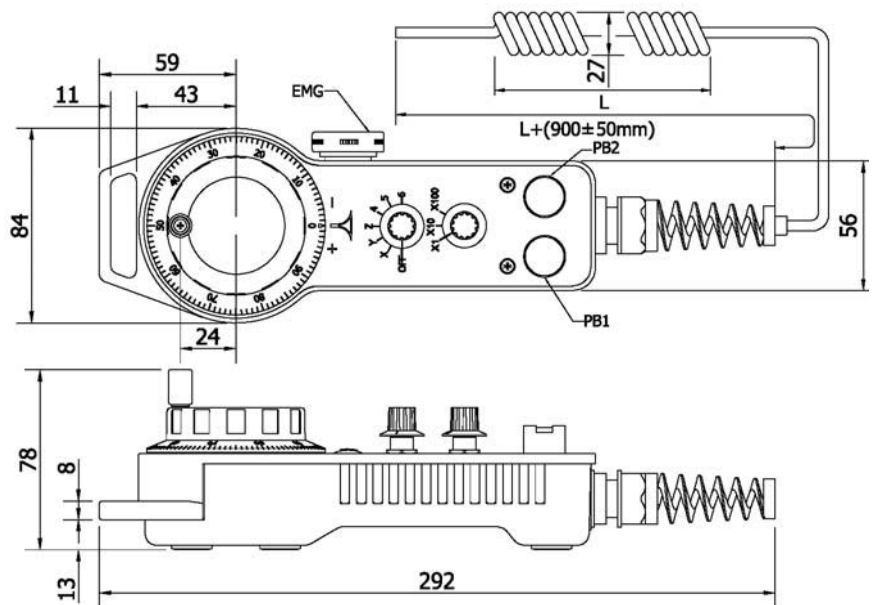


**HPG -A-\_\_ - B** **Pendant Hand-Held**



**ELECTRICAL SPEC. – manual pulse generator**

Detection System	Incremental
Output Wave	Square Wave
Standard Number of Pulse Per Revolution	25, 100
Output Phase	AB phase
Electronics	NPN Voltage, NPN Open Collector or Line Driver
Power Supply	DC 8~26V, DC 5V fixed
Current Consumption	< 60 mA
Output Capacity	Sync. Current: 20 mA, Residual Voltage: 0.5V or less
Max. Response	10K Hz
Phase Different	A, B phase different 90°±45° (T/4±T/8)
Wave Form Rise / Fall	2 µs or less

**MECHANICAL SPEC . – manual pulse generator**

Shaft Loading	Axial: 1 Kg, Radial : 2 Kg
Starting Torque (at 25°C)	260 g-cm
Max. Speed	500 rpm (Maximum ); 200 rpm (Continuous)
X.Y.Z. Vibration	10 ~ 50 Hz / 1.5 mm X.Y.Z. 2hr
Shock	50 g per 11 ms
Rotational Life	10 <sup>6</sup> cycles (200 rpm)
Weight	1500 g

**ENVIRONMENTAL SPEC.**

Operating Temp. / Humidity •	-10°C ~ 60°C, RH 35% ~ 90% (No Condensation)
Storage Temp.	-20°C ~ 80°C
Protection Grade	IP 64

**SWITCHES SPEC. (max.)**

	Rotary Switch	Push Button	Emergency Stop Switch
Max. Voltage	28V AC/DC max.	AC250V 0.3A, AC 125V 5A	With AC Load AC250V 0.5A, Resistance AC125V 1.0A
Current	10 mA	DC 250V 0.1A, DC24V 5A	With DC Load DC 30V 1.0A Resistance
Operating Torque	0.005 ~ 0.02 Nm		

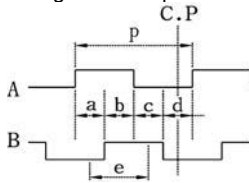
# HPG -A-\_\_ - B

# Pendant Hand-Held

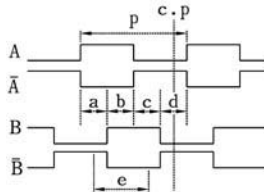
## OUTPUT WAVE FORM

(Clockwise rotation is "CW Rotation" looked from the front side)

NPN Voltage / NPN Open Collector



Line Driver



- $P = 1 P/R$ ;  $a, b, c, d = P/4 \pm P/6$
- C.P= click point  
(For 25 P/R, C.P is at each position of a, b, c, d.  
25 PPR a, b, c, d)
- Point e is recommended as the system switching timing.

## ELECTRICAL CONNECTION

DIAL BODY	encoder	COLOR of WIRE	FUNCTION
		Brown	+V
		Red	0V
		Orange	CH A
		Pink	CH B
		Yellow	CH /A
		Green	CH /B

POINT TO POINT

OFF

Axis Switch Selecting	Light Green	X
	Blue	Y
	Purple	Z
	Gray	4
	Blue / White	5
	Black	6
Rate Switch Selecting	Brown / White	X 1
	Red / White	X 10
	Red / Black	X 100
	Orange / White	Switch Common
Emergency Stop	Black / White	Emergency Stop Contact
	Gray / Black	Emergency Stop Common
Push Buttons	Yellow / Black	Push Button 1 (left)
	Green / White	Push Button 2 (right)
	Green / Black	Push Button Common
Enable Key	White	Enable Key Contact
	Purple / White	Enable Key Common

BINARY CODE TYPE (PNP)

	Purple	Blue	Light Green
OFF	0	0	0
X	0	0	1
Y	0	1	0
Z	0	1	1
4	1	0	0
5	1	0	1
6	1	1	0

BINARY CODE TYPE (NPN)

	Purple	Blue	Light Green
OFF	1	1	1
X	1	1	0
Y	1	0	1
Z	1	0	0
4	0	1	1
5	0	1	0
6	0	0	1

	Red / White	Brown / White
X 1	0	0
X 10	0	1
X 100	1	0

	Red / White	Brown / White
X 1	1	1
X 10	1	0
X 100	0	1

## ORDERING INFORMATION

HPG - A -

<i>Push Button Qty.</i>	<i>Push Button Action</i>	<i>Emergency Stop</i>	<i>Switch Function</i>	<i>Switch Axis</i>	<i>Supporting Foot</i>	<i>PPR</i>	<i>Electronics</i>	<i>Cable</i>
<b>A:</b> With PB1 <b>B:</b> With PB1&PB2	<b>1:</b> Alternate Normal Open 1A <b>2:</b> Alternate Normal Close 1B <b>3:</b> Momentary Normal Open 1A <b>4:</b> Momentary Normal Close 1B	<b>B:</b> With EMG Stop (1x NC contact) and Enable Key <i>[Standard] Momentary Action</i>	<b>P:</b> Point to Point <b>N:</b> Binary Code (PNP) <b>A:</b> Binary Code (NPN) <b>O:</b> Without Switch	<b>6:</b> 6 Axes (OFF-X-Y-Z-4-5-6)	<b>R:</b> Rubber Legs <b>*M:</b> Magnet	<b>A:</b> 100 PPR <b>B:</b> 25 PPR	<b>V:</b> NPN Voltage 8-26Vdc <b>V5:</b> NPN Voltage 5Vdc <b>C:</b> NPN Open-Collector 5-26V <b>L:</b> Line Driver 5Vdc <b>*HL:</b> Line Driver 5-26Vdc	<b>S3:</b> 3 m <b>*S5:</b> 5 m

*[Standard] Alternate Action*

\* OPTION ---