

ELECTRICAL SPEC. - manual pulse generator

Detection System	Incremental 增量型
Output Wave 輸出波形	Square Wave 方波
Standard Number of Pulse Per Revolution 解析	25, 100
Output Phase 輸出相	AB phase
Electronics 電路特性	NPN Voltage 電壓型, NPN Open Collector 電流型 or Line Driver 差動式
Power Supply 供應電源	DC 8~26V, DC 5V fixed
Current Consumption 消耗電流	< 60 mA
Output Capacity 輸出容量	Sync. Current: 20 mA, Residual Voltage: 0.5V or less
Max. Response 最大響應頻率	10K Hz
Phase Different 相位差	A, B phase different $90^\circ \pm 45^\circ$ (T/4 \pm T/8)
Wave Form Rise / Fall 波形上下時間	2 μ s or less

MECHANICAL SPEC. - manual pulse generator

Shaft Loading 軸荷重	Axial 軸向: 1 Kg, Radial 徑向: 2 Kg
Starting Torque (at 25°C) 起動轉矩	260 g-cm
Max. Speed 最大機械容許速度	500 rpm (Maximum 瞬間容許速度); 200 rpm (Continuous 連續容許速度)
X.Y.Z. Vibration 震動	10 ~ 50 Hz / 1.5 mm X.Y.Z. 2hr
Shock 衝擊	50 g per 11 ms
Rotational Life 回轉壽命	10^6 cycles (200 rpm)
Weight 重量	\leq 1500 g

ENVIRONMENTAL SPEC.

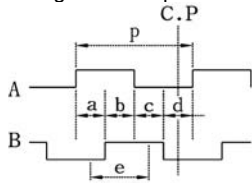
Operating Temp. / Humidity 操作溫度/濕度	-10°C ~ 60°C, RH 35% ~ 90% (No Condensation)
Storage Temp. 儲存溫度	-20°C ~ 80°C
Protection Grade 保護等級	IP 64

SWITCHES SPEC. (max.)

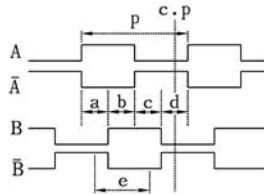
- Rotary Switch	
Max. Voltage 最大電壓	DC 30V max.
Current 電流範圍	30 mA
Switch Cycle (Life) 旋鈕壽命	> 25,000 cycles

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

NPN Voltage / NPN Open Collector



Line Driver



- $P = 1 \text{ P/R}$; a, b, c, d = $P/4 \pm P/6$
- C.P= click point 停止點信號
(For 25 P/R, C.P is at each position of a, b, c, d. 25 PPR 的停止點信號在 a, b, c, d 各個位置。)
- Point e is recommended as the system switching timing.
e 點為建議信號讀取/切換的範圍。

ELECTRICAL CONNECTION

DIAL BODY		COLOR of WIRE	FUNCTION
encoder	○	Brown 棕	+V
	○	Red 紅	0V
	○	Orange 橘	CH A
	○	Pink 粉紅	CH B
	○	Yellow 黃	CH /A
	○	Green 綠	CH /B

Axis SW Selecting		POINT TO POINT
○	Light Green 淺綠	OFF
○	Blue 藍	X
○	Purple 紫	Y
○	Gray 灰	Z
○	Gray 灰	4

Rate SW Selecting		POINT TO POINT
○	Brown/White 棕/白	X 1
○	Red/White 紅/白	X 10
○	Red/Black 紅/黑	X 100
○	Orange/White 橘/白	Switch Common

GRAY CODE TYPE (negative logic)			
	Light Green	Blue	Purple
OFF	1	1	1
X	0	0	1
Y	0	1	1
Z	1	0	1
4	1	1	0

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

ORDERING INFORMATION

HPG - B	Switch Function 旋鈕設定	Switch Axis 旋鈕軸數	Pulse per Revolution 解析	Electronics 電路特性	Extended Cable Length 電線長
	P: Point to Point G: Gray Code	4: 4 Axes (OFF-X-Y-Z-4)	A: 100 PPR B: 25 PPR	V: NPN Voltage 8~26Vdc V5: NPN Voltage 5Vdc C: NPN Open-Collector 5~26V L: Line Driver 5Vdc HL: Line Driver 5~26Vdc	S2: 2 m S3: 3 m S5: 5 m