# PDS7 inverter Manual

## A: characteristic function:

characteristic	parameter	display
tunction		code
PID constant	PID constant pressure control	
pressure		
water supply		ar p
PID sleep	<ol> <li>1) when the pressure arrives, the operating frequency is less than the sleep frequency P611 and the duration is longer than the sleep time P612. the "SLP" is displayed in dormant state when the frequency is reduced to 0.</li> <li>2) when the operating frequency is larger than the sleep frequency P611 and the frequency operates stably, the frequency converter can be recognized intelligently and it will also enter into the sleep state. the related parameter P652~P655.</li> <li>3)when the operating frequency is greater than P656, do not judge sleep.</li> </ol>	SLP
PID wake	In sleep, the feedback pressure is less than the P613 of the set pressure, the inverter wakes and the PID begins to work.	
pressure	When pressure sensor disconnects, the inverter will	20
wire break alarm	report trouble by displaying "20". Please refer to P621.	
Water shortage detection	If the pressure is lower than P641 and the duration time is longer than P644, the failure code "LL" is reported to be low pressure failure and stop.	LL
anhydrous alarm	If the pressure is lower than P606 and the duration time is longer than P643, the failure code "LP" is reported to be low pressure failure and stop.	LP
high voltage	If the pressure is higher than P605 and the duration time	HP
alarm	is greater than 0.1s, the failure code "HP" will be reported	
	to be high pressure failure and stop.	
power on	P102=0, set P645=1, power on and automatic operation	
automatic		
operation		
antifreeze	In sleep, the duration time is longer than P649, and run	
function	the time of P650.	

# B: keyboard description



### 1: indicator light instruction

indicator light name	function declaration
FWD	forward indicator light
REV	reverse indicator light
RUN	operation indicator light
STOP	stop indicator light

### 2: key instruction

key name	function declaration
PR	programming key: menu entry or exit
ENT	confirmation key or shift key: the short press is a shift key,the long press is a confirmation key.
	increment key: increment of data or function code
	decrement key: decrement of data or functional code
D	run key: it is used for running operation when keyboard controls start and stop.
STO	stop / reset key: when run, press this key to stop running; when failure, press this key to reset the failure.

C: basic wiring

1: main loop terminal



1: main loop terminal



#### main loop terminal instructions

······································			
name	terminal description		
L1、L2	single-phase power input		
$R_{\gamma} S_{\gamma} T$	three-phase power input		
U, V, W	connect motor		

220V main circuit wiring diagram



380V main circuit wiring diagram



1: control loop terminal



control loop terminal instructions

terminal	function definition description	remarks	
name			
S1	multi - function input terminal	multifunctional input terminals S1 and S2 which can be set by parameter setting	
S2	multi - function input terminal	when the terminal and GND are closed.	
24V	24V auxiliary power supply	Max voltage 100mA	
10V	frequency setting power supply	Max voltage 20mA	
5V	frequency setting power supply	Max voltage 20mA	
FIV	analog input terminal	0~10V/0~20mA	
FIC	analog input terminal	0~10V/0~20mA	

GND	GND		
RS+	RS485	communication	
	positive		
RS-	RS485	communication	
	negative		
RAB, RC	relay out	put contact	normally open
MO1	Transisto	r output	
control b	oard swite	ching switch instruction	\$
switching switch name switching switch instru		switching switch instru	iction
J1		FIC and V, short conn	ection is to be voltage input; FIC and I,short

	connection is to be current input.
J3	FIVand V, short connection is to be voltage input; FIV and I, short
	connection is to be current input.

### 1 basic wiring diagram



### D: shape and installation dimension







### E: inverter series model

Item no.	input voltage	applicable	main	air	electroma	Rated	Rated	Max
		motor	circuit	circuit	gnetic	input	output	output
		(KW)	diamet	breake	contactor	current(	current(	freque
			er	r (A)	(A)	A)	A)	ncy
			$(mm^2)$					(Hz)
			)					
PDS7-0R7P2	1PH 220V	0.75	1.0	25	13	7.2	5	999.9
PDS7-1R5P2	50/60Hz	1.5	1.5	25	18	10	7	999.9
PDS7-2R2P2		2.2	2.0	25	25	13	9	999.9
PDS7-0R7P4	3PH 380V	0.75	0.5	10	6	3.5	2.1	999.9
PDS7-1R5P4	50/60Hz	1.5	1.0	10	9	5	3.7	999.9
PDS7-2R2P4		2.2	1.0	10	10	5.8	5	999.9

F: commonly used parameters, first P1.17=8, then P1.17=5

(other parameters, please reference to NZE inverter

specifications.)

function code	set value	description	
P000	7	display PID target values and feedback values	
P645	1	power on delay 3s and automatic running	
P104	0	prohibit reversal	
P107	10.0s	acceleration time	
P108	10.0s	deceleration time	
P201	1	coast stop	
P300	1.00V	for backpack pressure sensors	
P301	5.00V	for backpack pressure sensors	
P600	1	PID open	
P603	0: select FIV	PID feedback	
P604	2.50bar	PID target	
P606	0.50 Bar	PID alarm lower limit	
P607	100.0%	P value of PID	
P608	2.0s	I value of PID	
P610	2%	PID action step	
P611	25.0Hz	PID sleep frequency	
P612	10S	sleep time	
P613	90%	sleep wake-up value	
P614	10.00 Bar	pressure sensor range	
P620	0.1%	PID deviation limit	
P621	1	0: pressure break line detection	
		1: alarm,but does not stop;	
		2: alarm and stop	
P622	0.5v	PID feedback loss detection value	
		Range: 0-10.00V	
		(If $4\sim 20$ mA is selected, it is	
		disconnected if it is less than	
		2mA;Then set P622=2mA*250 $\Omega$	

		=0.50V)
P623	1.0s	PID feedback loss detection time
P624	0.00Hz	PID reverse cutoff frequency
P640	0	0: No operation during shutdown
		1: Operation during shutdown
P641	0.50bar	Water shortage pressure
	(Set to 0, no	detection value
	detection)	
P642	10s	<ol> <li>After the high water pressure alarm, wait until the pressure returns to normal, after P642, automatically reset the high pressure fault,</li> <li>After the low water pressure alarm, automatically resets the low pressure fault after P642.</li> <li>If P642=0, it will not reset after high water pressure or low water pressure alarm, the range is 0~09995</li> </ol>
D642	10.00	0~99995 Banga 0-00005
	Low water pressure alarm detection time	During operation, if the pressure is lower than P606 and P643 continues, it will report "low water pressure fault" and stop, fault code "LP"; if P643=0, low pressure fault will not be detected
P644	100s	Water shortage alarm detection time
P646	600.0s	Water shortage self-reset first 10 times, interval time
P647	60min	Time interval after 10 times of water shortage: 0-1000min
P648	1	Antifreeze setting selection 0-Invalid 1-valid
P649	900s	During sleep, antifreeze waiting time
P650	30s	During sleep, antifreeze running time
P651	15.0Hz	During sleep, antifreeze operation frequency
P652	0.3HZ	sleep judgment: frequency change <p652 judge<="" s,="" starting="" td="" to=""></p652>

		sleep>	
P653	0.6%	sleep judgment: the reduce	
		frequency allows the pressure to	
		drop.	
P654	0.3HZ	sleep judgment: the rate of	
		decline per second	
P655	10 times	sleep judgment: the times of the	
		frequency of the fall	
P656	42.0HZ	sleep judgment: the frequency is	
		greater than P639, not sleep.	
P657	4ms	PID sampling time	

# G: fault alarm

number	operation panel display	fault name
1	20	pressure sensor line
		break detection
2	HP	high water pressure
		alarm
3	LP	low water pressure
		alarm
4	LL	Water shortage alarm
5	oc1/UC1	over current
	oc2/UC2	
	oc3/UC3	
6	oU1 oU2 oU3	over voltage
7	Lu1/Lu2//Lu3	low voltage
8	OL1/OL2/OL3	over load
9	оН	inverter overheating
10	ES	emergency stop
11	OT1/OT2/OT3	motor over torque