

MPG with display

NVMPG

Manual

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Chapter 1. | Brief Introduction

1.1 Products brief introduction

We design a new Manual Pulse Generator named NVMPG. This MPG has a screen, and 10 buttons. The coordinates and some parameter are displayed on the screen.

And user can change axis and rate by buttons. There are also few other functions e.g. ZERO/ GOTO0/HOME on the buttons.

The encoder of NVMPG is the same as general MPG. but the choice of axis and rate use USART port instead of general port.

1.2 Specification feature

- 1) High performance, low prices
- 2) 2.2' TFT Screen
- 3) 10 buttons
- 4) Voltage 5VDC
- 5) 8 wire control line
- 6) 6 axis coordinates /RESET/FRO/SRORSSPINDLE are display on the screen

1.3 Product appearance and dimension

NVBDH+ product appearance please picture 1-1 to 1-3.

Figure1-1. NVMPG appearance 1

Figure1-2. NVMPG appearance 2

Figure1-3. NVMPG appearance 3

Figure1-4. NVMPG appearance 4 working state

Figure1-5. NVMPG connected to NC200

Figure1-6. Size of NVMPG

Product size is 150*75*35mm, picture 1-6 shows.

1.4 Notice and Waring

- Prohibit staying in the rain, it will cause short-circuit..
- Pls use proper voltage power supply and motor.
- Note the power supply connection. Prohibit reverse connection of power supply and Hall.

Chapter 2. Connection

2.1 Connection interface definition

NVMPG has 8 wires connected to CNC system, the definition of NVMPG see as Chart

2-1.

0DUN	&RORU	'HILQLW	5HPDUN
	5('	\$	1HJDWLYH RI 03* V \$ SKDVH
	%/8(\$	3RVLWLYH RI 03* V \$ SKDVH
	%/ \$ & .	%	1HJDWLYH RI 03* V % SKDV
	5((1	%	3RVLWLYH RI 03 V % SKDV
	:+,7(9	9 3RZHU ZLUH
	9,2/(7	7;'	7UDQVPLVLRQ 3RUW
	%52:1	5;'	5HFHLYH 3RUW
	<(//2	*1'	*URXQG

Chart 2-1 Wiring definition of NVMPG

There are 2 mode of terminal, which are open (see as Figure2-1) and RJ45 port(see as Figure 2-2).

RJ45 port mode is only compatible with NC200. See as Figure 1-5.

Figure2-1. Wire mark of NVMPG in open wire mode

Figure2-2. Wire mark of NVMPG in RJ45 port mode

2.2 NVMPG connection

NVMPG can be connected to NVEM/NVUM and NC200. NVMPG and NVEM connecting method see as Figure 2-3 and Chart 2-2.

Figure 2-3 NVMPG connect to NVEM

1903*		19(0	
'HILQLWLRQ RI 1903*		'HILQLWLRQ RI 19(0	
5 ('	\$: + \$	
% / 8 (\$: + \$	
% / \$ & .	%	: + %	
* 5 ((1	%	: + %	
: + , 7 (9	9 ''	
9 , 2 / (7	7 ; '	7 ; '	
% 5 2 : 1	5 ; '	5 ; '	
< (/ / 2	* 1 '	* 1 '	

Chart 2-2 Connecting method with NVEM

Connection between NVMPG and NC200 is very simply, it's only need to put NVMPG's RJ45 plug into NC200's RJ45 socket. See as Figure 1-5.

Chapter 3. Configuration & Use

3.1 Configuration

There are 2 DLL file we provide. If we use standard MPG, we should use NVEM_F.DLL, or if we use NVMPG we should use NVEM_UART_F.DLL.

First we need to set MPG to valid, see as Figure 3-1. No need to set other parameter.

Figure3-1. Set MPG to valid

Second, if we need to use MPG, we should ~~get~~ Manual operation mode into MPG mode, see as Figure 3-2.


The image content is missing, but the caption indicates it shows the process of setting the machine to MPG mode.

Figure3-2. Set to MPG mode

3.2 Use

See as Figure 3-3,it's definition of NVMPG screen. Specific description is as follows.

- 1: Coordinate value of 6 axis
- 2:Axis identification
- 3:MPG rate.
- 4:State of RESET.
- 5:State and value of Spindle
- 6:Value of SRO

7:Value of SJR

8:Value of FRO

Figure3-3. Screen of NVMPG



Figure3-4. buttons of NVMPG

See as Figure 3-4, there are 10 buttons in NVMPG. Each key has a function. We list the function of these buttons in Chart 3-1.

1 R	0 D U N	' H I L Q L W L R Q
	/ () 7 % 8 7 7 2	6 W D U W 5 X Q * F R G H
	\$; , 6	& K D Q J H D F W L Y H D [L V \$, 6
	\$; , 6	& K D Q J H D F W L Y H D [L V \$, 6
	6 3 , 1 ' / (6 7 \$ 5 7 6 7 2 3 V S L Q G O H
	; ; ;	& K D Q J H U D W H R I 0 3 *
	+ 2 0 (7 U L J J H U + 2 0 (I X Q F W L R Q R I V \ V W H
	* 2 7 2 =	7 U L J J H U J R W R I X Q F W L R Q R I V \
	= (5 2	7 U L J J H U = (5 2 I X Q F W L R Q R I V \ V W H
		0 D N H D F W L Y H D [L V F R R U G L Q D W H
	5 , * + 7 % 8 7	7 2 (1 6 (7 (6 7 2 3

Chart 3-1 Function of keys

Button 1 (START) : After loading Gcode, push this button to run G code.

Button 2 (AXIS):

Button 3 (AXIS) : AXIS and AXIS are 2 buttons for change active axis. Each axis has a block above the axis label. Active axis' block is yellow, and invalid axis' block is black.

You can notice the color of the block when you change active axis.

Button 4 (SPINDLE): Open or shut down the spindle.

Button 5 (X1/X10/X100): Change the rate of MPG. The rate of MPG is displayed on the screen.

Button 6 (HOME): Push this button is making machine to find its Machine zero point. If we set a active axis, e.g. X, then push this button is going to find X axis' machine zero point. Or if

we set no active axis, then push this button is going to find all axes' machine zero port.

Button7(GOTOZ):Push is button is making machine to go to workpiece zero port. The method refer to button 6.

Button8(ZERO):Push this button is making cutrecoordinates to 0. The method refer to button 6.

Button9(1/2):Push this button is making cutrecoordinates halveThe method refer to button 6.

Button10(RESET): This button is RESET function.