

EAC series

EAC -10 -472 -□

① ② ③ ④

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

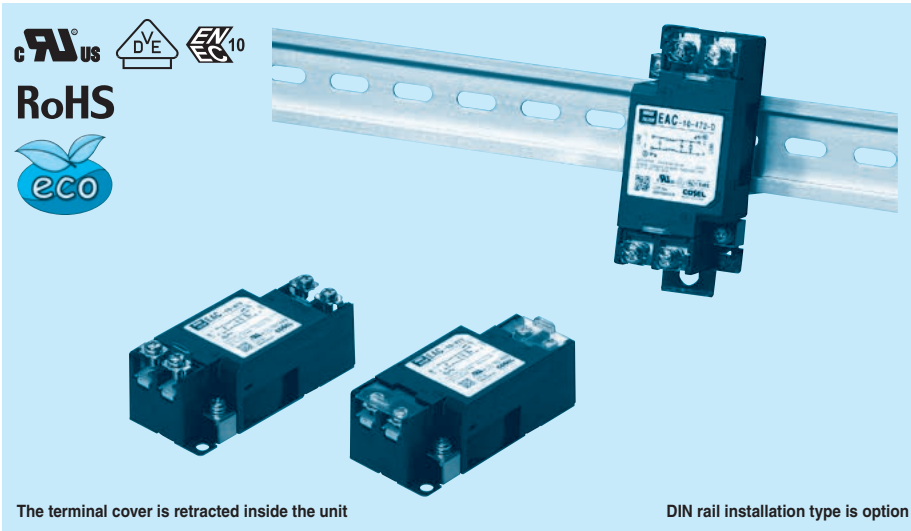
table 1.1 Line to ground capacitor code

Code	Leakage Current (Input 125/250V 60Hz)	Line to ground capacitor (nominal value)
681	75.5 μ A/150 μ A max	680pF
102	0.13mA/0.25mA max	1000pF
222	0.25mA/0.5 mA max	2200pF
332	0.38mA/0.75mA max	3300pF
472	0.5 mA/1.0 mA max	4700pF

* When the line to ground capacitor code is different, the attenuation characteristic is different.

④ Options
D: DIN rail installation type

* The dimensions change when the option is set. Refer to External view.



The terminal cover is retracted inside the unit

DIN rail installation type is option

Features of EAC series

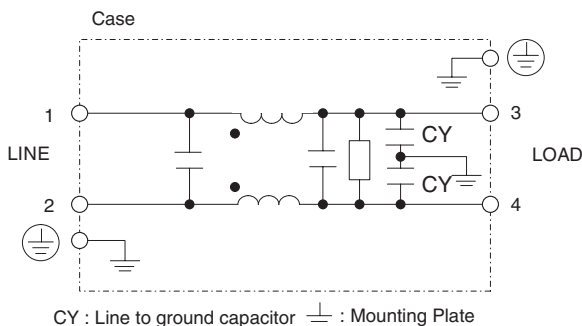
Small, common mode EMI/EMC Filters in 150kHz to 1MHz(1-Stage filter)

- Single Phase 250 VAC
 - Small-size
 - Quick and easy push-down terminal
- Just connect the wires, push-down and tighten the screws with a screwdriver**

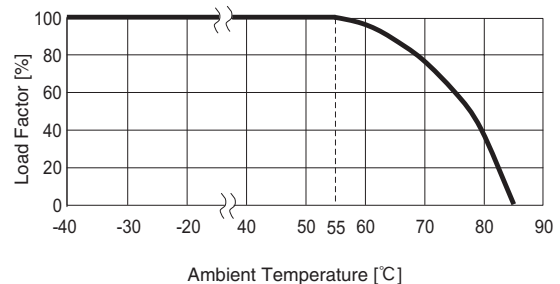
Specifications

No.	Items	EAC-03-472	EAC-06-472	EAC-10-472	EAC-16-472	EAC-20-472	EAC-30-472
1	Rated Voltage[V]	AC 1 ϕ 250 / DC250					
2	Rated Current[A]	3	6	10	16	20	30
3	Test Voltage (Terminal-Mounting Plate)	2,500 VAC (Cutoff Current = 20mA), 1minute at room temperature and humidity					
4	Isolation Resistance (Terminal-Mounting Plate)	500 VDC 500M Ω min at room temperature and humidity					
5	Leakage current 125/250V 60Hz	0.5mA/1.0mA max					
6	DC resistance	180m Ω max	110m Ω max	40m Ω max	20m Ω max	10m Ω max	6m Ω max
7	Safety agency approval temperatures	-25 to +85 $^{\circ}$ C (Refer to Derating Curve)					
8	Operating temperature	-40 to +85 $^{\circ}$ C (Refer to Derating Curve)					
9	Operating humidity	20 to 95%RH (Non condensing)					
10	Storage temperature/humidity	-40 to +85 $^{\circ}$ C/20 to 95%RH (Non condensing)					
11	Vibration	10 to 55Hz, 19.6m/s 2 (2G), 3min. Period, 1hour each X, Y and Z axis					
12	Impact	196.1m/s 2 (20G), 11ms Once each X, Y and Z axis					
13	Safety agency approvals	UL1283, CSA C22.2 No.8 (C-UL), DIN EN60939 VDE0565 Teil3-1, ENEC (At only AC input)					
14	Case size (without projection) /Weight	39X30X85 mm [1.54X1.18X3.35 inches] (W X H X D) /170g max (Option : -D refer to external view)					

Circuit Diagram



Derating Curve

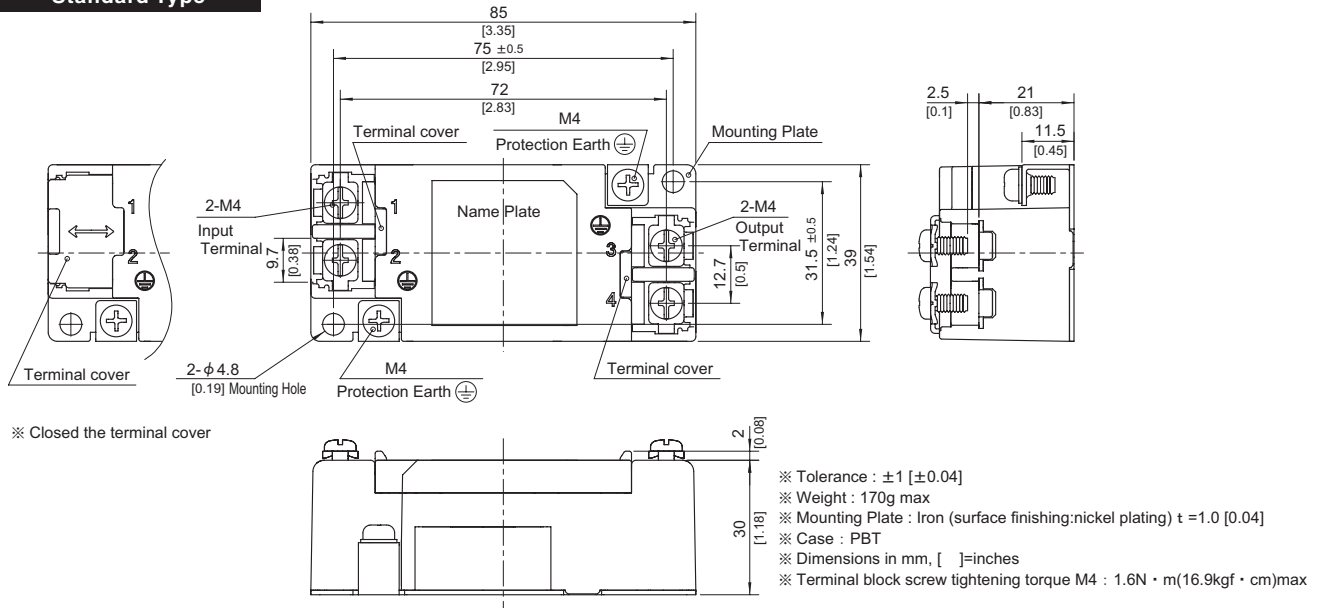


External view

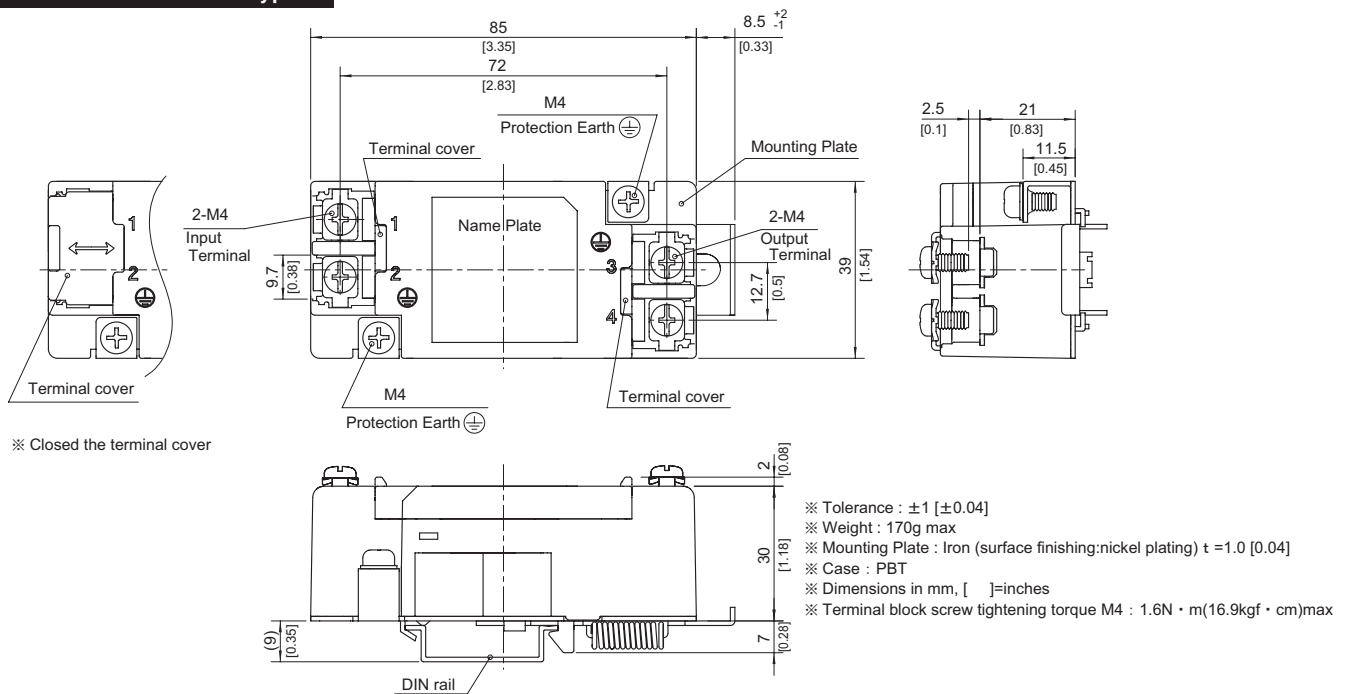
This product is shipped in the following condition, because it is equipped with push-down terminals.

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

Standard Type



DIN rail installation Type

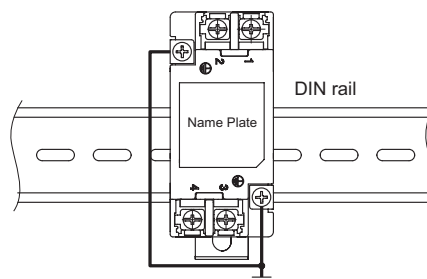


Note when installing the EMI/EMC Filter on a DIN rail.

When the EMI/EMC Filter is grounded through the DIN rail, the proper noise attenuation may not be achieved.

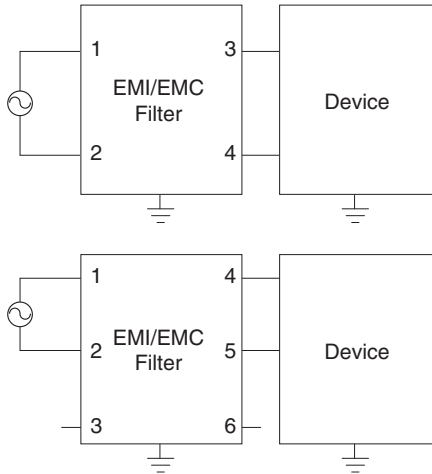
Be sure to connect the protection earth (PE) of the EMI/EMC Filter body to the earth.

It can connect the ground to either one only.



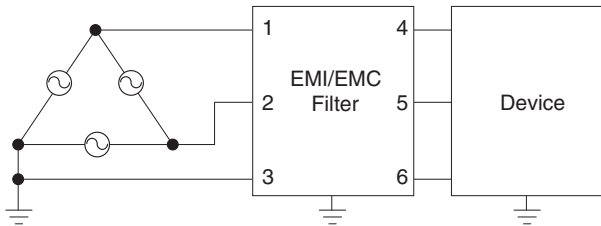
1 Method of connecting EMI/EMC Filter

(1) Single Phase

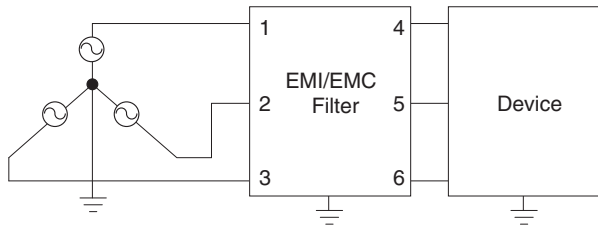


※Three phase EMI/EMC filter is also available as a single phase input type.

(2) Three phase (Delta-connection)



(3) Three phase (Star-connection)



[Reference] Example of calculating input current calculation

Input voltage 400 [V]

Input capacity of the equipment 4000 [VA]

$$\text{Input current} = \frac{4000 \text{ [VA]}}{400 \text{ [V]} \times \sqrt{3}} = 5.8 \text{ [A]}$$

2 Caution when connecting EMI/EMC Filter

Please note the excessive temperature increase of EMI/EMC filter. Please contact us if judgement is difficult.

(1) Input voltage and frequency

Please use within the rated voltage (or maximum voltage) of each model.

Input frequency specification for AC input EMI/EMC filter is considered as commercial frequency (50/60Hz).

It should not be used under the following conditions.

- 1) Distorted input voltage waveform.
(Triangle wave, square wave etc.)
- 2) High input frequency (ex: 400Hz)

(2) Input current

Please use within the rated current of each model.

EMI/EMC filters have short term peak current capability. Therefore, it can flow ~40A or ten times of rated current, non-repeated, within a few ms such as inrush current of power supply etc.

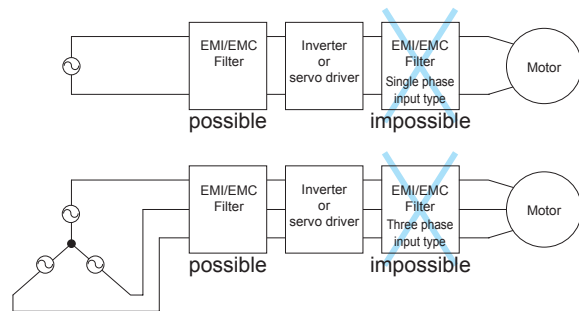
However, it should not be used under the following conditions.

- 1) Long duration peak current.
- 2) Peak current or high-frequency current is continuously flowing.

(3) Connection to a general-purpose inverter (servo driver)

Please connect EMI/EMC filter to input side of inverter driver (servo driver).

It should not be used between the inverter (servo driver) and the motor.



3 Safety Considerations

- To apply for safety standard approval using this EMI/EMC Filter, the following conditions must be met.
- The unit must be used as a component of an end-use equipment.
- Protection earth terminal (PE) must be connected to safety ground of end-use equipment.

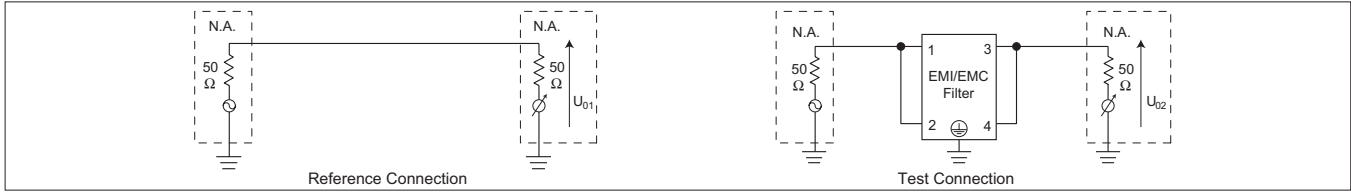
(1) Attenuation Characteristic(Static characteristic)

※ Attenuation= $20\log(U_{b1}/U_{b2})$ (dB)
 U_{b1} : Voltage in state without filters
 U_{b2} : Voltage in state which added filters
 ※ N.A.: Network analyzer

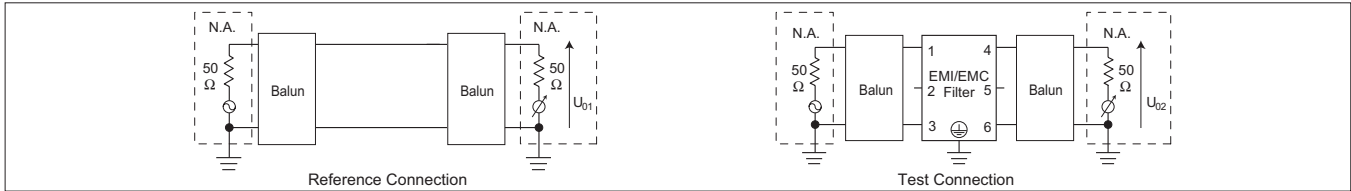
■ Object product : Single phase input type (Differential mode)



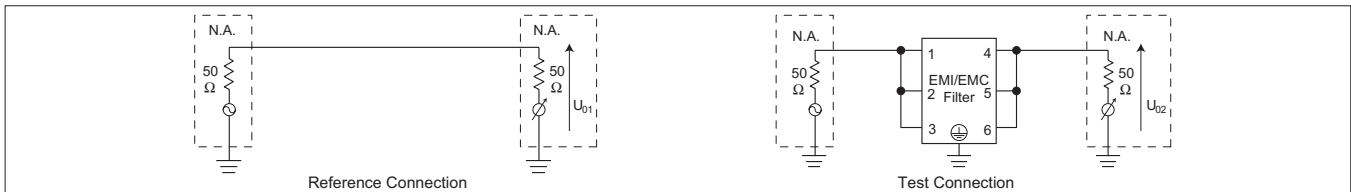
■ Object product : Single phase input type (Common mode)



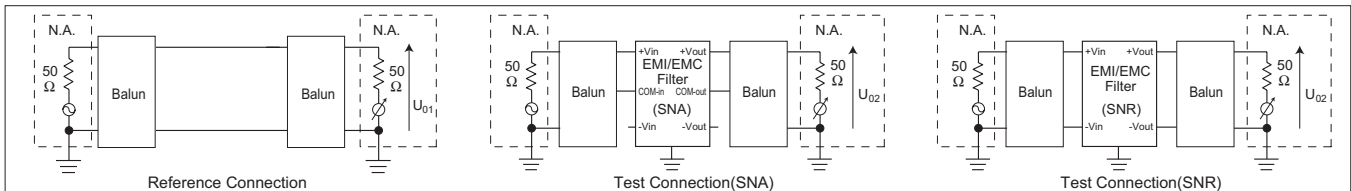
■ Object product : Three phase input type (Differential mode)



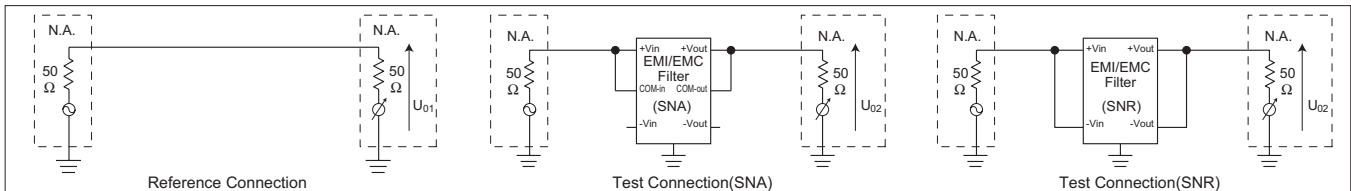
■ Object product : Three phase input type (Common mode)



■ Object product : DC input type (Differential mode)



■ Object product : DC input type (Common mode)



(2) Pulse Attenuation Characteristic





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- 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)
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- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

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- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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