



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# ESP series

ESP -10 -472 -□

① ② ③ ④

- ① Model Name
- ② Rated Current
- ③ Line to ground capacitor code: See table 1.1.
- ④ Options

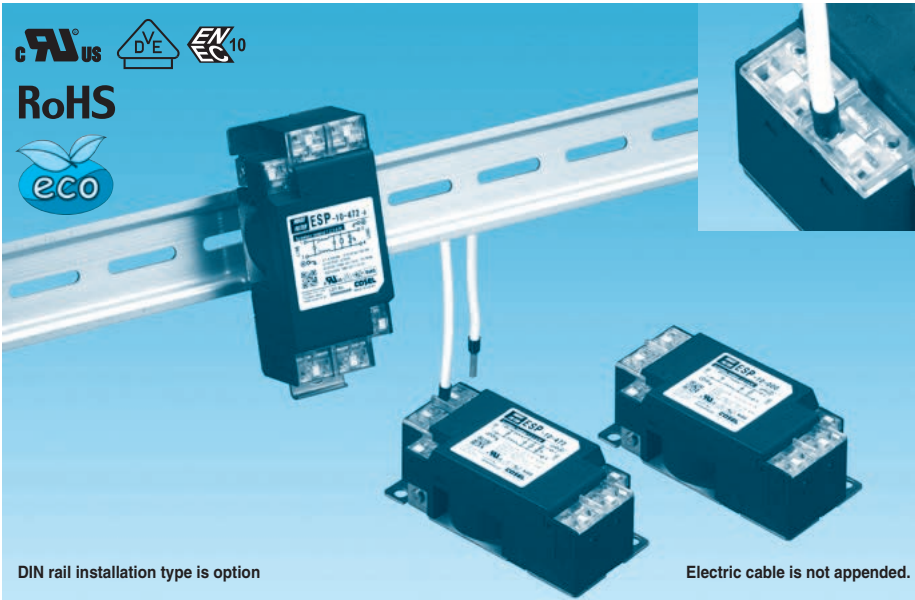
table 1.1 Line to ground capacitor code

Code	Leakage Current (Input 125/250V 60Hz)	Line to ground capacitor (nominal value)
000	5 $\mu$ A/ 10 $\mu$ A max	Not Provided
101	12.5 $\mu$ A/ 25 $\mu$ A max	100pF
221	25 $\mu$ A/ 50 $\mu$ A max	220pF
331	37.5 $\mu$ A/ 75 $\mu$ A max	330pF
471	50 $\mu$ A/100 $\mu$ A max	470pF
681	75.5 $\mu$ A/150 $\mu$ 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.



DIN rail installation type is option

Electric cable is not appended.

## Features of ESP series

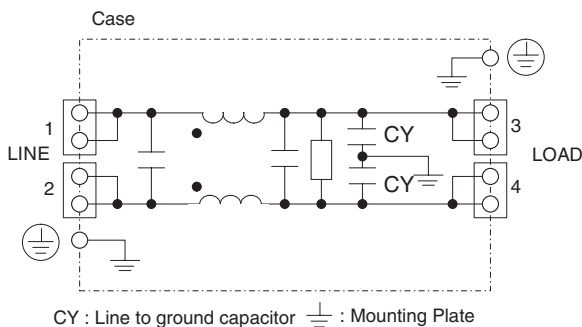
### Small, High-voltage pulses common mode EMI/EMC Filters (1-Stage filter)

- Small EMI/EMC Filters that change input-output terminal and protection earth terminal of EA series into screwless terminal type
- Single Phase 250VAC
- Torque management is unnecessary with screwless

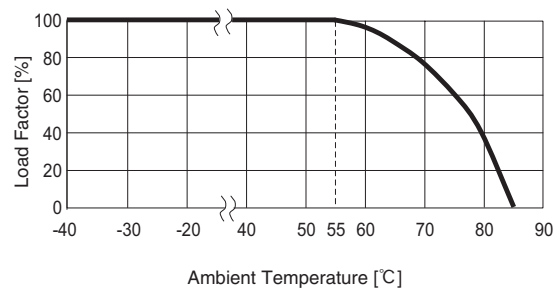
## Specifications

No.	Items	ESP-03-472	ESP-06-472	ESP-10-472	ESP-16-472
1	Rated Voltage[V]	AC 1 $\phi$ 250 / DC250			
2	Rated Current[A]	3	6	10	16
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 $\Omega$ min at room temperature and humidity			
5	Leakage current 125/250V 60Hz	0.5mA/1.0mA max			
6	DC resistance	180m $\Omega$ max	110m $\Omega$ max	40m $\Omega$ max	20m $\Omega$ 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	39 X 30 X 85 mm [1.54 X 1.18 X 3.35 inches] (W X H X D) /170g max (Option : -D refer to external view)			

## Circuit Diagram

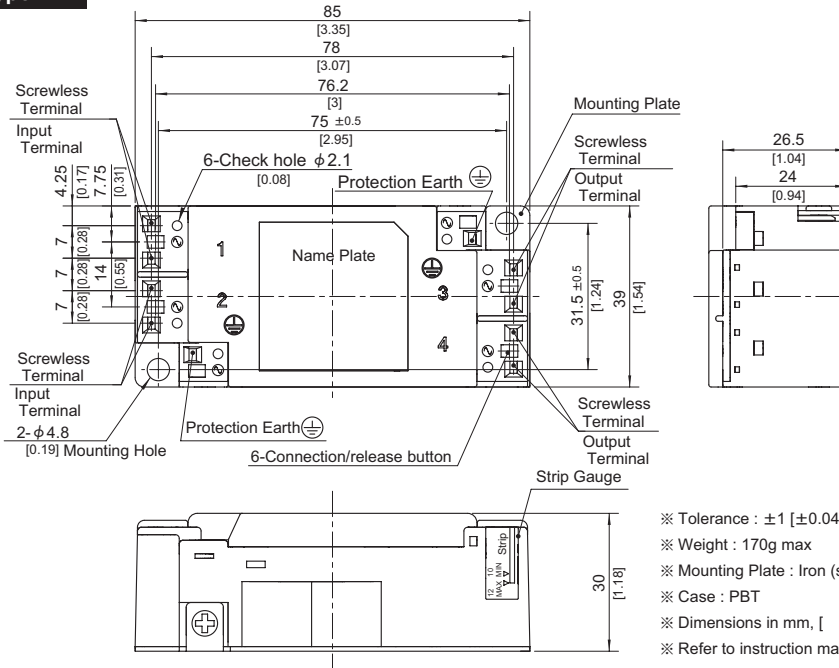


## Derating Curve



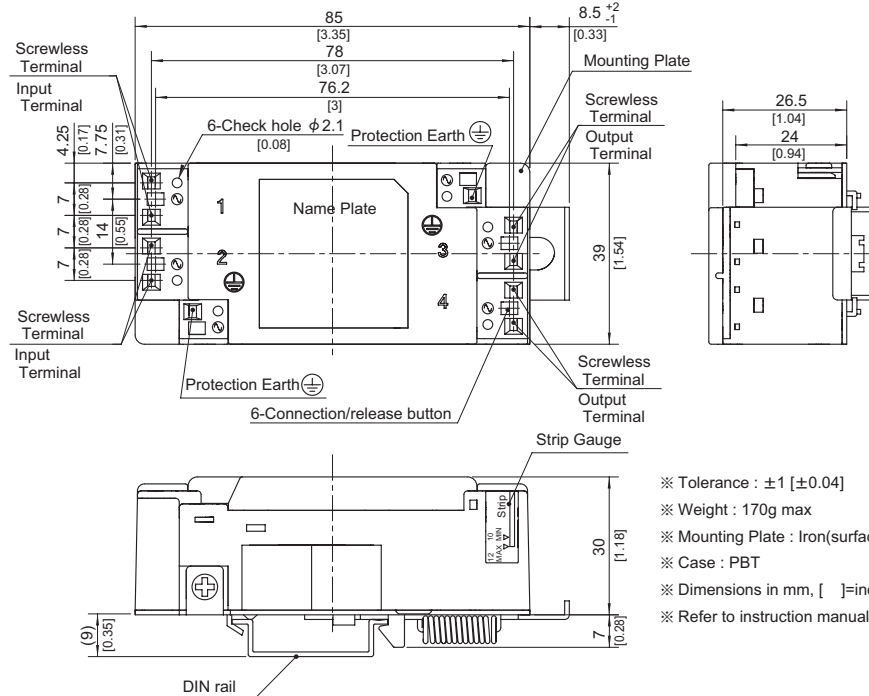
## External view

### Standard Type



- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 170g max
- ※ Mounting Plate : Iron (surface finishing:nickel plating)  $t=1.0$  [0.04]
- ※ Case : PBT
- ※ Dimensions in mm, [ ]=inches
- ※ Refer to instruction manual for details.

### DIN rail installation Type



- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 170g max
- ※ Mounting Plate : Iron (surface finishing:nickel plating)  $t=1.0$  [0.04]
- ※ Case : PBT
- ※ Dimensions in mm, [ ]=inches
- ※ Refer to instruction manual for details.

### ■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.

