

PT MULTI MAKMUR TEKNIKATAMA

FOTEK



FC Series







High compact Magnetic Sensor

FC series

磁簧傳感器

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



高防水等級IP-67



● Model guiding / 型號索引

	EX. $\frac{FC}{1} - \frac{20}{2} \frac{R}{3} - \frac{H}{4}$	
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) or 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

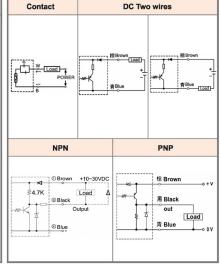
※ Notice for use / 選型使用注意事項(*)

- 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燈不會亮,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 $\ \lceil FC\text{-}xxR \rfloor \ .$
- 2. Optimum sensitivity of sensor is required, if it is too high to be turned on too early 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 $\lceil 2 \rceil$ wire type \rfloor sensor.
- 4. FC-xxRJ & FC-xxREJ 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					
Vibration resistance	耐震動	50g (490m/S²/ (55 ~ 2000 Hz)) IEC-60068-2-6)	60g(588m/S²/(55 ~ 2000 Hz)) (IEC-60068-2-6)					
Shock resistance	耐衝擊	100g(980m/S² with 11ms) (IEC-60068-2-27)	120g(1176m/S² with 11ms) (IEC-60068-2-27)					
Protection class	保護等級	IP-67 (II	EC-60529)					
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	度 100 MΩ / 500vdc						
Operation circum.	工作環境	-25°C ~ +85°C : 100%RH max. (Condensation permitte						

● Connection diagram / 接線圖





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● 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-20R	2с/4Ф	5~240VDC/AC	Contact	3.0V	non	500mA							
	FC-20RE	2с/4Ф	5~60VDC	Contact	3.0V	non		H<40 N<80	200Hz	Reed				
, n	FC-20RN	3с/4Ф	5~30VDC	NPN	3.0V	non	150mA	L<120	20002	sensor				
FC-20	FC-20RP	3с/4Ф	5~30VDC	PNP	3.0V	non					Intensive			
8	FC-20D	2c/4Φ	10~30VDC	Т	3.5V	0.5mA					Nylon	11.0 27.0 29.0		
	FC-20N	3с/4Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor				
	FC-20P	3с/4Ф	5~30VDC	PNP	0.8V	0.1mA				3011301				
	FC-04R	2c/3Φ	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed				
	FC-04RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor				
FC-04	FC-04D	2c/3Φ	10~30VDC	Т	3.5V	0.5mA					Intensive			
4	FC-04N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor	Nylon	7.4 9.2 22.0		
	FC-04P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				3611301		24.0		
	FC-05R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed				
, .	FC-05RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor		94.20		
FC-05	FC-05D	2с/3Ф	10~30VDC	Т	3.5V	0.5mA					Intensive			
ŭ	FC-05N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor	Nylon	7.00 10.00 22.00 21.00		
	FC-05P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				5611501		24.00		
_	FC-10D	2с/3Ф	10~30VDC	Т	3.5V	0.5mA						ДД		
FC-10	FC-10N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall	ABS	25 6 6 8 8		
8	FC-10P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				sensor		12.0 14.5 8		
	FC-11R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed		12.0 14.5 6		
	FC-11RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor		بحظے بھے		
FC-11	FC-11D	2c/3Φ	10~30VDC	Т	3.5V	0.5mA					Intensive			
=	FC-11N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor	Nylon	6.80		
	FC-11P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA						22.00 15.50		
	FC-36D	2с/2.5Ф	10~30VDC	Т	3.5V	0.5mA	50mA	<40	5KHz	Hall sensor	Intensive	2.8		
FC-36	FC-36N	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA						4.0		
36	FC-36P	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA					Nylon	4.0 6.0 最高感應位置		
	FC-37D	2с/2.5Ф	10~30VDC	Т	3.5V	0.5mA	50mA	<40	5KHz	Hall sensor	Intensive Nylon	14.5 JBQ FRI SERIES ID. III.		
FC-37	FC-37N	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA								
37	FC-37P	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA					Nyion	2.8 6.0 14.5 最高總額位置		
	FC-47R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed			4.0 14.5 最高感應位置	
_	FC-47RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor				
FC-47	FC-47D	2с/3Ф	10~30VDC	Т	3.5V	0.5mA		<40			Intensive			
47	FC-47N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA		5KHz	Hall	Nylon	27.5 29.5		
	FC-47P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA	1001101			sensor		29.5		
	FC-48R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed		6.5		
	FC-48RE	2c/3Φ	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	00Hz sensor		Ø3.50		
FC-48	FC-48D	2c/3Φ	10~30VDC	Т	3.5V	0.5mA		E (IEO			Intensive			
8	FC-48N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall	Nylon	8.0 9.0 最高感應位置		
	FC-48P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				sensor		26.0		
	FC-50R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed				
	FC-50RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor		4.0		
FC-50	FC-50D	2с/3Ф	10~30VDC	T	3.5V	0.5mA					Intensive			
50	FC-50N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor	Nylon	_6.3		
	FC-50P	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				3011301				
	FC-50SR	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		Reed				
П	FC-50SRE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	sensor		4.0		
FC-50S	FC-50SD	2с/3Ф	10~30VDC	Т	3.5V	0.5mA		2 120			Intensive			
SO	FC-50SN	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	Hall sensor	Nylon			
	FC-50SP	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA				3011301		,		
Ţ	FC-53R	2c/3Φ	5~240VDC/AC	Contact	3.0V	non	500mA	<40	200Hz	Reed	Intensive	4.9		
FC-53	FC-53D	2c/3Φ	10~30VDC	Т	3.5V	0.5mA	150mA	<40	5KHz	Hall	ABS	6.3 30.0		
	FC-59R	2с/2.5Ф	5~240VDC/AC	Contact	3.0V	non	500mA			Reed				
F	FC-59RE	2с/2.5Ф	5~60VDC	Contact	3.0V	non	50mA	<40	200Hz	sensor	Intensive	0,1		
FC-59	FC-59D	2с/2.5Ф	10~30VDC	Т	3.5V	0.5mA				Hall	Nylon	140 445 23807330		
	FC-59N	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5KHz	sensor		3.0 6.0 23.0 2-3.80X3.20		



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● 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-06R	2с/2.5Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40		DI				
	FC-06RE	2с/2.5Ф	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	200Hz	Reed	lata a shar	2.8		
FC-06	FC-06D	2с/2.5Ф	10~30VDC	т	3.5V	0.5mA					Intensive Nylon	4.0 7.5 最高感應位置		
6	FC-06N	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5K Hz	Hall sensor		25.5		
	FC-06P	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA								
	FC-07R	2с/2.5Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40	200Hz	Reed				
	FC-07RE	2c/2.5Φ	5~60VDC	Contact	3.0V	non	50mA	N<80 L<120	20002	Reeu		2.8		
FC-07	FC-07D	2c/2.5Φ	10~30VDC	Т	3.5V	0.5mA		<40			Intensive Nylon	4.0 7.5 最高感應位置 25.5		
07	FC-07N	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA	150mA		5K Hz	Hall sensor				
	FC-07P	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA								
MS-08	MS08-10N	3с/4Ф	5~30VDC	NPN	0.8V	0.1mA	450A	< 40	5K Hz	Hall	Cu			
-08	MS08-10P	3с/4Ф	5~30VDC	PNP	0.8V	0.1mA	150mA	<40	SK FIZ	пан	Cu	12.0 25.0		
71	FC-08R	2с/4Ф	5~240VDC/AC	Contact	3.0V	non	500mA	<40	200Hz	Reed		M8x1.0		
FC-08	FC-08D	2с/2.5Ф	10~30VDC	Т	3.5V	0.5mA	- 150mA <40		5K Hz	Hall	Cu	37.0 40.0		
ω	FC-08N	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA	TOOTIER	\40) 5K HZ sens					
	FC-20zR	2с/4Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H/N/L	200Hz	Reed				
FC-20z	FC-20zD	2c/4Φ	10~30VDC	T	3.5V	0.5mA			5K Hz	Hall sensor	Die cast Zn alloy	11.0 12.0 27.0 29.0		
20z	FC-20zN	3с/4Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40						
	FC-20zP	3с/4Ф	5~30VDC	PNP	V8.0	0.1mA								
	FC-05zR	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H/N/L	200Hz			Ø4.2		
FC-05z	FC-05zD	2с/3Ф	10~30VDC	Т	3.5V	0.5mA	150mA	<40	5K Hz	Hall sensor	Die cast Zn alloy			
05z	FC-05zN	3с/3Ф	5~30VDC	NPN	0.8V	0.1mA						7.0 10.0 22.0 24.0		
	FC-05zP	3с/3Ф	5~30VDC	PNP	0.8V	0.1mA								
Ţ	FC-36zD	2c/2.5Φ	10~30VDC	Т	3.5V	0.5mA		<40	5K Hz	Hall sensor	Die cast Zn alloy	2.8 LED		
FC-36z	FC-36zN	3с/2.5Ф	5~30VDC	NPN	V8.0	0.1mA	50mA							
Ñ	FC-36zP	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA						14.5 最高威應位1		
	FC-58zR	2c/2.5Φ	5~120VDC/AC	Contact	3.0V	non	100mA 22		on 100mA	DOmA DOmA		2.8 LED		
FC-58z	FC-58zRE	2с/2.5Ф	5~60VDC	Contact	3.0V	non	50mA	<120	200Hz	Reed	Die cast Zn alloy	4.0 7.5 最高纖維企習 21.0		
28 Z	FC-58zRN	3с/2.5Ф	5~30VDC	NPN	V8.0	0.1mA	150mA							
	FC-58zRP	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA	10011111							
	FC-06zR	2с/2.5Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40 N<80	200Hz	Reed	Reed		2.8 LED	
Ţ	FC-06zRE	2с/2.5Ф	5~60VDC	Contact	3.0V	non	50mA	L<120	200112		Die eest	2.8		
FC-06z	FC-06zD	2с/2.5Ф	10~30VDC	Т	3.5V	0.5mA			5K Hz	Hall sensor	Die cast Zn alloy	4.0 7.5 最高感應位置		
N	FC-06zN	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40				25.5		
	FC-06zP	3с/2.5Ф	5~30VDC	PNP	V8.0	0.1mA								
	FC-06zR	2с/2.5Ф	5~240VDC/AC	Contact	3.0V	non	500mA	H<40 N<80	200Hz	Reed		len len		
F	FC-07zRE	2с/2.5Ф	5~60VDC	Contact	3.0V	non	50mA	L<120			Die cast	2.8 - 2.8 - 2.8 - 2.8 - 3.0 - 4.0 - 7.5 - 最高鹹糖位置		
C-07z	FC-07zD	2с/2.5Ф	10~30VDC	T	3.5V	0.5mA				Hall	Zn alloy			
N	FC-07zN	3с/2.5Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5K Hz	sensor		25.5		
	FC-07zP	3с/2.5Ф	5~30VDC	PNP	0.8V	0.1mA						18.0		
FC-T12	FC-T12R	2с/3Ф	5~240VDC/AC	Contact	3.0V	non	100mA	<40	200Hz	Reed	PC	14.0 7.1 10.9		
12	FC-T12RE	2с/3Ф	5~60VDC	Contact	3.0V	non	50mA	1		sensor				
	FC-12R	2с/4Ф	5~240VDC/AC	Contact	3.0V	non	500mA	<40	200Hz	Reed	Cu	M12X1.0		
FC-12	FC-12D	2с/4Ф	10~30VDC	Т	3.5V	0.5mA				Hall sensor		16.9 51.0		
12	FC-12N	3с/4Ф	5~30VDC	NPN	0.8V	0.1mA	150mA	<40	5K Hz		_			
	FC-12P	3с/4Ф	5~30VDC	PNP	0.8V	0.1mA						F803		
FC-18	FC-18RE	2c/4Φ	5~60VDC	Contact	3.0V	non	500mA	<40	200Hz	Reed sensor	PP			
18	FC-18N	3с/4Ф	5~30VDC	NPN	0.8V	0.01mA	150mA	<40	5K Hz	Hall sensor	_ 'F	21.3 38.6 53.4		



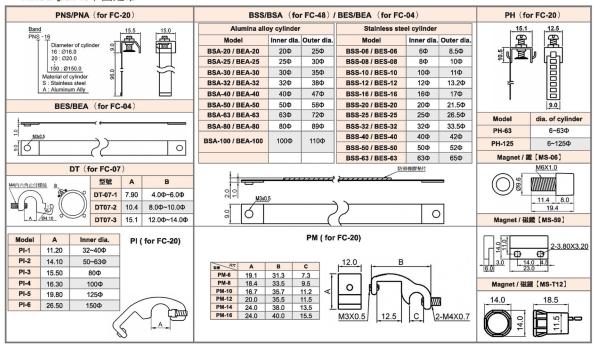
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● Fixed parts / 固定帶



● Magnetic ring / 磁環

§ RME series Rub	ber anisotropic mag	netic ring								
	П	Model Dimension (mm)				Model	Dimension (mm)			
		Wodei	A±0.3	B±0.2	C±0.1	Model	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	
	1 1 1	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	
B	RME-254L	24.5	17.3	4.0	RME-255	24.5	13.3	5.0		
A A	-	RME-304	29.5	21.3	4.0	RME-305	29.5	21.3	5.0	
使用環境溫度	-25°C ~ 80°C	RME-324	31.5	21.3	4.0	RME-325	31.5	21.3	5.0	
磁通密度	2,500~2,600 GAUSS	RME-404	39.5	22.3	4.0	RME-405	39.5	22.3	5.0	
保磁力 (IHC)	2,800~3,200 Oe	RME-504	49.5	32.3	4.0	RME-505	49.5	32.3	5.0	
保磁力 (bHC)	2,100~2,400 Oe	RME-634	62.5	42.3	4.0	RME-635	62.5	42.3	5.0	
最大磁積能	1.3 ~ 1.5 M Oe	RME-804	79.5	58.3	4.0	RME-805	79.5	58.3	5.0	
磁阻力	20~50kgf/cm2	RME-1004	99.5	78.3	4.0	RME-1005	99.5	78.3	5.0	
延展性	10~20%	RME-1254S	124.5	79.3	4.0					
硬度	30~50 HV	RME-1254	124.5	108.3	4.0					
材料密度	1.2~1.8 g/cm3	RME-1504	149.5	125.3	4.0					
		RME-2004	195.5	176.3	4.0					
§ PME series Plas	stic anisotropic mag	netic ring								
	\ N	Model	Dimension (mm)			Madel	Dimension (mm)			
)	Model		B±0.2	C±0.1	Model	A±0.3	B±0.2	C±0.1	
	1/1	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	
使用環境溫度	-40°C ~ 120°C	PME-304	29.5	21.3	4.0	PME-205	19.5	9.3	5.0	
磁通密度	2,800~3,000 GAUSS	PME-324	31.5	21.3	4.0	PME-255	24.5	13.3	5.0	
保磁力 (iHC)	3,000~3,600 Oe	PME-404	39.5	22.3	4.0	PME-305	29.5	21.3	5.0	
保磁力(bHC)	2,400~2,600 Oe	PME-504	49.5	32.3	4.0	PME-325	31.5	21.3	5.0	
最大磁積能	1.8 ~ 2.0 M Oe	PME-634	62.5	42.3	4.0	PME-405	39.5	22.3	5.0	
磁阻力	70~80kgf/cm2	PME-804	79.5	58.3	4.0	PME-505	49.5	32.3	5.0	
延展性	5~7%	PME-1004	99.5	78.3	4.0	PME-635	62.5	42.3	5.0	
硬度	110~120 HV					PME-805	79.5	59.3	5.0	
材料密度	3.8~4.0 g/cm3					PME-1005	99.5	78.3	5.0	



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