

Guiding of model 【Incremental type】 / 型號索引

Ex : **EMS - 25 D - H - 5M**
1 2 3 4 5

1	Product (產品系列) : 「EMS」 = EMS series (Die-cast Zn) 「EMK」 = EMK series (Intensive ABS)	3	Output method (輸出方式) 「Non」 = NPN+PNP (Push-Pull) 「D」 = Line driver
2	Resolution (解析度) 「1」 = 1μm ; 「5」 = 5 μm ; 「10」 = 10 μm 「25」 = 25μm ; 「50」 = 50 μm ; 「100」 = 100 μm 「250」 = 250 μm ; 「500」 = 500 μm ; 「1K」 = 1K μm	4	Max. output frequency (最高輸出頻率) 「H」 = 250 K Hz ; 「SH」 = 2000 K Hz 「Non」 = 16 K Hz
5	Length of lead wire(出線長度) : 「Non」 = 3 m ; 「5M」 = 5 m ; 「10M」 = 10 M		

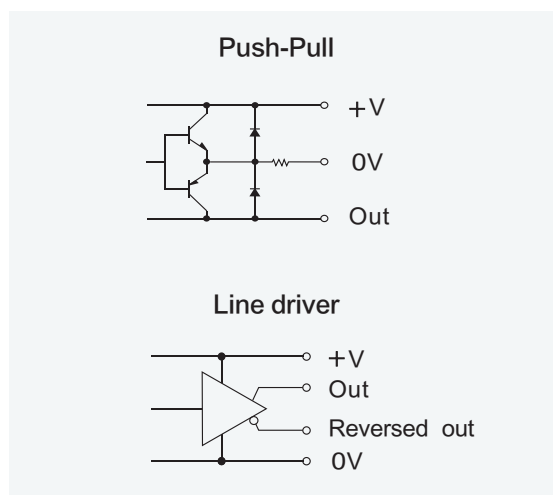
Electrical Specification / 電氣規格

Output model	輸出型式	Push - Pull	Line Driver
Operating voltage	工作電壓	10 ~ 30VDC	5 VDC±10%
Output method	輸出方式	A/B/Z	A/B/Ā/B̄
Ripple of power	電源漣波	10 % peak to peak	
Current consumption	耗電流	30 mA max.	
Output current	輸出電流	50mA max. (each)	
Protection circuit	保護回路	Short circuit & polarity reversed	
Voltage drop	輸出壓降	0.8V max.	
Residual voltage	殘餘電壓	0.1V max.	
Leakage current	洩漏電流	0.1mA max.	
Noise resistance	抗干擾	2kv / 1μs	
EMC Immunity		ESD : 8 KV Air Discharge (Level3) / EN-61000-4-2 RF Interference : 10V / M / ENV-50140 Burst test : 2KV / EN61000-4-4	
EMC Interference		IEC 61000-6-4	
Dielectric strength	電介強度	2.5kv / 1 minute min.	
Insulation strength	絕緣強度	100 MΩ / 500vdc	
Approval	安規	CE / RoHS	

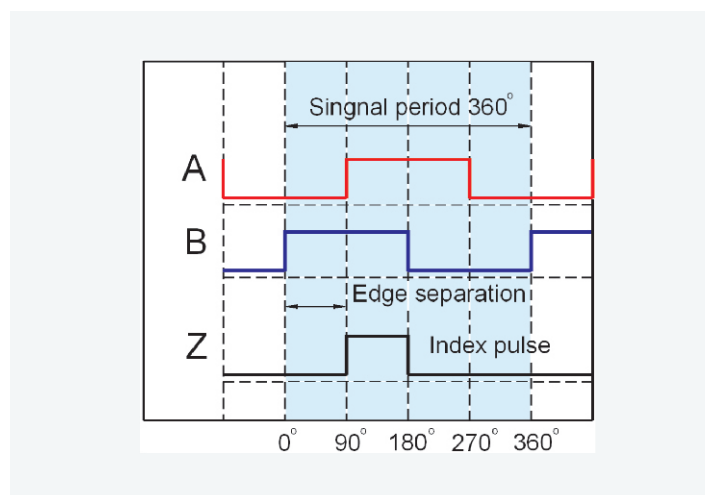
Mechanical Data / 機械規格

Resolution		解析度	1 μm	5 μm	10 μm	25 μm	50 μm	100 μm	250 μm	500 μm	1K μm
Travel speed (m/s)	SH	2000KHz	8.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
	H	250kHz	1.0	5.0	10.0	25.0	25.0	25.0	25.0	25.0	25.0
	Non	16KHz	0.06	0.30	0.60	1.50	3.00	6.00	15.0	25.0	25.0
Setting distance	安裝距離	0.1 ~ 4.0 (mm)									
Pole width	磁距	5.0mm									
System accuracy	系統精度	± (0.025 + 0.015 x L) mm, (L= Length of magnetic tape ; Unit : meter)									
Repeat accuracy	重複精度	± 0.01 mm max.									
Measuring length	可量測長度	Infinite (Limitless)									
Vibration resistance	抗振動	300m / (55 ~ 2000 Hz) (IEC-60068-2-6)									
Shock resistance	抗衝擊	300m / with 11ms (IEC-60068-2-27)									
Lead wire	出線方式	5.2Φ shielded cable									
Housing material	外殼材質	EMS : Die-cast Zn ; EMK : Intensive ABS									
Operating circum.	工作環境	-25℃ ~ +85℃ ; 100%RH max. (Condensation permitted)									
Protection class	保護等級	IP-67 (IEC-60529)									

Output circuit / 輸出回路



Output timing chart / 輸出時序圖



Connections / 接線圖

Push-Pull (推拉式)

Connector No.	Color	Description
# 1	Brown	+ V (1)
# 3	Blue	0 V (3)
# 4	Black	Phase A (4)
# 2	White	Phase B (2)
# 5	Yellow	Phase Z (5)

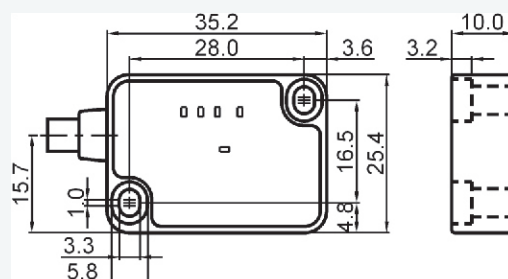
Line driver (差動式)

Color	Description	Color	Description
Brown	+V	Blue	0 V
Black	Phase A	Yellow	Phase $\bar{A}$
White	Phase B	Grey	Phase $\bar{B}$

Outline dimension / 外形圖

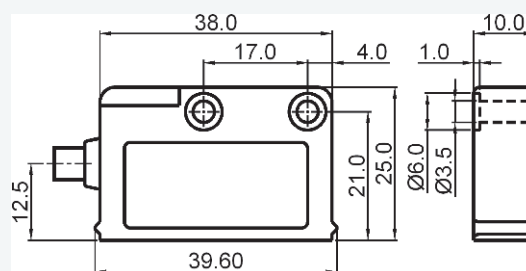
Die-cast (Zn)

EMS-□□

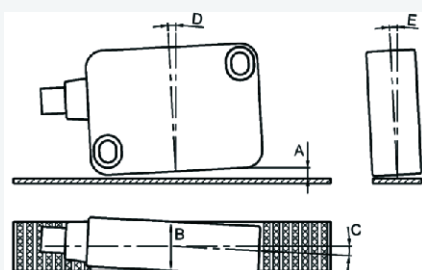


Plastic (ABS)

EMK-□□



Mounting instruction / 安裝注意事項



Please ensure the correct alignment of the sensor and magnetic band (see diagram).

※ Allowance of tolerances

- A : Setting distance : 4.0mm max.
- B : Lateral offset : ± 2.0 mm max.
- C : Misalignment (Yaw) : $< \pm 3^\circ$ max.
- D : Longitudinal tilt (Pitch) : $< \pm 3^\circ$ max.
- E : Lateral tilt (Roll) : $< \pm 3^\circ$ max.