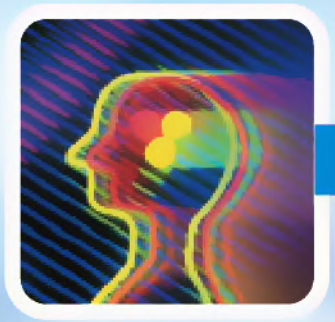


FOTEK

AlltronicsPerú

High compact

Magnetic Sensor

- ☐ High compact
- ☐ High Reliability
- ☐ High Noise Resistance
- ☐ Short circuit protection
- ☐ High protection class IP-67

- ☐ 堅固耐用
- ☐ 高穩定性
- ☐ 高抗干擾力
- ☐ DC type附短路保護
- ☐ 高防水等級IP-67

CE RoHS

AlltronicsPerú
AUTOMATIZACIÓN INDUSTRIAL

陽明電機股份有限公司 FOTEK CONTROLS CO., LTD.

Model guiding / 型號索引

Ex. FC-20 R-H-2M
1 2 3 4 5

1	Series(系列名稱)	「FC」: Magnetic senor 「MS」: M8 Tubular type
2	Model(形式)	「20」: Plastic housing 「11」: Plastic housing 「05」: Plastic housing 「08」: M8
3	Output method (輸出方式)	「R」: Reed contact 「RE」: Output protection 「RN」: Reed contact NPN 「RP」: Reed contact PNP 「N」: NPN output 「P」: PNP output 「D」: Two wire solid state output
4	Sensitivity(感度) / Output status	「Non」: Standard sensitivity (<80 Gauss) 「H」: High sensitivity (<40 Gauss) 「L」: Low sensitivity (<120 Gauss) 「B」: NC type
5	Connection(出線方式)	「2M」: 2m cable/ 「1M」: 1m cable/ 「4M」: 4m cable/ 「PG」: M8 connector Lead wire/ 「PE」: Plastic connector Lead wire

※ Notice for use / 選型使用注意事項 (*)

1.所有型號都有輸出短路及極性保護，除「FC-xxR」沒輸出短路保護。
2.請配合氣缸磁環選用適當感度的機型。「感度太高」動作點會提前或易受帶磁外物干擾，「感度太低」無動作或訊號漏失。
3.「2線式」最好不要超過2個以上串聯使用以免無法推動負載。(因沒每個都有輸出壓降約3.0V)
4.「FC-xxR」及「FC-xxRE」極性反接仍可感應輸出但指示灯不會亮，須更換極性即可正常動作，其他型極性接反則無動作。

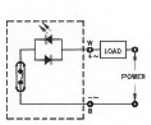
1. All model with Output short circuit & Polarity reversed protection, excepted 「FC-xxR」.
2. Optimum sensitivity of sensor is required, if it is too high to be turned on too easily or be interrupted, if it is too low to lose signal.
3. It maybe cannot operate the load, if series connection over 2 pieces of 「2 wire type」 sensor.
4. 「FC-xxR」& 「FC-xxRE」may turn on load but cannot turn on operating LED, other type don't work , if power polarity is reversed.

General data / 共同規格

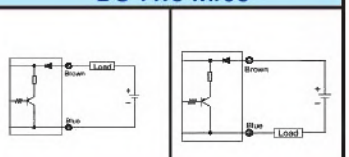
Specification 規格	Data	
Sensor 感應器	Reed sensor	Hall sensor
Contact rated 接點功率	10W max.	---
Output current 輸出電流	50mA or 150mA or 500mA max.	50mA or 150mA max.
Current consumption 消耗電流	non	8mA max.
Output protection 輸出保護	*	Short circuit & Polarity reversed
Protection class 保護等級	IP-67 (IEC-60529)	
Vibration resistance 耐震動	300m/S² / (55 ~ 2000 Hz) (IEC-60068-2-6)	
Shock resistance 耐衝擊	300m/S² with 11ms (IEC-60068-2-27)	
EMC Interference 電磁相容	IEC 61000-6-4	
Dielectric strength 電介強度	2.5kv / 1 minute min.	
Insulation strength 絕緣強度	100 MΩ / 500vdc	
Operation circumstance 工作環境	-25℃ ~ +85℃ ; 100%RH max. (Condensation permitted)	

Connection diagram /接線圖

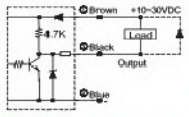
Contact



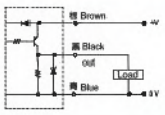
DC Two wires



NPN



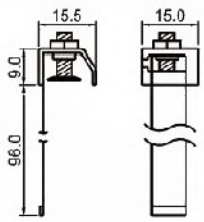
PNP



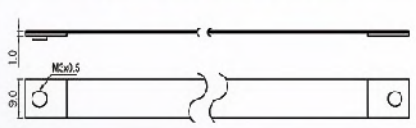
Fixed parts / 固定帶

PNS/PNA (for FC-20)

Band
PNS - 16
Diameter of cylinder
16 : Ø16.0
20 : Ø20.0
150 : Ø150.0
Material of cylinder
S : Stainless steel
A : Aluminum Ally

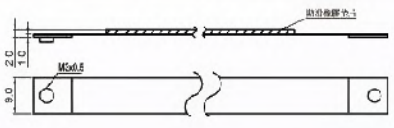


BES/BEA (for FC-04)

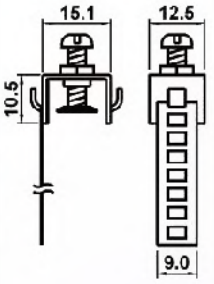


BSS/BSA (for FC-48) / BES/BEA (for FC-04)

Alumina alloy cylinder			Stainless steel cylinder		
Model	Inner dia.	Outer dia.	Model	Inner dia.	Outer dia.
BSA-20 / BEA-20	20Φ	25Φ	BSS-06 / BES-06	6Φ	8.5Φ
BSA-25 / BEA-25	25Φ	30Φ	BSS-08 / BES-08	8Φ	10Φ
BSA-30 / BEA-30	30Φ	35Φ	BSS-10 / BES-10	10Φ	11Φ
BSA-32 / BEA-32	32Φ	38Φ	BSS-12 / BES-12	12Φ	13.2Φ
BSA-40 / BEA-40	40Φ	45Φ	BSS-16 / BES-16	16Φ	17Φ
BSA-50 / BEA-50	50Φ	55Φ	BSS-20 / BES-20	20Φ	21.5Φ
BSA-63 / BEA-63	63Φ	70Φ	BSS-25 / BES-25	25Φ	26.5Φ
BSA-80 / BEA-80	80Φ	87.7Φ	BSS-32 / BES-32	32Φ	33.5Φ
			BSS-40 / BES-40	40Φ	42Φ



PH (for FC-20)



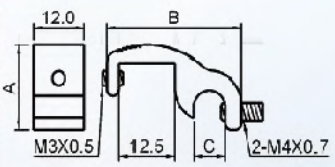
Model	dia. of cylinder
PH-63	6~63Φ
PH-125	6~125Φ

PI (for FC-20)

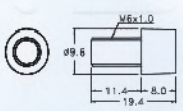
Model	A	Inner dia. of cylinder
PI-1	11.20	32~40Φ
PI-2	14.10	50~63Φ
PI-3	15.50	80Φ
PI-4	16.30	100Φ
PI-5	19.80	125Φ
PI-6	26.50	150Φ

PM (for FC-20)

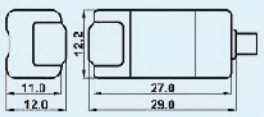
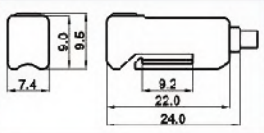
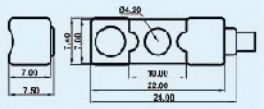
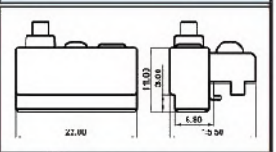
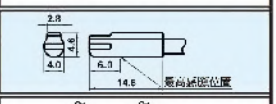
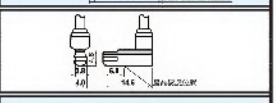
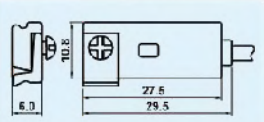
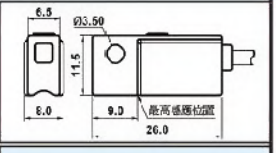
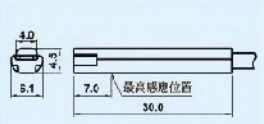
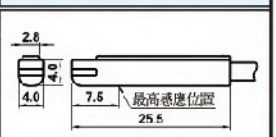
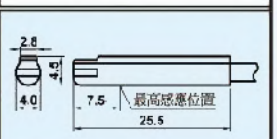
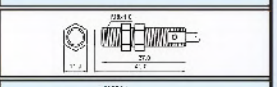
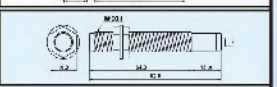
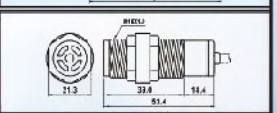
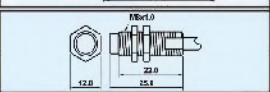
型號 / 尺寸	A	B	C
PM-5	19.1	31.3	7.3
PM-8	18.4	33.5	9.5
PM-10	16.7	35.7	11.2
PM-12	20.0	35.5	11.5
PM-14	24.0	38.0	13.5
PM-15	24.0	40.0	15.5

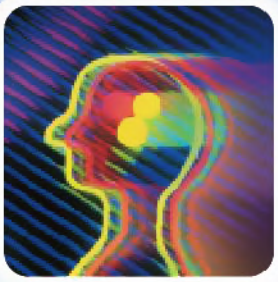


磁鐵【MS-06】



Specification /規格

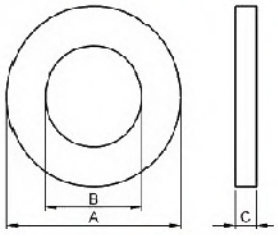
Series	Model	Wires	Operating voltage	Output method	Voltage drop	Leakage current	Output current	Sensitivity (Gauss)	Response frequency	Sensor	Housing material	Outline
FC-20	FC-20R	2c/4φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	Intensive Nylon	
	FC-20RE	2c/4φ	5~60VDC	Contact	3.0V	non	150mA					
	FC-20RN	3c/4φ	5~30VDC	NPN	3.0V	non						
	FC-20RP	3c/4φ	5~30VDC	PNP	3.0V	non						
	FC-20D	2c/4φ	10~30VDC	T	3.5V	0.5mA	150mA	<40	5K Hz	Hall sensor		
	FC-20N	3c/4φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-20P	3c/4φ	5~30VDC	PNP	0.8V	0. 1mA						
FC-04	FC-04R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	Intensive Nylon	
	FC-04RE	2c/3φ	5~60VDC	Contact	3.0V	non	50mA					
	FC-04D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150 mA	<40	5K Hz	Hall sensor		
	FC-04N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-04P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-05	FC-05R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	ntensive Nylon	
	FC-05RE	2c/3φ	5~60VDC	Contact	3.0V	non	50mA					
	FC-05D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150 mA	<40	5K Hz	Hall sensor		
	FC-05N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-05P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-11	FC-11R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	Intensive Nylon	
	FC-11RE	2c/3φ	5~60VDC	Contact	3.0V	non	50mA					
	FC-11D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150 mA	<40	5K Hz	Hall sensor		
	FC-11N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-11P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-36	FC-36D	2c/2.5φ	10~30VDC	T	3.5V	0.5mA	50 mA	<40	5K Hz	Hall sensor	Intensive Nylon	
	FC-36N	3c/2.5φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-36P	3c/2.5φ	5~30VDC	PNP	0.8V	0.1mA						
FC-37	FC-37D	2c/2.5φ	10~30VDC	T	3.5V	0.5mA	50 mA	<40	5K Hz	Hall sensor	Intensive Nylon	
	FC-37N	3c/2.5φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-37P	3c/2.5φ	5~30VDC	PNP	0.8V	0.1mA						
FC-47	FC-47R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	Intensive Nylon	
	FC-47RE	2c/3φ	5~60VDC	Contact	3.0V	non	50mA					
	FC-47D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150 mA	40 Gauss	5K Hz	Hall sensor		
	FC-47N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-47P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-48	FC-48R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed sensor	Intensive Nylon	
	FC-48RE	2c/3φ	5~60VDC	Contact	3.0V	non	50mA					
	FC-48D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150mA	40 Gauss	5K Hz	Hall sensor		
	FC-48N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-48P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-50	FC-50R	2c/3φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed	Intensive Nylon	
	FC-50RE	2c/3φ	5~60VDC	Contact	3.0V	non	50 mA					
	FC-50D	2c/3φ	10~30VDC	T	3.5V	0.5mA	150mA	<40	5K Hz	Hall sensor		
	FC-50N	3c/3φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-50P	3c/3φ	5~30VDC	PNP	0.8V	0.1mA						
FC-06	FC-06R	2c/2.5φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed	Intensive Nylon	
	FC-06RE	2c/2.5φ	5~60VDC	Contact	3.0V	non	50 mA					
	FC-06D	2c/2.5φ	10~30VDC	T	3.5V	0.5mA	150mA	40 Gauss	5K Hz	Hall sensor		
	FC-06N	3c/2.5φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-06P	3c/2.5φ	5~30VDC	PNP	0.8V	0.1mA						
FC-07	FC-07R	2c/2.5φ	5~240VDC/AC	Contact	3.0V	non	500 mA	H<40 N<80 L<120	200Hz	Reed	Intensive Nylon	
	FC-07RE	2c/2.5φ	5~60VDC	Contact	3.0V	non	50 mA					
	FC-07D	2c/2.5φ	10~30VDC	T	3.5V	0.5mA	150mA	<40	5K Hz	Hall sensor		
	FC-07N	3c/2.5φ	5~30VDC	NPN	0.8V	0.1mA						
	FC-07P	3c/2.5φ	5~30VDC	PNP	0.8V	0.1mA						
FC-08	FC-08R	2c/4φ	5~240VDC/AC	Contact	3.0V	non	500 mA	<40	200Hz	Reed sensor	Cu	
FC-12	FC-12R	2c/4φ	5~240VDC/AC	Contact	3.0V	non	500 mA	<40	200Hz	Reed sensor	Cu	
FC-18	FC-18RE	2c/4φ	5~60VDC	Contact	3.0V	non	150 mA	<40	200Hz	Reed	PP	
	FC-18N	3c/4φ	5~30VDC	NPN	0.8V	0.01mA	150 mA	<40	5K Hz	Hall		
MS-08	MS08-10N	3c/4φ	5~30VDC	NPN	0.8V	0.01mA	150 mA	<40	5K Hz	Hall sensor	Cu	
	MS08-10P	3c/4φ	5~30VDC	PNP	0.8V	0.01mA	150 mA	<40				



- 以滿足客戶需求追求『企業永續經營』
- 以使用者角度設計『實用耐用的電控產品』
- 以量產標準化製造『世界標準的電控產品』
- By satisfying customer's requirements, To manage company forever.
- On user's position, To develop more「Performance & Reliable controls」
- By mass-quantity producing , To produce「World standard controls」

Magnetic ring / 磁環

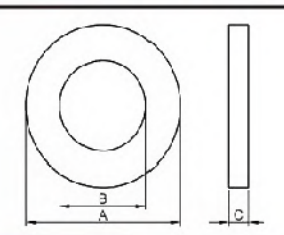
RME series Rubber anisotropic magnetic ring



使用環境溫度	-25℃ ~ 80℃
磁通密度	2,500~2,600 GAUSS
保磁力（iHC）	2,800~3,200 Oe
保磁力（bHC）	2,100~2,400 Oe
最大磁積能	1.3 ~ 1.5 M Oe
磁阻力	20~50kgf/cm^2
延展性	10~20%
硬度	30~50 HV
材料密度	1.2~1.8 g/cm^3

Model	Dimension（mm）			Model	Dimension（mm）		
	A±0.3	B±0.2	C±0.1		A±0.3	B±0.2	C±0.1
RME-164	15.5	8.3	4.0	RME-165	15.5	8.3	5.0
RME-204	19.5	9.3	4.0	RME-205	19.5	9.3	5.0
RME-254	24.5	13.3	4.0	RME-205L	19.5	12.3	5.0
RME-254L	24.5	17.3	4.0	RME-255	24.5	13.3	5.0
RME-304	29.5	21.3	4.0	RME-305	29.5	21.3	5.0
RME-324	31.5	21.3	4.0	RME-325	31.5	21.3	5.0
RME-404	39.5	22.3	4.0	RME-405	39.5	22.3	5.0
RME-504	49.5	32.3	4.0	RME-505	49.5	32.3	5.0
RME-634	62.5	42.3	4.0	RME-635	62.5	42.3	5.0
RME-804	79.5	58.3	4.0	RME-805	79.5	58.3	5.0
RME-1004	99.5	78.3	4.0	RME-1005	99.5	78.3	5.0
RME-1254S	124.5	79.3	4.0				
RME-1254	124.5	108.3	4.0				
RME-1504	149.5	125.3	4.0				
RME-2004	195.5	176.3	4.0				

PME series Plastic anisotropic magnetic ring



使用環境溫度	-40℃ ~ 120℃
磁通密度	2,800~3,000 GAUSS
保磁力（iHC）	3,000~3,600 Oe
保磁力（bHC）	2,400~2,600 Oe
最大磁積能	1.8 ~ 2.0 M Oe
磁阻力	70~80kgf/cm^2
延展性	5~7 %
硬度	110~120 HV
材料密度	3.8~4.0 g/cm^3

Model	Dimension（mm）			Model	Dimension（mm）		
	A±0.3	B±0.2	C±0.1		A±0.3	B±0.2	C±0.1
PME-204	19.5	9.3	4.0	PME-125	11.5	6.3	5.0
PME-254	24.5	13.3	4.0	PME-165	15.5	8.3	5.0
PME-304	29.5	21.3	4.0	PME-205	19.5	9.3	5.0
PME-324	31.5	21.3	4.0	PME-255	24.5	13.3	5.0
PME-404	39.5	22.3	4.0	PME-305	29.5	21.3	5.0
PME-504	49.5	32.3	4.0	PME-325	31.5	21.3	5.0
PME-634	62.5	42.3	4.0	PME-405	39.5	22.3	5.0
PME-804	79.5	58.3	4.0	PME-505	49.5	32.3	5.0
PME-1004	99.5	78.3	4.0	PME-635	62.5	42.3	5.0
				PME-805	79.5	59.3	5.0
				PME-1005	99.5	78.3	5.0

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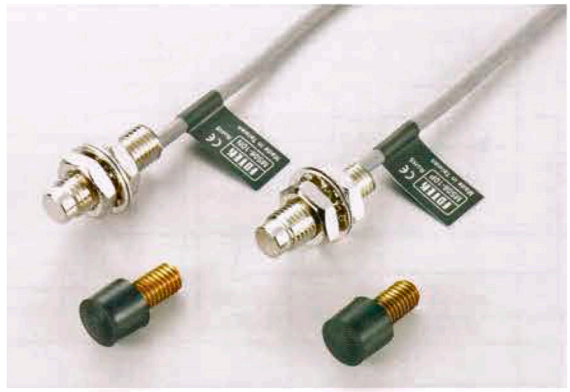
www.AlltronicsPerú.com

MS series Magnetic Hall sensor

CE Rohs

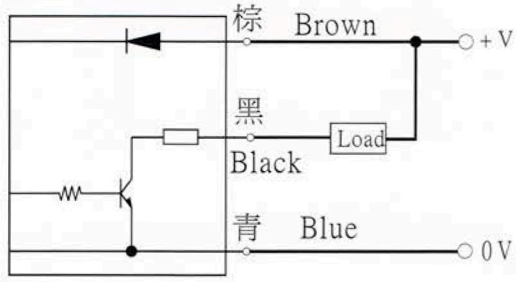
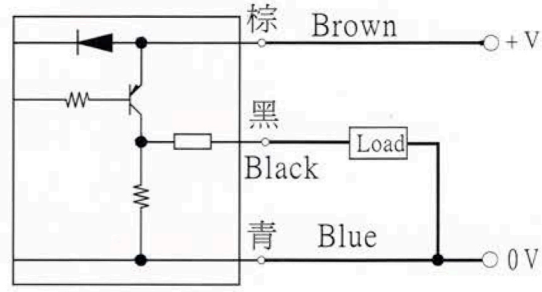
- High compact structure
  堅固結構
- High reliability with protection circuit
  高可靠度附保護回路
- Solid state output：150 mA max.
  無接點輸出：150 mA max.
- High response frequency：1.2K Hz
  高速響應頻率：1.2K Hz



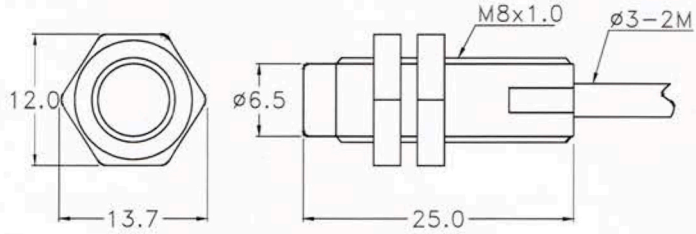
◈ Specification / 規格

Model	MS08-10N	MS08-10P
Output method	NPN	PNP
Sensing distance 感應距離	8 ~ 12 mm（with MS-M6）	
Response frequency 響應頻率	1.2 K Hz min.	
Operating voltage 工作電壓	10 ~ 30 VDC	
Power ripple 電源漣波	20% of Vp-p max.	
Output current 輸出電流	150mA max.	
Current consumption 消耗電流	10mA max.	
Residual voltage 殘留電壓	0.8V max.	
Leakage current 洩漏電流	0.1mA	
Hysteresis 應差	20% of sensing distance max.	
Thermal drift 溫度漂移	20 μm / ℃ max.	
Voltage drift 電壓漂移	2.0 μm / V max.	
Protection circuit 保護回路	Short-circuit & Polarity reversed protection	
Operating Temperature 工作溫度	- 25℃~ +80℃	
Operating humidity 工作濕度	35% ~ 95% RH	
Protection class 保護等級	IP - 67	

◈ Output circuit & connection diagram / 輸出回路及接線圖

NPN	PNP
	

◈ Outline dimension / 外形尺寸



◈ Magnet / 磁鐵

MS-M6