



HS20A

Encoder modules



● Application 應用

- Stepping motor 步進馬達
- Automated equipment 自動化設備
- Robot arm 機械手臂

● Feature 特點

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

● Resolution 解析度

200, 250, 256, 300, 360, 400, 500, 512, 600, 720, 800, 1000, 1024, 1200, 1440, 1600, 2000, 2048, 8192 P/R

● Electrical Spec 電氣規格

Resolution		200 ~ 2048		3200 ~ 8192
Output circuit		Z _□ VT、Z _□ OT	Z _□ LT	Z _□ LT
Supply voltage		4.5 ~ 5.5V	4.5 ~ 5.5V	4.5 ~ 5.5V
Supply current (Max.)		60mA	80mA	90mA
Signal		A, B, Z	A+, A-, B+, B-, Z+, Z-	A+, A-, B+, B-, Z+, Z-
Rise/Fall time (Max.)		100ns	50ns	10ns
Frequency		220kHz	550kHz	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		5mA	5mA	5mA

● Mechanical Spec 機械規格

Hollow diameter 孔徑	Φ 2, 3, 4 mm
Housing material 殼材質	PPS
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



HS20A

Encoder modules

● Connection 接線方式

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

Molex : 532610671 (相容連接器)

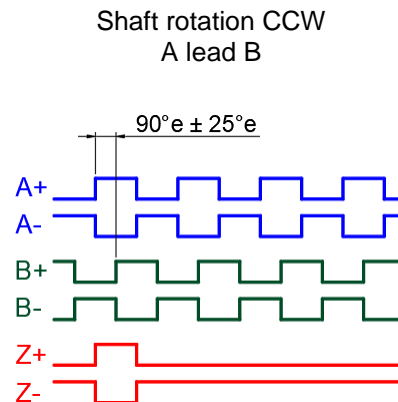
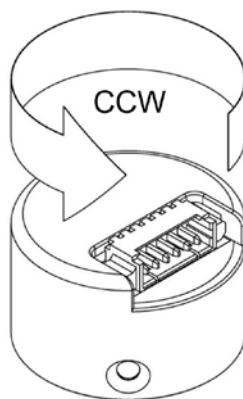
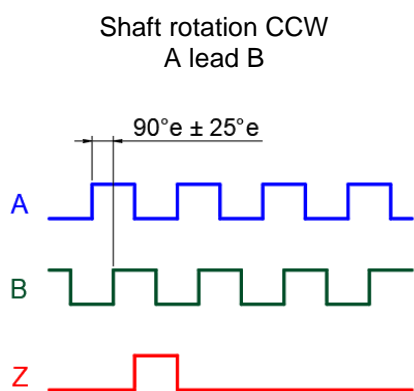
紅	黑	白	綠	黃	藍
Vcc	Gnd	A	B	Z	Shield

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

JST : SM09B-SRSS-TB (相容連接器)

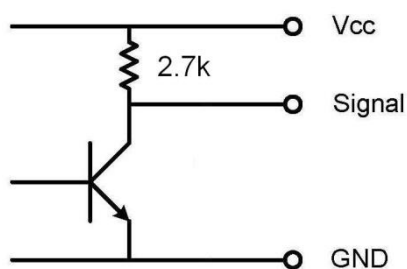
紅	黑	白	白/黑	綠	綠/黑	黃	黃/黑	藍
Vcc	Gnd	A+	A-	B+	B-	Z+	Z-	Shield

● Output Waveform 輸出波形

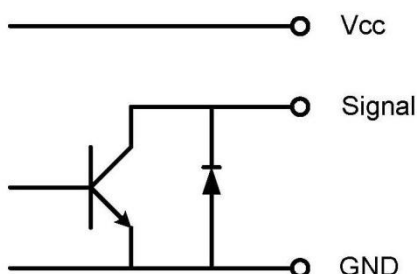


● Output circuit 輸出電路

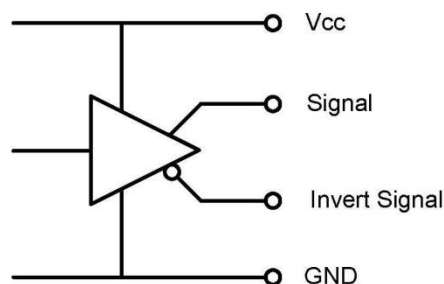
Voltage output



Open collector



Line driver(AM26C31)





HS20A

Encoder modules

Ordering Information 訂購資訊

HS20A - XXXX - X X X X - X - NXXX

解析度(Resolution)
200 ~ 8192

輸出相位(Phase)
Z A, B, Z

軸孔(Hollow)
2 2mm
3 3mm
4 4mm

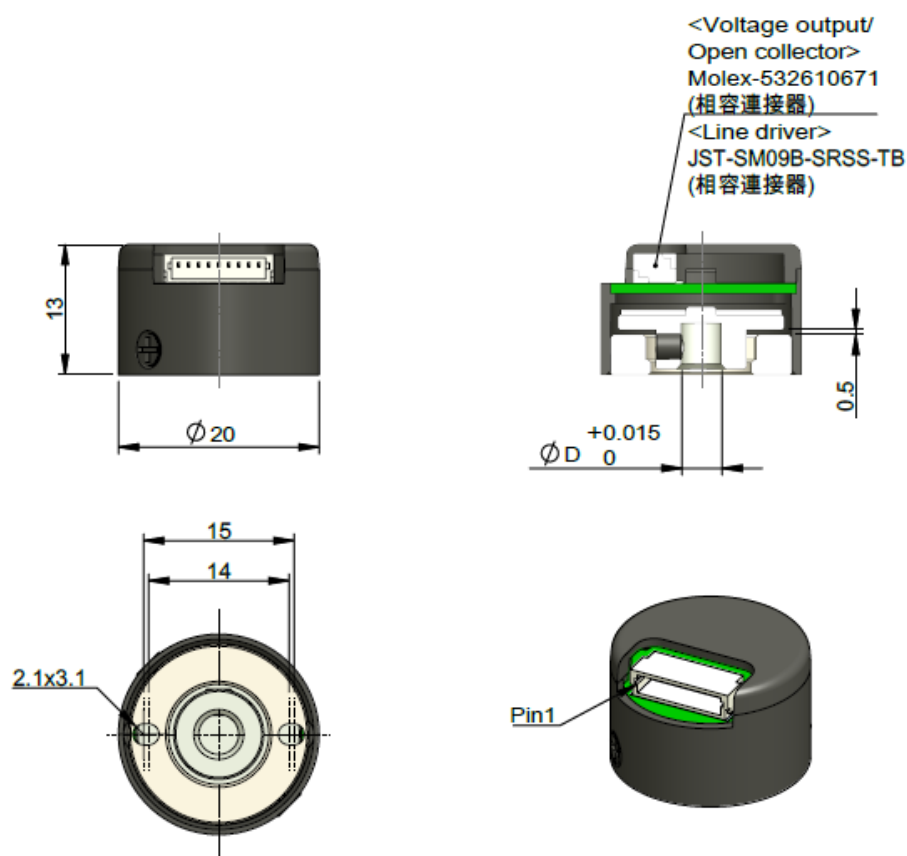
樣式編號(Type No.)
001, 002, 003 ...

底座樣式(Base)
D Default

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





HS20A

Encoder modules

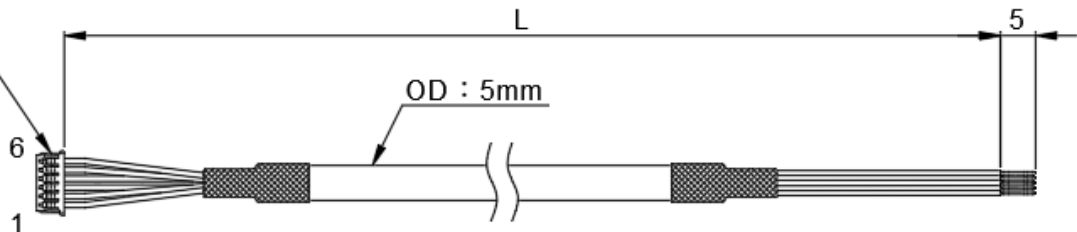
● Cable Introduction 線材說明

<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

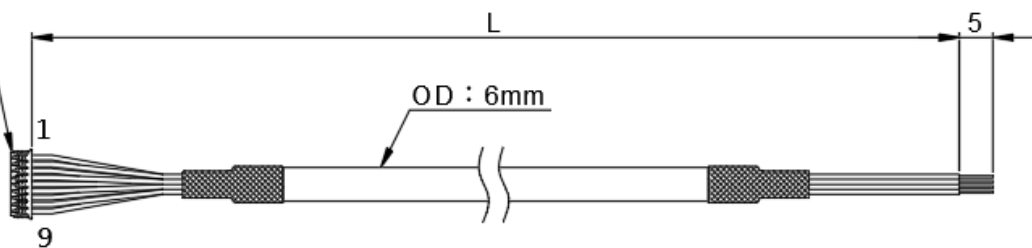
Cable length 線長：500、1000、2000mm

<Line driver>

JST
SHR-09V-S-B
SSH-003T-P0.2-H

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

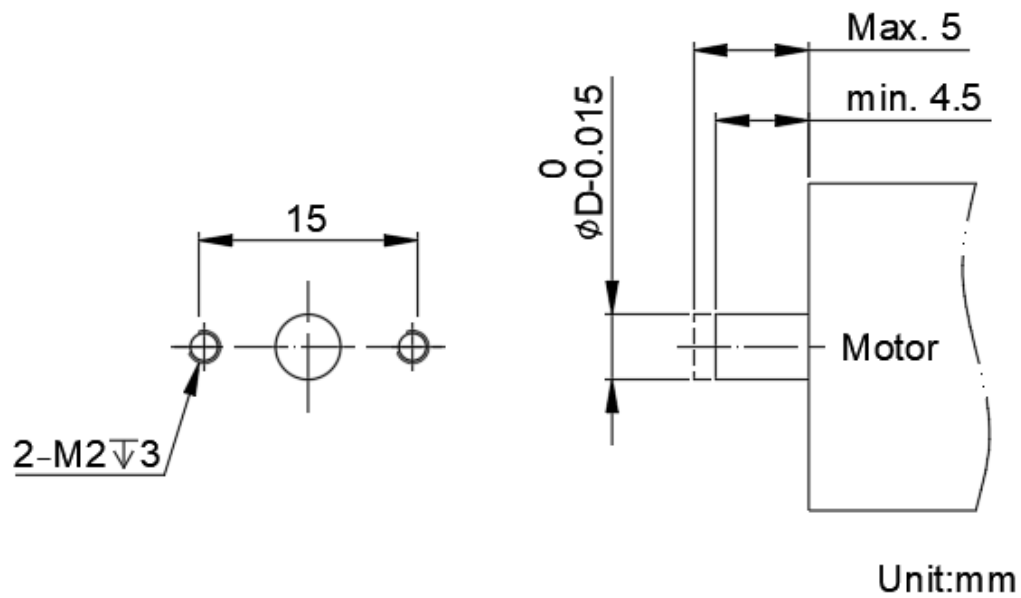
Cable length 線長：500、1000、2000mm



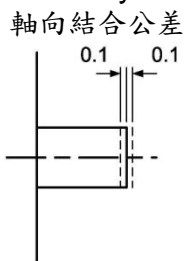
HS20A

Encoder modules

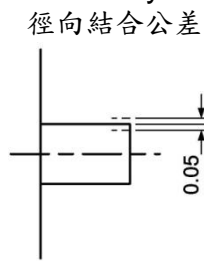
● Setting Dimension 安裝尺寸



Axial assembly tolerance



Radial assembly tolerance



Concentric angle tolerance

