

# FSB series(10,20,30A)

FSB -30 -324 -□

① ② ③ ④



The terminal cover is retracted inside the unit

## Features of FSB series

### EMI/EMC Filter for motor drive system (AC servo)

- Improve saturation resistance (There is such as performance improvement type “-254-HU”)
- Book type (Space-saving type)
- Quick and easy push-down terminal  
Just connect the wires, push-down and tighten the screws with a screwdriver

### Specifications

No.	Items	FSB-10-324	FSB-20-324	FSB-30-324
1	Rated Voltage[V]	AC Three Phase 500 (voltage range:528 max) 50/60Hz *3 *4		
2	Rated Current[A]	10	20	30
3	Test Voltage (Terminal-Mounting Plate)	2,800 VDC (Cutoff Current = 10mA), 1minute at room temperature and humidity *5		
4	Isolation Resistance (Terminal-Mounting Plate)	500 VDC 100MΩ min at room temperature and humidity *6		
5	Leakage current 250/500V 60Hz	12mA/24mA max		
6	DC resistance	100mΩ max	38mΩ max	20mΩ max
7	Safety agency approval temperatures	-25 to +85°C (Refer to Derating Curve)		
8	Operating temperature	-40 to +85°C (Refer to Derating Curve)		
9	Operating humidity	20 to 95%RH (Non condensing)		
10	Storage temperature/humidity	-40 to +85°C/20 to 95%RH (Non condensing)		
11	Vibration	10 to 55Hz, 19.6m/s <sup>2</sup> (2G), 3min. Period, 1hour each X, Y and Z axis		
12	Impact	196.1m/s <sup>2</sup> (20G), 11ms Once each X, Y and Z axis		
13	Safety agency approvals	UL1283, CSA C22.2 No.8 (C-UL), DIN EN60939 VDE0565 Teil 3-1, ENEC		
14	Case size (without projection)	66 X 100 X 240 mm (W X H X D) [2.60 X 3.94 X 9.45 inches] (W X H X D)		
15	Weight	1.8kg max		

\*3 Only capacitor code “355”, Three Phase Δ-connection : 400 (440 max), Y-connection : 500 (528 max)  
 \*4 Only “FSB-□□□□□□□□-U”, Three Phase 250 (275 max)  
 \*5 Only capacitor code “203”, “573”, “693”, “104”, 2,500VAC (Cutoff Current = 100mA), 1minute at room temperature and humidity.  
 \*6 Only capacitor code “335”, “355”, Isolation resistance specification is deleted.

- ① Model Name
- ② Rated Current
- ③ Line to ground capacitor code: See table 1.1.

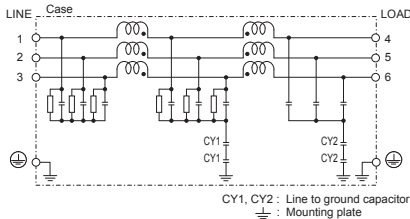
table1.1 Line to ground capacitor code

Code	Leakage Current *1 Upper row : Δ-connection Lower row : Y-connection	Line to ground capacitor CY1 (nominal value)	Line to ground capacitor CY2 (nominal value)
203	1.0mA/2.0mA max 0.1mA/0.2mA max	0.01μF	0.01μF
573 *2	2.5mA max/Not applicable 0.35mA max/Not applicable	0.01μF	0.047μF
693	2.5mA/5.0mA max 0.35mA/0.7mA max	0.022μF	0.047μF
104	3.5mA/7.0mA max 0.5mA/1.0mA max	0.033μF	0.068μF
254 *2	12mA max/Not applicable 1.5mA max/Not applicable	0.033μF	0.22μF
324	12mA/24mA max 1.5mA/3.0mA max	0.1μF	0.22μF
335 *2	160mA max/Not applicable 20mA max/Not applicable	0.033μF	3.3μF
355	180mA/270mA max 25mA/50mA max	0.22μF	3.3μF

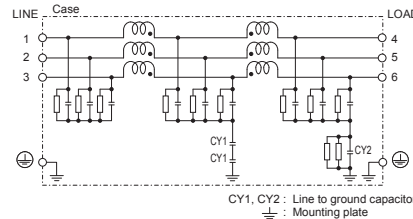
- \* When the line to ground capacitor code is different, the attenuation characteristic is different.
- \*1 Input 250/500V 60Hz (Only Δ-connection of “355” is 250/400V 60Hz)
- \*2 Only “U” type is applied.
- ④ Option  
 H : Ultra high-attenuation type  
 U : Improve differential mode attenuation (Rated voltage 250V)  
 Only “573”, “254”, “335” is applied.

### Circuit Diagram

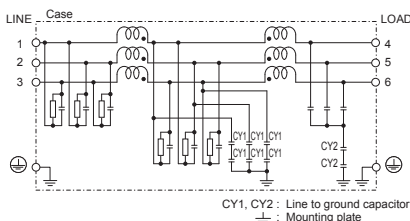
(1) Line to ground capacitor code : 203, 693, 104, 324



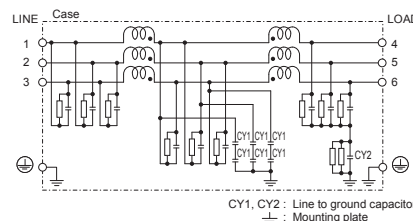
(2) Line to ground capacitor code : 355



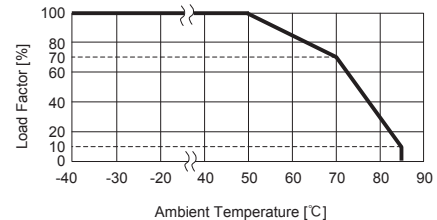
(3) Line to ground capacitor code : 573, 254  
Option : U



(4) Line to ground capacitor code : 335  
Option : U



### Derating Curve

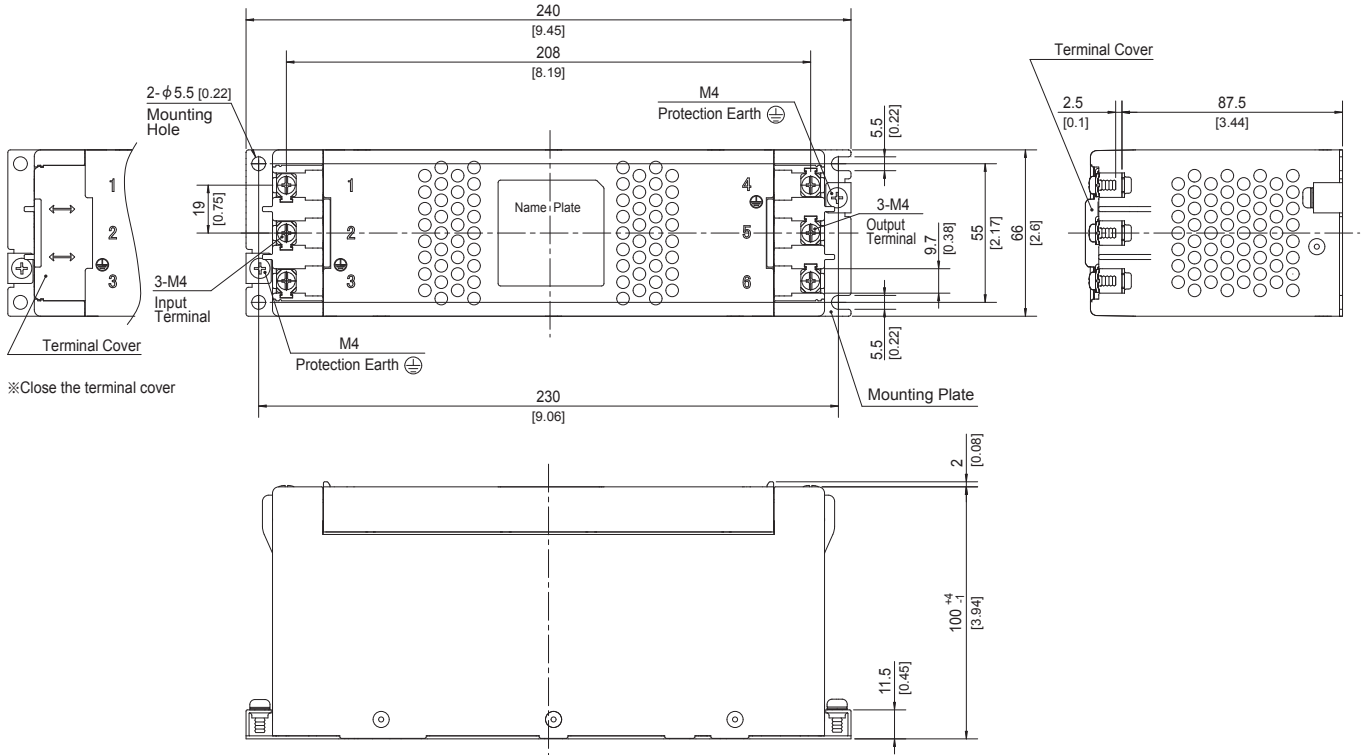


\* Keep free ventilation holes for cooling.

## External view

As this product is adopted push-down type terminal block, this appearance is as follows.

- ① The terminal cover is retracted inside the unit.
- ② The screws for connecting the terminals are held in the up right position.



※Close the terminal cover

- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 1.8kg max
- ※ Mounting Plate : Hot-dip Galvanized Steel board  $t=1.2$  [0.05]
- ※ Case : PBT
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque M4 :  $1.6N \cdot m$  (16.9kgf·cm)max
- ※ Can not be mounted upside-down (mounted the top surface)
- ※ Keep free ventilation holes for cooling



## Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро EMC, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

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- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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