

E3 servo point table instruction

Restricted © HNC Electric Ltd., 2015 All rights reserved.

Point table application example





TARGET POSITION - - PCSEL1 - - PCSEL2 - - PCSEL3 - - PCSEL4 ON OFF OFF OFF 234567 OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON ON OFF OFF ON ON OFF ON ON OFF ON

HOME POSITION: All inputs OFF



Wiring in CN1:

Pin1&3	24V	Parameter Definition	Set Value			
Di=0.940	0)/	Pr2.0	0			
PIn2&12	UV	Pr3.0	3			
Pin4 (I1)	SVON	Pr9.0	0 or 1(See below explanation)			
Pin6 (I3)	PCSTART1	Pr642.0	0			
Pin7 (14)		Pr644.0	1			
	PGSEL1	Pr645.0	2			
Pin8(15)	PCSEL2	Pr646.0	0			
Pin9 (16)	PCSEL3	Pr646.3	0			
		Pr648.0	Depend on			
Pin10(I7)	PCSEL4	Pr649.0	Depend on			
Pin11(18)	ORG	Pr650.0	Depend on			

Parameter setting:

Note: Please refer to manual for more detailed information of above. Pr9.0=0 You need active& deactive SVON by PiN4 Pr9.0=1 You need active& deactive SVON by using software "HCX-SETUP" Pin6 is for motor start(speed defined by Pr648.0) Pin11 is for Homing sensor(speed defined by Pr649.0) Pr650.0 is the Homing time from speed Pr648.0 to Pr649.0)



HCX-SETUP 测试1.12										-	×
Folder (F) Tool (T)	Window	(W) I	Help(H)			Connect Dis	connect	Alarm statu	us 🕘 Current position	1	
ې کټ Communication setting								The second	ine a construction of the second s		
Q. Parameter		Select	Port	Address	Servo drive type	Motor type	Encoder type	Servo drive serial number	Motor serial number		
∿ Waveform monitor			COM3	1	02041000	10221001	00110606	16003031	fiffiff		
D Waveform comparison											
88 Status display											
Alarm											
Auto tuning											
Point table											
C) Test run											
Auxiliary function											
	Ŀ	<			111				>	1	
				G	at	Connect	Discon	nert			
							Click here	to connect to	"HCX-SETUP	"	



18 HCX-SETUP 测试1.12										- 0 X
Folder (F) Tool (T)	Window	(W)	Help(H)			Connect Dis	connect	Alarm statu	s 🕘 Current position	
्र Communication setting										
Q, Parameter		Select	Port	Address	Servo drive type	Motor type	Encoder type	Servo drive serial number	Motor serial number	1
へ Waveform monitor			COM3	1	02041000	10221001	00110606	16003031		
ତ୍ର Waveform comparison										
88 Status display										
Alarm					нсх	SETUP	×			
Auto tuning					Со	nnection successful.				
Point table										
O Test run						确定				
Auxiliary function		<			Ш				>	
				G	et	Connect	Discon	nect		
СОМЗ										



	190000000000 8 -3380 8 -1			Connect Disconnect	II 🔘 Alarm	status 🔵 Current positi	on
4	Point table					Command types	Command
Communication setting	No. Position	Rotation speed	Accel time	eration Deceleration Dwell time Command Running Positioning	Valid or Invalid	Write current	types O I/O
Parameter	0 20000	100	30	Note	× nvalid	ABS Position comma	and
\sim	1 300000	100	30		(alid	O ABS position feedba	eck
Waveform monitor	2 400000	100	30	The following operation is required for the parameters before	(alid		
පු	3 500000	100	30	U using the Point table	(alid	User	r I/O input is invalid.
Vaveform comparison	4 600000	100	30	"Control mode selection" is set to "Position control mode".	(alid		24.0274281 - 2002200
88	5 700000	100	30	(No.2.0 is set to "0" in parameter screen.)	(alid	File name	
Status display	6 800000	100	30	"Command mode selection" is set to "Internal generation	<u>/alid</u> ≡	Folder	
<u>A</u>	7 1000000	100	30	command".	(alid		-
Alarm	8 0	1	30	(No.3.0 is set to "3" in parameter screen)	(alid	Read	Save
~	9 0	1	30		(alid		
Auto tuning	10 0	1	30	"Operation mode command" is set to "Communication".	(alid	Course dation	
	11 0	1	30	(No.9.0 is set to "1" in parameter screen)	(alid	Servo arive	
Point table	12 0	1	30	"Internal position command-Operation mode" is set to "Point	(alid	Cat Cat	144 **
0	13 0	1	30	table".	(alid	Get Set	vvrite
Test run	14 0	1	30	(No.642.0 is set to "0" in parameter screen.)	Valid V		
0 1.0	Click here	140					
Auxiliary function	Inching		-	Catura anu?	home	Compare	
			Trav	Set up now?	12		
	CCW rotation	• No.1	100000		Start	All O E	EPROM
	CON IOIAIOII	1. 					
	4 <u>0</u>	O No.2	50	是(Y) 否(N)		Individua	50 C
	CW rotation				Stop	O Fi	ile
		0 No.3	100	1000 ms (1000 - 0 r/min)			
			-	2.Clic	ck here		



			Connect		Alarma		
्र munication setting	- Basic view - Basic - Position control	No.	Parameter name	Restart	Unit	Value	Change ^ setting
‰5 Parameter	Speed control	2.0	Control mode selection	H		0	
~	Torque control	3.0	Command mode selection	[-]		3	
eform monitor	Vibration suppress control	4.0	Communication address	[-]		1	
ÐÐ		8.0	Selection of host cmmunication method	[-]		0	
orm comparison		9.0	Selection of Operation mode	[-]		1	
tatus display		11.0	RS485communication Minimum response time	[ms]		3	
atus uispiuy		32.0	Pulse train command - Input mode	[-]		0	
Alarm		32.1	Pulse train command - Rotation direction	[-]		1	If 9.0=1
~		32.2	Selection of Auto interpolation for command division an	[-]		1	See next page
Auto tuning		32.3	Selection of Pulse train input logic	[-]		0	
.		33.0	Pulse train command - Input filter selection	[-]		4	
Point table		34.0	Command division and multiplication (Numerator)	[-]		1000	
() Test run		36.0	Command division and multiplication (Denominator)	[-]		1000	
Q		48.0	Analog speed command input -Fiter constant (Numerat	[-]		16000	
iliary function	File name	49.0	Analog speed command input -Fiter constant (Denomin	[-]		65535	~
	Folder	Paran	neter description	MA I	(8	50	
	Read Save	Sele	ect Control Mode				
		222					= Compare
	Servo drive	0 =					
	Cat Cat With	2 -	torque control mode				Clear







HCX-SETUP 测试1.12									
Folder (F) Tool (T)	Window (W) Help (H)		Connect Disconnect	1	Alarm	status 🕘 Cu	rrent position		30001
t⊊ ommunication setting	Basic view Basic Bosition control	No.	Parameter name	Restart	Unit	Value	Change	^	
Q. Parameter	Speed control	399.0	Internal speed command - Target speed 8	[r/min]		3000			
~	Torque control	642.0	Internal speed command - Operation mode	[-]		Ō			
Waveform monitor	Vibration suppress control	643.0	Internal speed command - Overflow detection option	[-]		1			
£5		644.0	Point No. output method	[-]		1			
aveform comparison		645.0	Base signal 1 selection for Home position	[-]		2			
Status display		645.1	Base signal 2 selection for Home position	[-]	- Alt	0			
Status display		645.3	Home position Base signal 1 redetection	[-]		0			
Alarm		646.0	Home position return direction	[-]		0			
2		646.1	Home position sensor input polarity	[-]		0		-	
Auto tuning		646.2	Home positon return Timeout option	[-]		0			
		646.3	Point No.0 function selection	[-]		0			
Point table		647.0	Home position return Torque limit option	[-]		0		_	
Test run		647.1	Action at home position return completion	[-]		0		=	
0		648.0	Home position return Speed	[r/min]		500			1
Auxiliary function	File name	649.0	Home position return Creep speed	[r/min]		10		~	
	Folder	Param	eter description		X				
	Read Save	Set	Operation mode for internal position command				^ ■ Com	pare	
	Servo drive Get Set Write	0 = 1 = 2 =	Point Table Communication operation Manual pulse input				- Cl	ear	



1001(1)	vvinc		Set values or write cu	as you want rrent positio	n to here		Connect	I	Disconnect	t		II 🔘 Alarm	status 🕘 C	urrent position	3000
숙 ation setting O	No	t table	Rotation speed	Acceleration time	Deceleration	n Bwell time	Comman method	d	Running operation		Positioning complete	Valid or ^ Invalid	Command Write cur	rent	Comma types
neter	0	200000	100	30	30		Absolu	Y	Succes	Y	40	Valid	ABS Pos	ition command	
	1	300000	100	30	30	1	Absolu	×	Succes	×	40	Valid	O ABS po	sition feedback) H
monitor	2	400000	100	30	30	1	Absolu	×	Succes	×	40	Valid			
1	3	500000	100	30	30	1	Absolu	×	Succes	×	40	Valid		User I/O	input is ir
omparison	4	600000	100	30	30	1	Absolu	~	Succes	×	40	Valid	_		
1	5	700000	100	30	30	1	Absolu	~	Succes	×	40	Valid	File name		
isplay	6	800000	100	30	30	1	Absolu	×	Succes	×	40	Valid ≡	Folder		
68 - 60	7	1000000	100	30	30	1	Absolu	~	Succes	×	40	Valid			-
m	8	0	1	30	30	1	Relativ	V	Single	V	40	Valid	Read	Save	
	9	0	1	30	30	1	Relativ	~	Single	V	40	Valid			
uning	10	0	1	30	30	1	Relativ	×	Single	×	40	Valid			
	11	0	1	30	30	1	Relativ	~	Single	V	40	Valid	Servo drive		
able	12	0	1	30	30	1	Relativ	×	Single	Y	40	Valid			
1	13	0	1	30	30	1	Relativ	V	Single	V	40	Valid	Get	Set W	/rite
run	14	0	1	30	30	1	Relativ	×	Single	V	40	Valid			
1	4.5	_	4		20	4	lo L c	1	C' 1	ĺ.,	1.0	V PI			
function	-Inchi	ng CW rotation CW rotation	 No.1 No.2 No.3 	Travel distar 100000 50 100	nce Rotatio 500 Accelerat 1000 Decelera 1000	n speed] r/min ion time] ms (0 - 100 tion time] ms (1000 -	00 r/min) 0 r/min)	Se		FF Sen	vo vo	to home on Start Stop	Compare	O EEPRC	DM



Write the parameters to servo, you need click below buttons in sequence:





After set all parameters needed, restart the servo(AC220 and DC24) Then please double-check all parameters are set correctly and write to servo successfully





Wiring in CN1:

Pin1&3	24V
Pin2	0V
Pin4 (I1)	SVON
Pin6 (I3)	PCSTART1
Pin7(I4)	PCSEL1
Pin8 (15)	PCSEL2
Pin9 (16)	PCSEL3
Pin10(I7)	PCSEL4
Pin11 (18)	ORG
Pin12	0V

Note:

- 1. Home position is not the motor mechanical zero point, it's determined by home sensor position.
- 2. In Homing procedure:

a. Keep all Pin7-Pin10 is OFF and keep Pin4 is ON. Active Pin6, then de-active Pin6 after motor running. Motor will running with speed Pr648.0

b. When motor arrived the home sensor position, Pin11 should be ON, motor will running with speed Pr649.0 and stopped immediately when Pin11 became OFF. The stop positon is home position that you decided.

3. Take Point table (Target positon)1 as example:

a. Active Pin7, then active Pin6, and then de-active Pin6 after motor running. Motor will running to Point table 1.

b. Please note that, there's two running type after motor arrived Point table 1:

1. If you select "Single " in software, motor will stop at Point table 1 positon, if you want to go to another position, set related Pins accordingly and set Pin6 ON&OFF again.

2. If you select " <u>Successiv</u> " in software, motor will continue running to point table2-3-4-5-6-7 in sequence..



Thank you!

