG control, vector control + PG control, three methods for space voltage vector waveform generating.
- Slip compensation function make stable operation of the motor.
- Built-in automatic torque compensation function, torque control function make constant torque operation of the motor.
- Ten ways to set the frequency, analog terminals can receive customized signals within the range of 0 ~ 10V, 0 ~ 20mA.
- Achieve up to seven sections of the speed and eight acceleration control, built-in PID function enable high-performance closed-loop control.
- Support 0 ~ 10V, 1 ~ 5V, 0 ~ 20mA, 4 ~ 20mA feedback signal.
- Revolving speed tracking start and recover running after instant power-off function.
- Powerful communication capabilities to support standard RS485 and Can Bus, meanwhile offer remote keyboard control function.
- Humanized menu, highlighted LED display, simultaneous display of three groups of state parameters.
- Unique design, minimize the pollution of drives to power supply.

Capacity range:

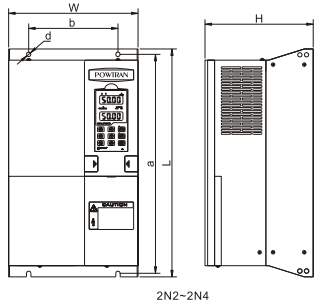
Power range :11-315kW Frequency range: 0.00 ~ 800. 00Hz
Voltage: three phase 460V/575V/660V/690V

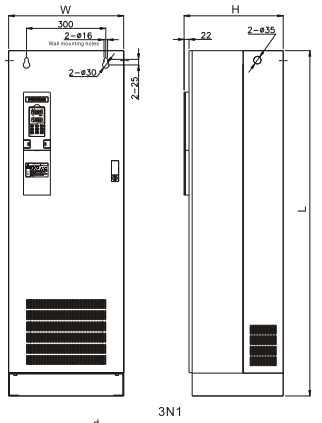
Application fields:

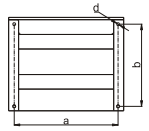
Metallurgy, petroleum, chemical, electric power, building materials, coal, lifting, sewage treatment, etc.

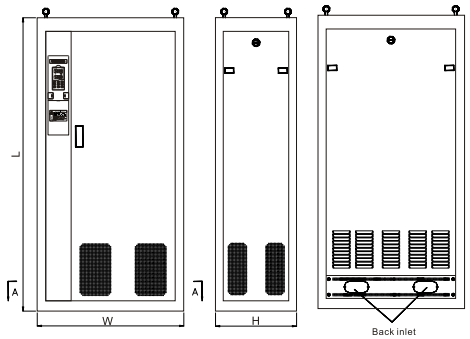
Specification and Size:

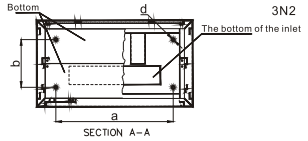
Model	Power (KW)	Voltage (V)	Current (A)	Shape dimensions (mm) L	W	H	Installation dimensions (mm) a	b	d	Structure Item	Net weight (Kg)
PI7800 011G6/015F6	11/15	660	15/18	660	365	283	640	250	Ø10	2N2	48
PI7800 015G6/018F6	15/18	660	18/22								
PI7800 018G6/022F6	18/22	660	22/28								
PI7800 022G6/030F6	22/30	660	28/35								
PI7800 030G6/037F6	30/37	660	35/45								
PI7800 037G6/045F6	37/45	660	45/52								
PI7800 045G6/055F6	45/55	660	52/63								
PI7800 055G6/075F6	55/75	660	63/86	710	455	283	690	350	Ø10	2N3	68
PI7800 075G6/093F6	75/93	660	86/98								
PI7800 093G6/110F6	93/110	660	98/121								
PI7800 110G6/132F6	110/132	660	121/150	910	480	342	890	350	Ø10	2N4	86
PI7800 132G6/160F6	132/160	660	150/175								
PI7800 160G6/187F6	160/187	660	175/198								
PI7800 187G6/200F6	187/200	660	198/218								
PI7800 200G6/220F6	200/220	660	218/240								
PI7800 220G6/250F6	220/250	660	240/270	1540	515	443	465	367	Ø13	3N1	190
PI7800 250G6/280F6	250/280	660	270/330	1700	850	492	640	260	Ø13	3N2	350
PI7800 280G6/315F6	280/315	660	330/345								
PI7800 315G6/355F6	315/355	660	345/370								
PI7800 355G6/400F6	355/400	660	370/430								
PI7800 400G6/450F6	400/450	660	430/490								











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