



HS28A

Encoder modules



● Application 應用

- Stepping motor 步進馬達
- Automated equipment 自動化設備

● Feature 特點

- Low cost 低成本
- Small size 體積小
- Easy mounting 易安裝

● Resolution 解析度

360*, 400, 500, 512, 625, 720*, 800, 1000, 1024, 1250, 1440*, 1600, 2000, 2048, 2500, 10000 P/R

* => without $\Phi 8$ mm hollow shaft.

● Electrical Spec 電氣規格

Resolution		360 ~ 2500		3200 ~ 10000
Output circuit		Z \square VT、Z \square OT	Z \square LT	Z \square LT
Supply voltage		4.5 ~ 5.5V	4.5 ~ 5.5V	4.5 ~ 5.5V
Supply current (Max.)		80mA	100mA	110mA
Signal		A, B, Z	A+, A-, B+, B-, Z+, Z-	A+, A-, B+, B-, Z+, Z-
Rise/Fall time (Max.)		250ns	50ns	10ns
Frequency		300kHz	500kHz	1.5MHz
Output voltage	"H"	2.4V min.	2.4V min.	2.4V min.
	"L"	0.4V Max.	0.4V Max.	0.4V Max.
Max. output current		10mA	20mA	20mA

● Mechanical Spec 機械規格

Hollow diameter 孔徑	Φ 4, 5, 6, 6.35, 8 mm
Housing material 殼材質	PC
Max. R.P.M. 最大轉速	6000 rpm*
Net weight 淨重	30g

*R.P.M = Frequency * 60 / Resolution

● Environmental Spec 環境條件

Operating temp. 操作溫度	-20 ~ +85°C
Storage temp. 保存溫度	-20 ~ +85°C
Operating humidity 操作溼度	RH 85% Max. non-collecting
Shock 衝擊	490 m/s ² , 3Dx2 times
Vibration 震動	1.2mm, 10~55KHz, 3Dx30min.
Protection 防護等級	IP 40



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● Connection 接線方式

Signal : A, B, Z (UL2464、AWG26、5pin + Shield)

Molex : 532610671 (相容連接器)

紅	黑	白	綠	黃	藍
Vcc	Gnd	A	B	Z	Shield

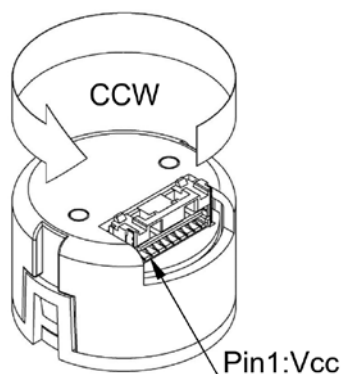
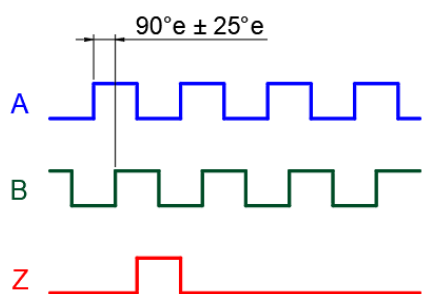
Signal : A+, A-, B+, B-, Z+, Z- (UL2517、AWG28、8pin + Shield)

Molex : 5023860970 (相容連接器)

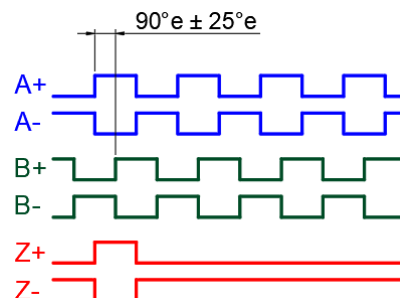
紅	黑	白	白/黑	綠	綠/黑	黃	黃/黑	藍
Vcc	Gnd	A+	A-	B+	B-	Z+	Z-	Shield

● Output Waveform 輸出波形

Shaft rotation CCW
A leads B

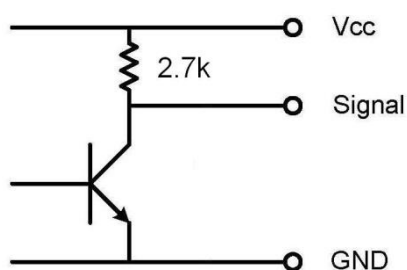


Shaft rotation CCW
A leads B

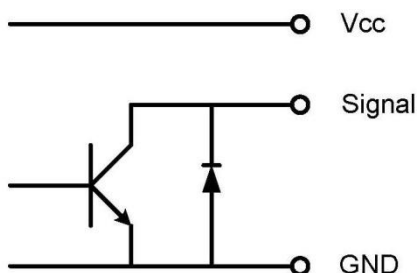


● Output Circuit 輸出電路

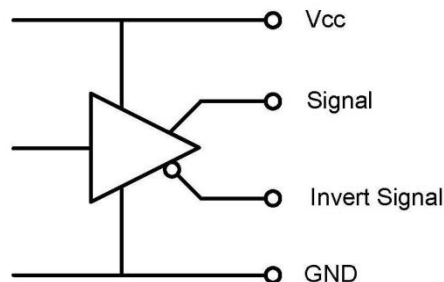
Voltage output



Open collector



Line driver(AM26C31)





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Ordering Information 訂購資訊

HS28A - XXXX - X X X X - X - NXXX

解析度(Resolution)
360 ~ 10000

輸出相位(Phase)
Z
A, B, Z

軸孔(Hollow)	
4	4mm
5	5mm
6	6mm
6.35	6.35mm
8	8mm

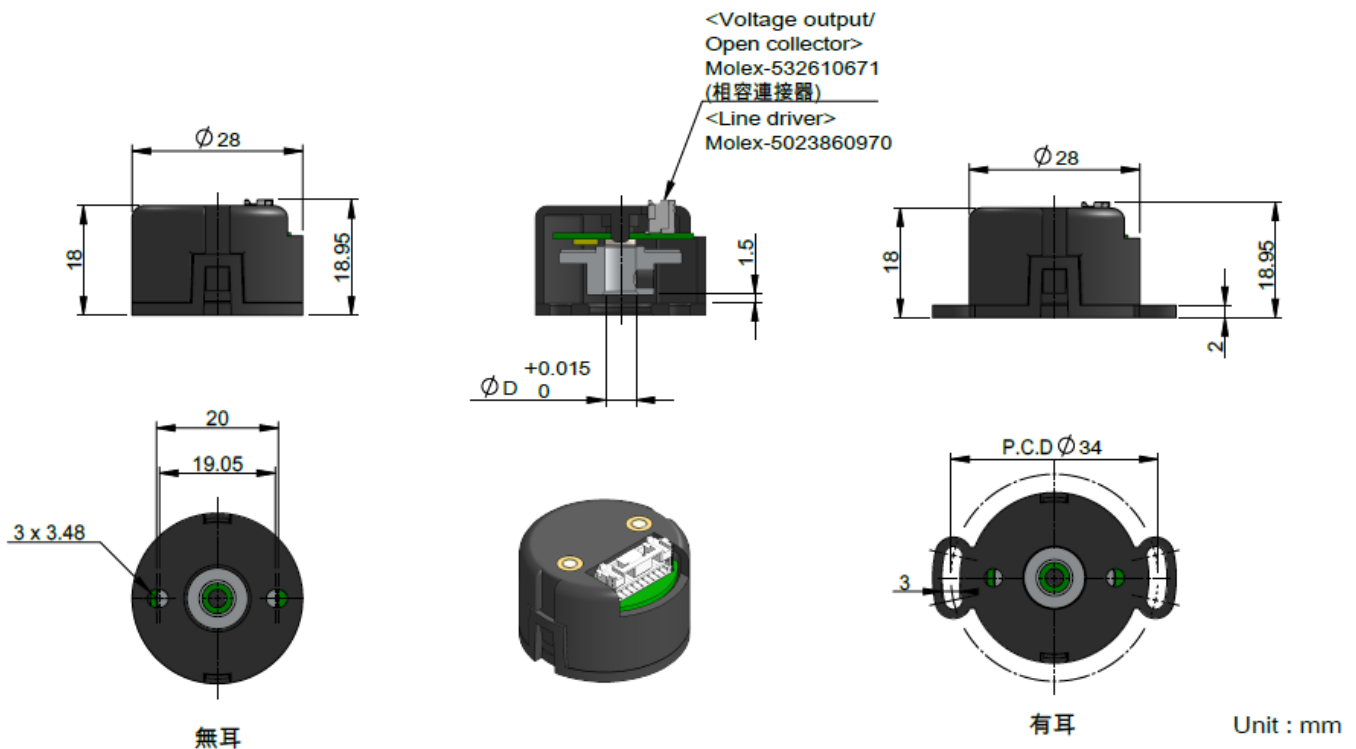
樣式編號(Type No.)
001, 002, 003 ...

底座樣式(Base)	
D	無耳(Default)
E	有耳(Ears)

工作電壓(Supply voltage)	
T	TTL (5V)

輸出電路(Output circuit)	
V	Voltage output(NPN)
O	Open collector(NPN)
L	Line driver

● Mechanical Drawing 外型尺寸





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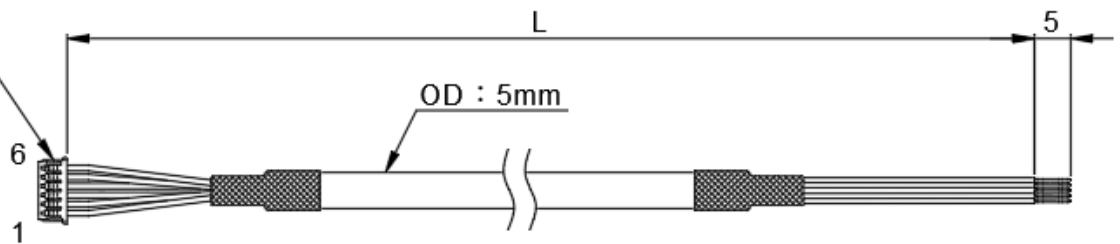
● Cable Introduction 線材說明

<Voltage output / Open collector>

Molex
510210600
500798000

顏色順序:

- 1.紅
- 2.黑
- 3.白
- 4.綠
- 5.黃
- 6.Shield



<線材規格>

AWG26、UL2464、雙隔離編織

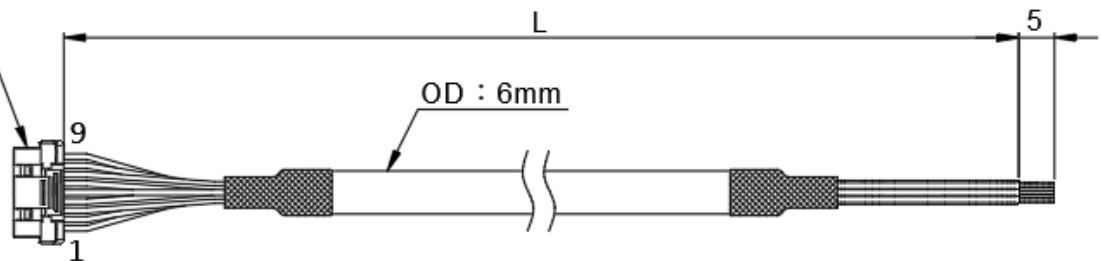
Cable length 線長：500、1000、2000mm

<Line driver>

Molex
5023800900
5023810000

顏色順序：

- 1.紅
- 2.黑
- 3.白
- 4.白/黑
- 5.綠
- 6.綠/黑
- 7.黃
- 8.黃/黑
- 9.Shield



<線材規格>

AWG28、UL2517、雙隔離編織

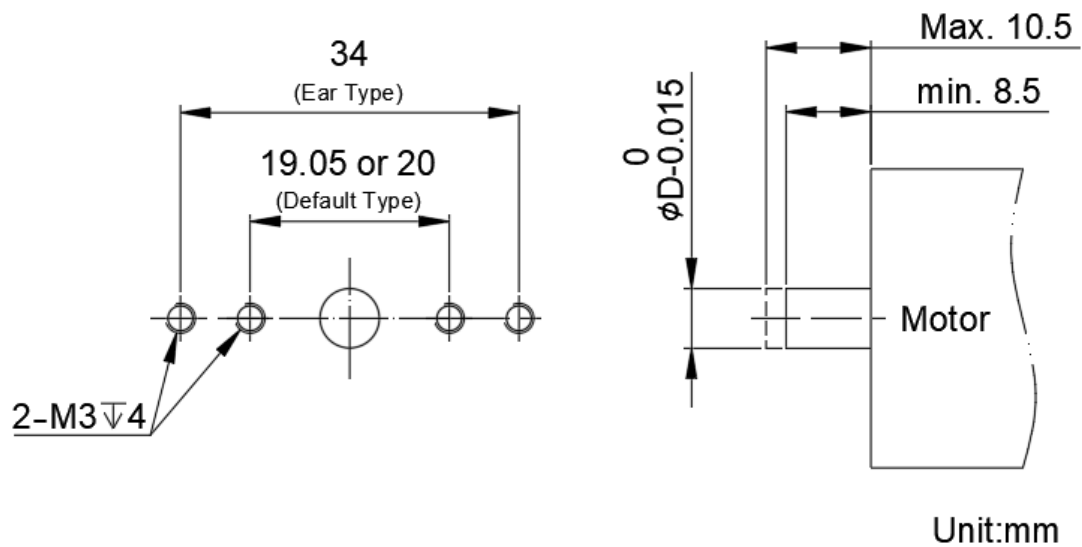
Cable length 線長：500、1000、2000mm



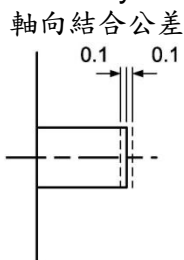
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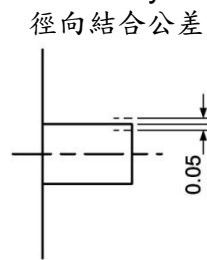
● Setting Dimension 安裝尺寸



Axial assembly tolerance



Radial assembly tolerance



Concentric angle tolerance

