

# FTA series(40,50,60A)

FTA -50 -683 -□

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 250/500V 60Hz) (335 only 250/400V 60Hz)	Line to ground capacitor (nominal value)
223	1.0mA/2.0mA max	22,000pF
683	2.5mA/5.0mA max	68,000pF
104	3.5mA/7.0mA max	100,000pF
335	160mA/250mA max	3.3μF

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

- ④ Option
- H: Ultra high attenuation type "335" is not applied.
- U: Improve differential mode attenuation (Rated voltage 250V)
- G: With switch of line to ground capacitor Only "335" is applied.
- \* Leakage current 160mA/250mA max when the switch state is ON (switched to "I"). 10μA/16μA max when the switch state is OFF (switched to "O").



## Features of FTA series

### Book type (Space-saving type)

- 1-stage filter General-purpose High-attenuation (150kHz - 1MHz)
- Selectable leakage current value, Ultra high attenuation type "335" for EU(Wye type with neutral earth system), With switch of line to ground capacitor "-G"

### Specifications

No.	Items	FTA-40-683	FTA-50-683	FTA-60-683
1	Rated Voltage[V]	AC Three Phase 500 (voltage range:528 max) 50/60Hz *1 *2		
2	Rated Current[A]	40	50	60
3	Test Voltage (Terminal-Mounting Plate)	2,500 VAC (Cutoff Current = 100mA), 1minute at room temperature and humidity *3		
4	Isolation Resistance (Terminal-Mounting Plate)	500 VDC 100MΩ min at room temperature and humidity *4		
5	Leakage current 250/500V 60Hz	2.5mA/5.0mA max		
6	DC resistance	8.5mΩ max	6mΩ max	4.5mΩ 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 Teil3-1, ENEC		
14	Case size (without projection)	65 X 84 X 153 mm (W X H X D) (Option: -G refer to external view) [2.56 X 3.31 X 6.02 inches] (W X H X D)		
15	Weight	1.2kg max		

\*1 Only capacitor code "335", Three Phase Δ-connection : 400 (440 max), Wye-connection : 500 (528 max)

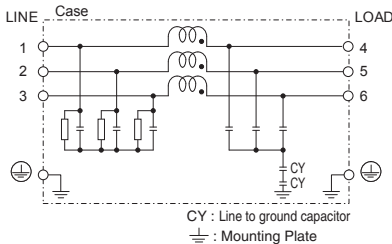
\*2 Only "FTA-□□□□□□-U", Three Phase 250 (275 max)

\*3 Only capacitor code "335", 2,800VDC (Cutoff Current = 10mA), 1minute at room temperature and humidity.

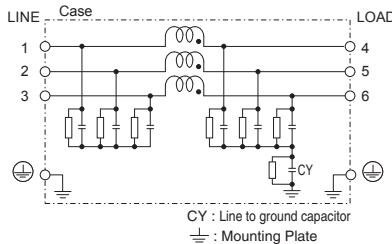
\*4 Only capacitor code "335", Isolation resistance specification is deleted.

## Circuit Diagram

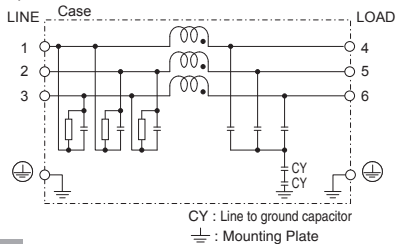
(1) Line to ground capacitor code : 223, 683, 104



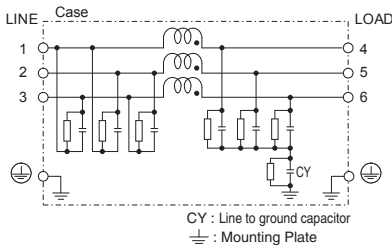
(2) Line to ground capacitor code : 335



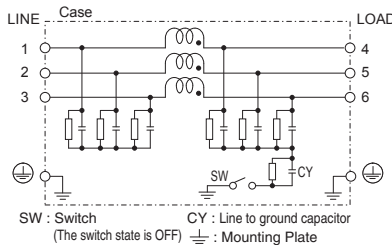
(3) Line to ground capacitor code : 223, 683, 104  
Option : U



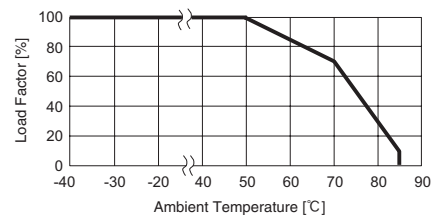
(4) FTA-□□□-335-U



(5) FTA-□□□-335-G

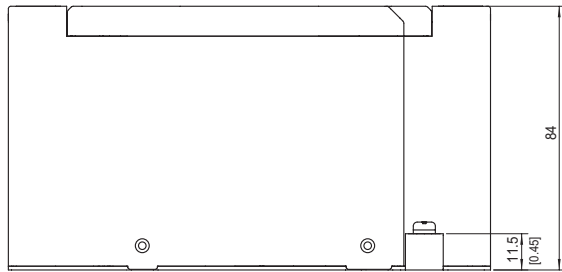
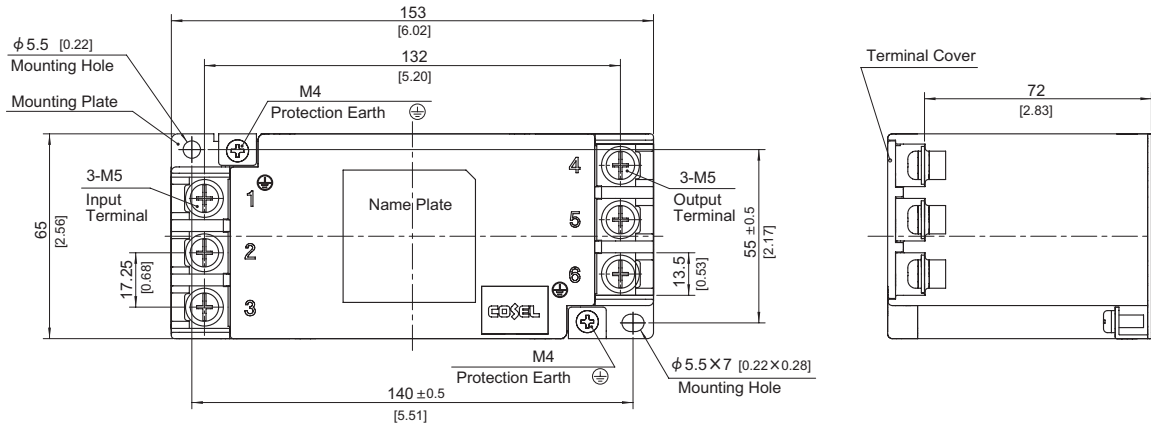


## Derating Curve



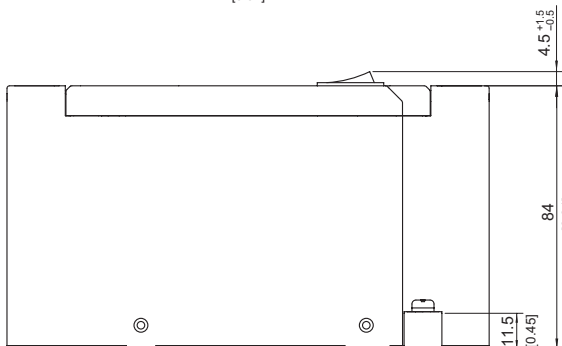
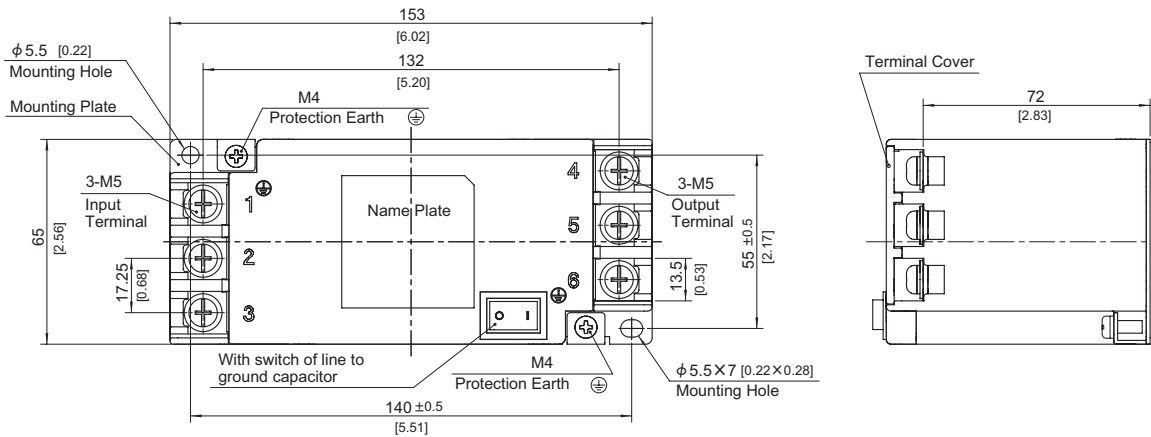
## External view

### Standard Type



- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 1.2kg max
- ※ Mounting Plate : Iron (surface finishing : nickel plating)  $t=1.2$  [0.05]
- ※ Case : PBT
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque M5 :  $3.0N \cdot m$  (30.7kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque M4 :  $1.6N \cdot m$  (16.9kgf · cm)max
- ※ Can not be mounted upside-down (mounted the top surface)

### With switch of line to ground capacitor ON/OFF



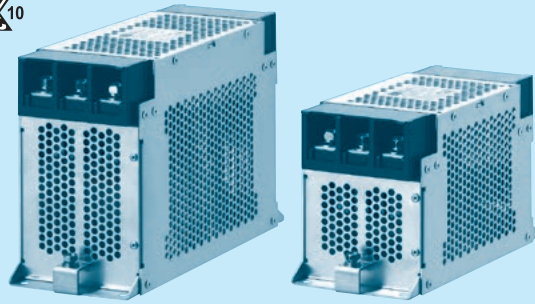
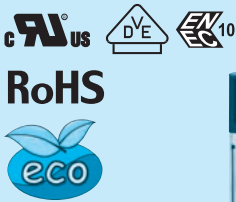
- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 1.2kg max
- ※ Mounting Plate : Iron (surface finishing : nickel plating)  $t=1.2$  [0.05]
- ※ Case : PBT
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque M5 :  $3.0N \cdot m$  (30.7kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque M4 :  $1.6N \cdot m$  (16.9kgf · cm)max
- ※ Can not be mounted upside-down (mounted the top surface)
- ※ The switch state is OFF at shipping
- ※ Switch status ON : "I", OFF : "O"

※ **HIGH LEAKAGE CURRENT**  
first connect to earth

# FTA series(80,100,125,150A)

FTA -80 -683 -□

① ② ③ ④



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

Code	Leakage Current (Input 250/500V 60Hz) (155,335 only 250/400V 60Hz)	Line to ground capacitor (nominal value)
223	1.0mA/2.0mA max	22,000pF
683	2.5mA/5.0mA max	68,000pF
104	3.5mA/7.0mA max	100,000pF
155	160mA/250mA max	1.5μF
335	320mA/500mA max	3.3μF

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

- ④ Option
- H: Ultra high attenuation type  
"155", "335" is not applied.
- S: Hexagon socket head cap screw  
(Standard type is Hexagon head screw)
- U: Improve differential mode attenuation  
(Rated voltage 250V)
- G: With switch of line to ground capacitor  
Only "155", "335" is applied.
- \* "155" is Leakage current 160mA/250mA max when the switch state is ON (switched to "1").  
50μA/80μA max when the switch state is OFF (switched to "0").
- \* "335" is Leakage current 320mA/500mA max when the switch state is ON (switched to "1").  
50μA/80μA max when the switch state is OFF (switched to "0").

## Features of FTA series

### Book type (Space-saving type)

- 1-stage filter General-purpose High-attenuation (150kHz - 1MHz)
- Selectable leakage current value, Ultra high attenuation type "155", "335" for EU  
(Wye type with neutral earth system), With switch of line to ground capacitor "-G"

## Specifications

No.	Items	FTA-80-683	FTA-100-683	FTA-125-683	FTA-150-683
1	Rated Voltage[V]	AC Three phase 500 (voltage range:528 max) 50/60Hz *1 *2			
2	Rated Current[A]	80	100	125	150
3	Test Voltage (Terminal-Mounting Plate)	2,500 VAC (Cutoff Current = 100mA), 1minute at room temperature and humidity *3			
4	Isolation Resistance (Terminal-Mounting Plate)	500 VDC 100MΩ min at room temperature and humidity *4			
5	Leakage current 250/500V 60Hz	2.5mA/5.0mA max			
6	DC resistance	5mΩ max	4mΩ max	3mΩ max	3mΩ 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 Teil3-1, ENEC			
14	Case size (without projection)	100 X 130 X 210 mm (W X H X D) (Option: -G refer to external view) [3.94 X 5.12 X 8.27 inches]			100 X 170 X 260 mm (W X H X D) (Option: -G refer to external view) [3.94 X 6.69 X 10.24 inches]
15	Weight	3.1kg max			4.2kg max

\*1 Only capacitor code and option "155", "335", Three Phase Δ-connection: 400 (440 max), Wye-connection: 500 (528 max)

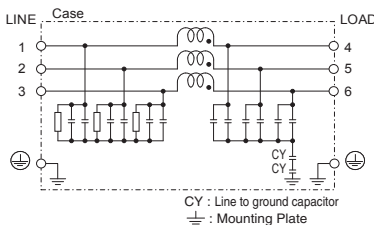
\*2 Only option "U", Three Phase 250 (275 max)

\*3 Only capacitor code and option "155", "335", 2,800VDC (Cutoff Current = 10mA), 1minute at room temperature and humidity.

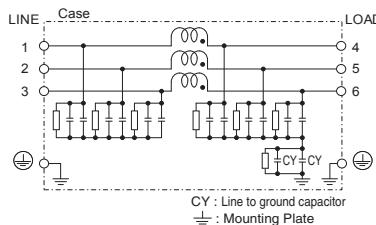
\*4 Only capacitor code and option "155", "335", Isolation resistance specification is deleted.

## Circuit Diagram

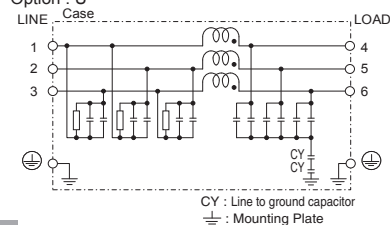
(1) Line to ground capacitor code : 223, 683, 104



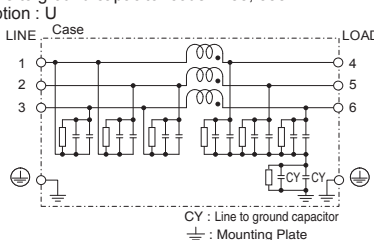
(2) Line to ground capacitor code : 155, 335



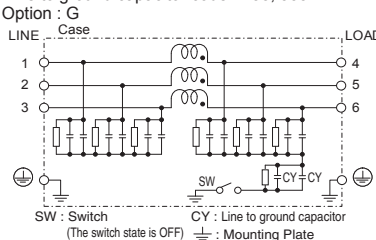
(3) Line to ground capacitor code : 223, 683, 104



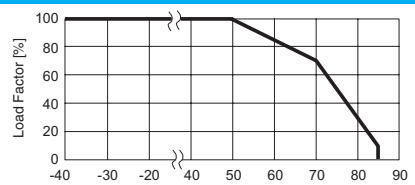
(4) Line to ground capacitor code : 155, 335



(5) Line to ground capacitor code : 155, 335



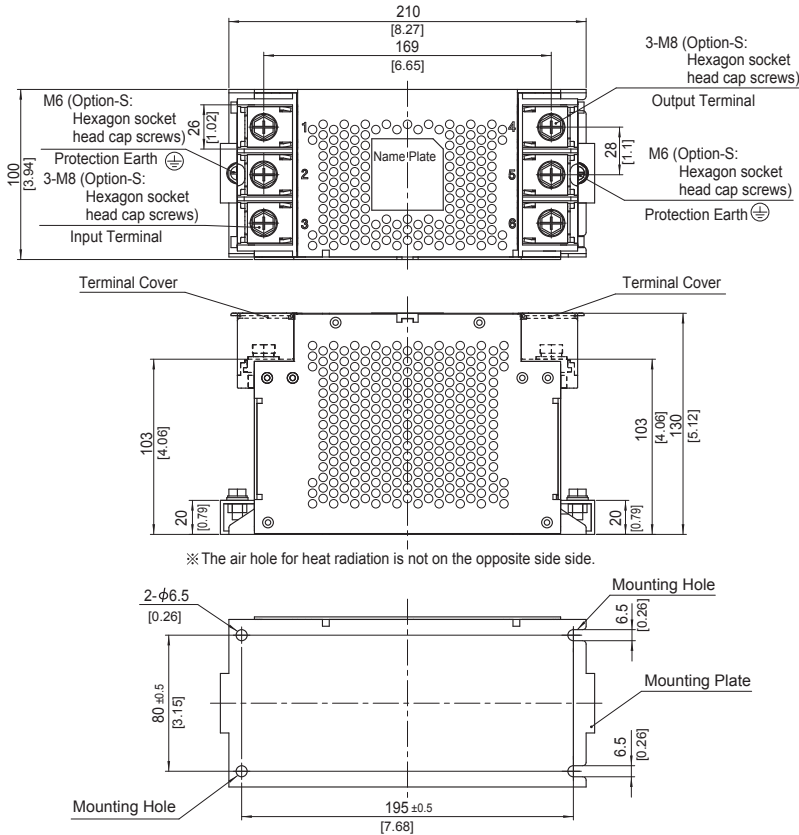
## Derating Curve



\* Keep free ventilation holes for cooling.

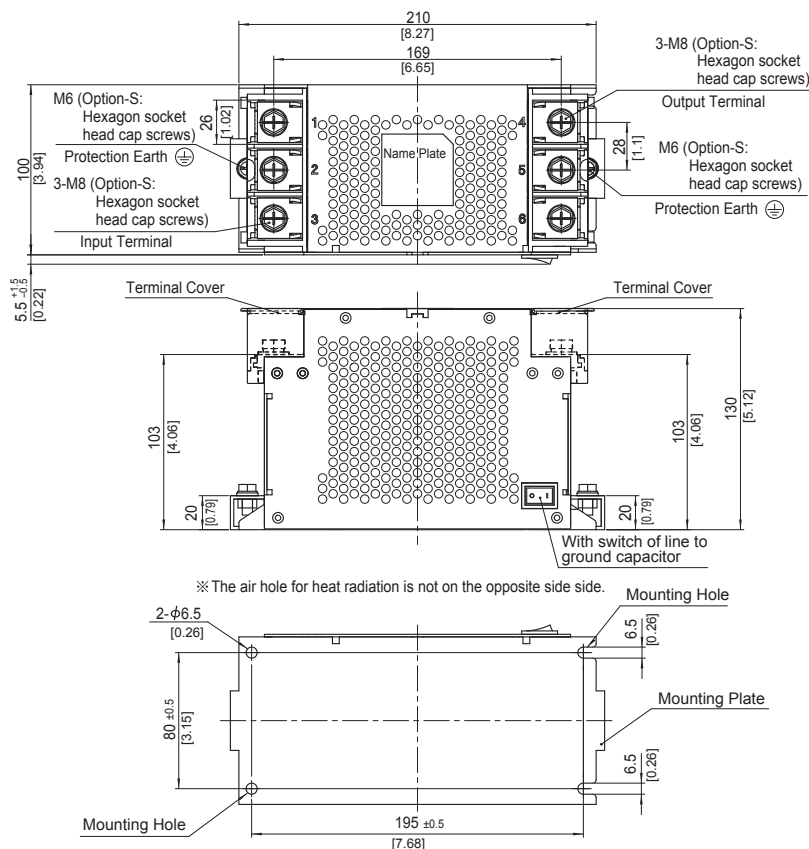
## External view

### FTA-80 / FTA-100 / FTA-125



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 3.1kg max
- ※ Mounting Plate : Aluminum t=2.0 [0.08]
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque  
M8 : 9.2N · m(93.9kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque  
M6 : 5.8N · m(59.2kgf · cm)max
- ※ Can not be mounted upside-down  
(mounted the top surface)
- ※ Keep free ventilation holes for cooling

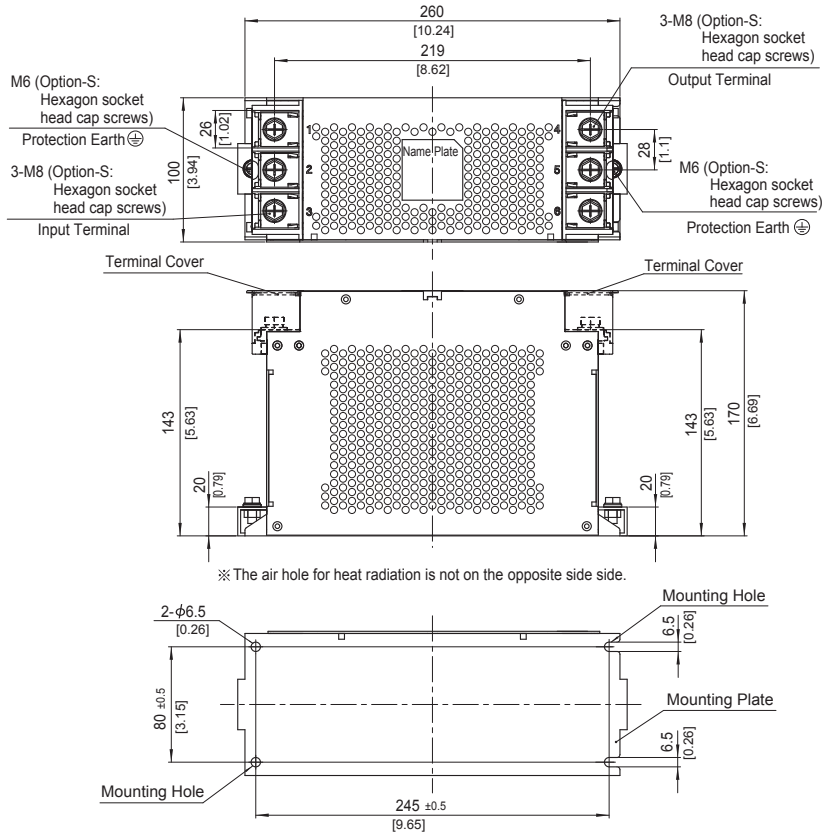
### FTA-80 / FTA-100 / FTA-125 with switch of line to ground capacitor ON/OFF



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 3.1kg max
- ※ Mounting Plate : Aluminum t=2.0 [0.08]
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque  
M8 : 9.2N · m(93.9kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque  
M6 : 5.8N · m(59.2kgf · cm)max
- ※ Can not be mounted upside-down  
(mounted the top surface)
- ※ Keep free ventilation holes for cooling
- ※ The switch state is OFF at shipping
- ※ Switch status ON : "I", OFF : "O"
- ※ HIGH LEAKAGE CURRENT  
first connect to earth

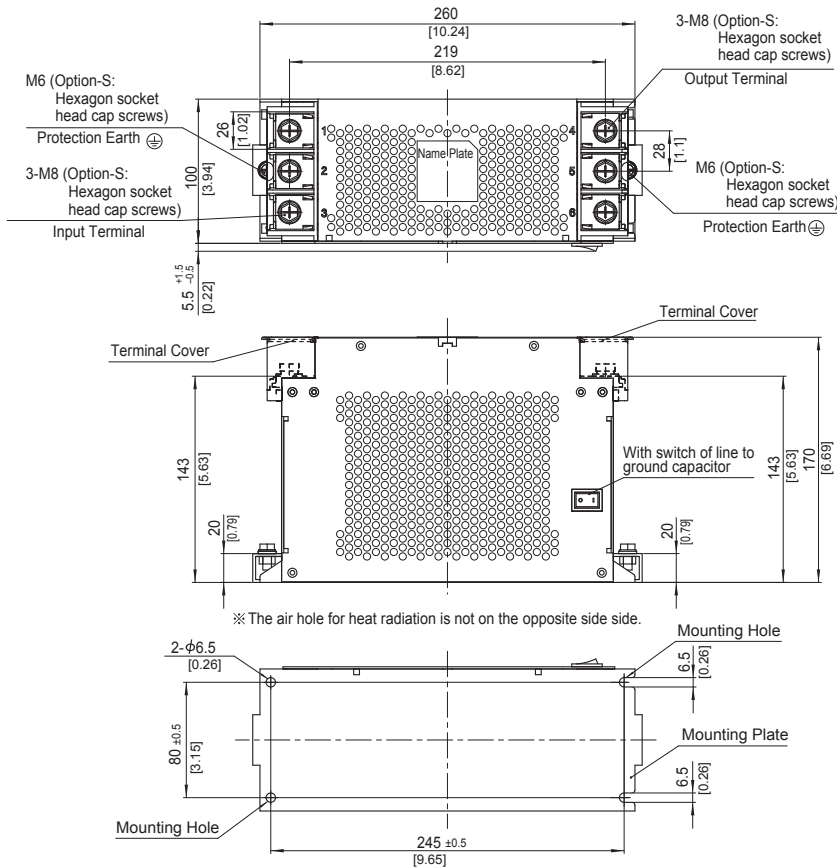
## External view

### FTA-150



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 4.2kg max
- ※ Mounting Plate : Aluminum t=2.0 [0.08]
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque  
M8 : 9.2N · m(93.9kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque  
M6 : 5.8N · m(59.2kgf · cm)max
- ※ Can not be mounted upside-down (mounted the top surface)
- ※ Keep free ventilation holes for cooling

### FTA-150 with switch of line to ground capacitor ON/OFF



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 4.2kg max
- ※ Mounting Plate : Aluminum t=2.0 [0.08]
- ※ Dimensions in mm, [ ]=inches
- ※ Terminal block screw tightening torque  
M8 : 9.2N · m(93.9kgf · cm)max
- ※ Protection Earth (PE) screw tightening torque  
M6 : 5.8N · m(59.2kgf · cm)max
- ※ Can not be mounted upside-down (mounted the top surface)
- ※ Keep free ventilation holes for cooling
- ※ The switch state is OFF at shipping
- ※ Switch status ON : " | ", OFF : " O "
- ※ HIGH LEAKAGE CURRENT first connect to earth

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