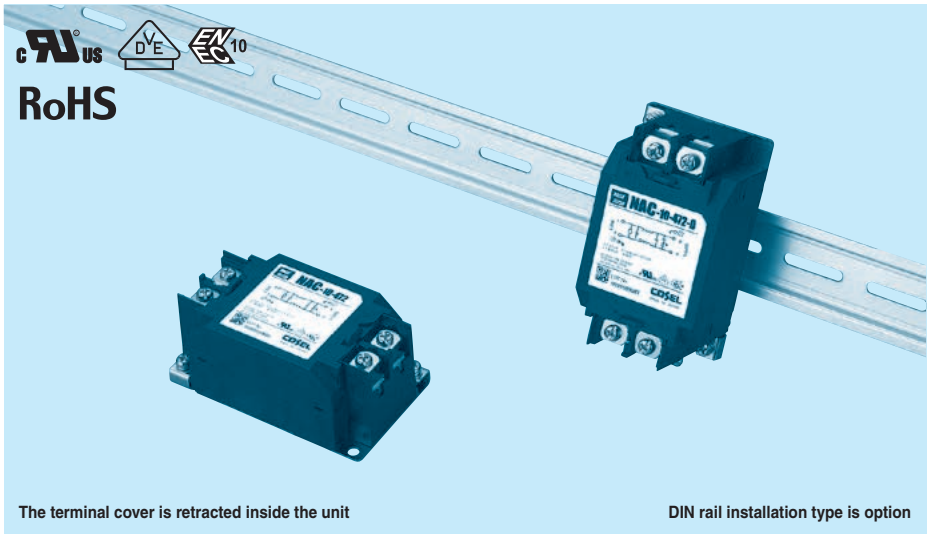
COSEL Single phase input type (1-Stage filter)

NAC/NAM/NAH/NAP series(4-30A)

Ordering information

NAC ① -10 ② -472 ③ -□ ④



The terminal cover is retracted inside the unit

DIN rail installation type is option

①Series Name
②Rated Current
③Line to ground capacitor code: Refer to table 1.1.

table1.1 Line to ground capacitor code

Code	NAC	NAM	NAH	NAP	Leakage Current (Input 125/250V 60Hz)	Line to ground capacitor (nominal value)
000		●	●	●	5 μA / 10μA max	Not Provided
101		●	●	●	12.5 μA / 25μA max	100pF
221		●	●	●	25 μA / 50μA max	220pF
331		●	●	●	37.5 μA / 75μA max	330pF
471		●	●	●	50 μA / 100μA max	470pF
681	●		●	●	75.5 μA / 150μA max	680pF
102	●		●	●	0.13 mA / 0.25mA max	1,000pF
222	●		●	●	0.25 mA / 0.5 mA max	2,200pF
332	●		●	●	0.38 mA / 0.75mA max	3,300pF
472	●		●	●	0.5 mA / 1.0 mA max	4,700pF

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

④Option
D:DIN rail installation type

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

Features of NAC/NAM/NAH/NAP series

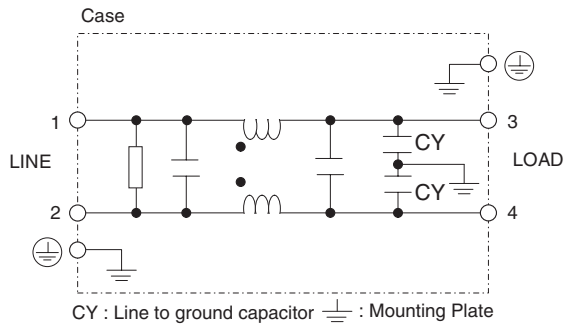
- Single Phase 250VAC (1-Stage filter)
- Quick and easy push-down terminal
  Just connect the wires, push-down and tighten the screws with a screwdriver

■ **NAC : High-attenuation type from 150kHz to 1MHz**
■ **NAM: Low leakage current type**
■ **NAH : Ultra high-attenuation type from 9kHz to 1MHz**
■ **NAP : Outside impulse high-attenuation type**

Specifications

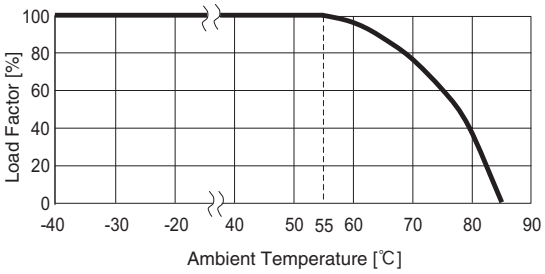
No.	Items	NAC-04-472 / NAM-04-000 / - / NAP-04-472	NAC-06-472 / NAM-06-000 / NAH-06-472 / NAP-06-472	NAC-10-472 / NAM-10-000 / NAH-10-472 / NAP-10-472	NAC-16-472 / NAM-16-000 / NAH-16-472 / NAP-16-472	NAC-20-472 / NAM-20-000 / NAH-20-472 / NAP-20-472	NAC-30-472 / NAM-30-000 / NAH-30-472 / NAP-30-472
1	Rated Voltage[V]	AC 1φ 250 / DC250					
2	Rated Current[A]	4	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 100MΩ min at room temperature and humidity					
5	Leakage current	Refer to table 1.1					
6	Voltage drop	1.0V max					
7	Safety agency approval temperatures	-25 to +85℃ (Refer to Derating Curve)					
8	Operating temperature	-40 to +85℃ (Refer to Derating Curve)					
9	Operating humidity	20 to 95%RH (Non condensing)					
10	Storage temperature/humidity	-40 to +85℃/20 to 95%RH (Non condensing)					
11	Vibration	10 to 55Hz, 19.6m/s² (2G), 3min. Period, 1hour each X, Y and Z axis					
12	Impact	196.1m/s² (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	53×41×92 mm [2.09×1.61×3.62 inches] (W×H×D) /300g max (Option : -D refer to external view)					

Circuit Diagram



CY : Line to ground capacitor ⏚ : Mounting Plate

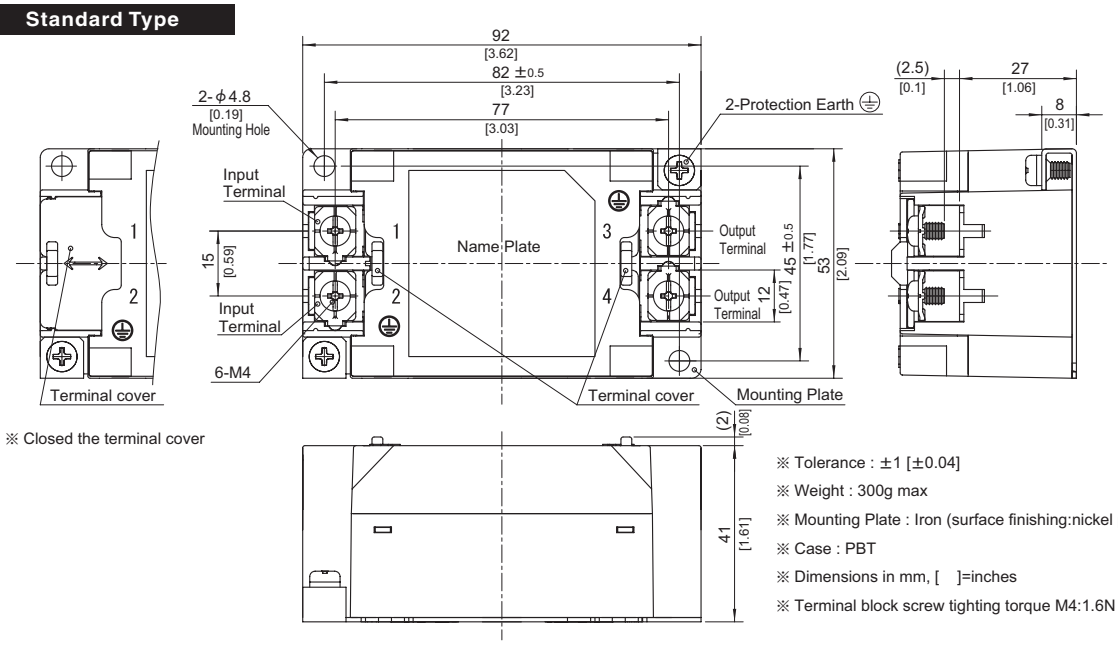
Derating Curve



External view

This product is shipped in the following condition, because it is equipped with push-down terminals.
①The terminal cover is retracted inside the unit.
②The screws for connecting the terminals are held in the up right position.

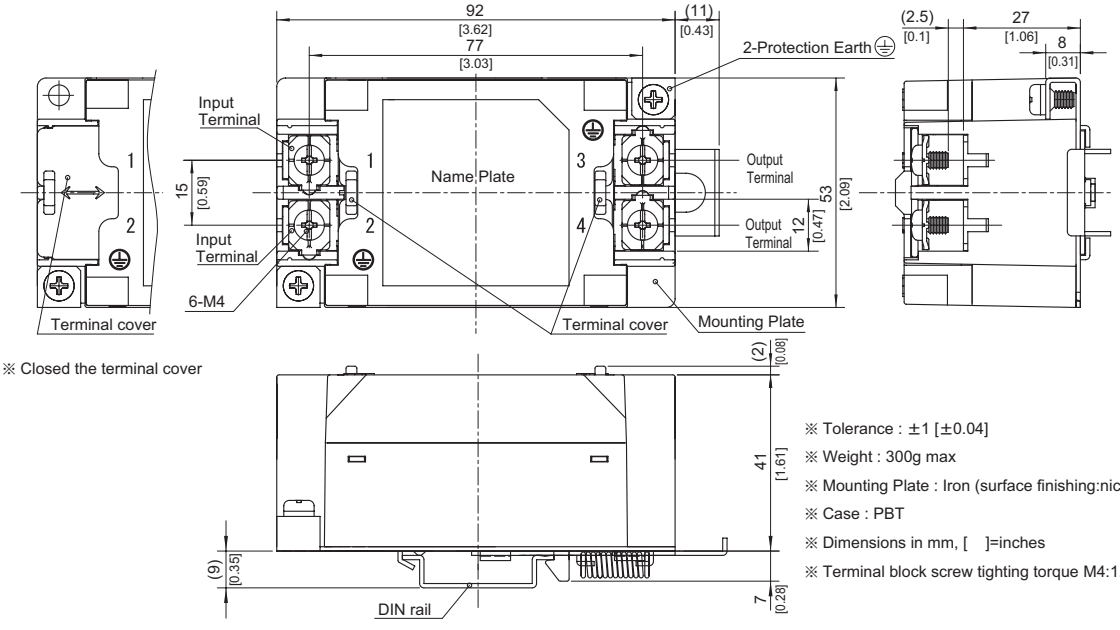
Standard Type



※ Closed the terminal cover

※ Tolerance : ±1 [±0.04]
※ Weight : 300g max
※ Mounting Plate : Iron (surface finishing:nickel plating) t=1.0 [0.04]
※ Case : PBT
※ Dimensions in mm, [ ]=inches
※ Terminal block screw tighting torque M4:1.6N・m (16.9kgf・cm) max

DIN rail installation Type

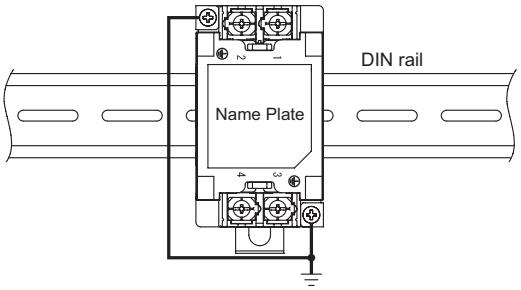


※ Closed the terminal cover

※ Tolerance : ±1 [±0.04]
※ Weight : 300g max
※ Mounting Plate : Iron (surface finishing:nickel plating) t=1.0 [0.04]
※ Case : PBT
※ Dimensions in mm, [ ]=inches
※ Terminal block screw tighting torque M4:1.6N・m (16.9kgf・cm) max

■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.
At least one PE connection is required.



COSEL Single phase input type (1-stage filter)

NAC/NAM/NAH/NAP series (40,50,60A)

Ordering information

NAC -50 -472 -□

① ② ③ ④



①Series Name
②Rated Current
③Line to ground capacitor code:Refer to table 1.1 and table 1.2.
④Option
F:High input voltage (500VAC/600VDC)

table1.1 Line to ground capacitor code (Standard)

Code	NAC	NAM	NAH	NAP	Leakage Current (Input 125/250V 60Hz)	Line to ground capacitor (nominal value)
000		●	●	●	5 μA/ 10 μA max	Not Provided
471		●	●	●	50 μA/ 100 μA max	470pF
222	●		●	●	0.25 mA/ 0.5 mA max	2,200pF
472	●		●	●	0.5 mA/ 1.0 mA max	4,700pF
223	●		●	●	1.25 mA/ 2.5 mA max	0.022μF
683	●		●	●	1.75 mA/ 3.5 mA max	0.068μF
224	●				6.0 mA/ 12.0 mA max	0.22μF
155	●				27.5 mA/ 55.0 mA max	1.5μF

table1.2 Line to ground capacitor code (Option: F)

Code	NAC	NAM	NAH	NAP	Leakage Current (Input 250/500V 60Hz)	Line to ground capacitor (nominal value)
103	●		●	●	0.5 mA/ 1.0 mA max	0.01μF
223	●		●	●	1.0 mA/ 2.0 mA max	0.022μF
683	●		●	●	2.5 mA/ 5.0 mA max	0.068μF

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

Features of NAC/NAM/NAH/NAP series

- Single Phase 277VAC/300VDC (1-stage filter)
  This product is available 277VAC equipment in factory switchboards and building equipment
- Withstand voltage 4,000 VAC (Line to ground capacitor code -000 to -472)

■ NAC : High-attenuation type from 150kHz to 1MHz
■ NAM : Low leakage current type
■ NAH : Ultra high-attenuation type from 9kHz to 1MHz
■ NAP : Outside impulse high-attenuation type

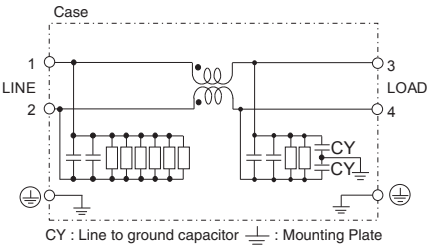
Specifications

No.	Items		NAC-40-472 / NAM-40-000 / NAH-40-472 / NAP-40-472	NAC-50-472 / NAM-50-000 / NAH-50-472 / NAP-50-472	NAC-60-472 / NAM-60-000 / NAH-60-472 / NAP-60-472
1	Rated Voltage	[VAC]	277 (voltage range : 305 max) 1φ 50/60Hz [Option : F 500 (voltage range : 528 max) 1φ 50/60Hz]		
		[VDC]	300 (voltage range:400 max) [Option : F 600]		
2	Rated Current[A]		40	50	60
3	Test Voltage (Terminal-Mounting Plate)		4,000 VAC (Cutoff Current = 25mA), 1minute at room temperature and humidity ∗1 ∗2		
4	Isolation Resistance (Terminal-Mounting Plate)		500 VDC 100MΩ min at room temperature and humidity ∗3		
5	Leakage current		Refer to table 1.1 and table 1.2		
6	DC resistance		10mΩ max	6.0mΩ max	4.5mΩ max
7	Safety agency approval temperatures		-25 to +85℃ (Refer to Derating Curve)		
8	Operating temperature		-40 to +85℃ (Refer to Derating Curve)		
9	Operating humidity		20 to 95%RH (Non condensing)		
10	Storage temperature/humidity		-40 to +85℃/20 to 95%RH (Non condensing)		
11	Vibration		10 to 55Hz, 19.6m/s² (2G), 3min. Period, 1hour each X, Y and Z axis		
12	Impact		196.1m/s² (20G), 11ms Once each X, Y and Z axis		
13	Safety agency approvals		UL60939 [Overvoltage Category : Ⅲ Altitude:3000m], CSA C22.2 No.8 (C-UL) EN60939 (DEMKO) [Overvoltage Category: Ⅲ Altitude:3000m] , ENEC		
14	Case size (without projection) /Weight		65×54×153mm [2.56×2.13×6.02 inches] (W×H×D) / 750g max		

∗1 "NA□-□□-□□□-F" : 2,500 VAC (Cutoff Current = 100mA) , 1 minute at room temperature and humidity.
∗2 Capacitor code "223","683","224" and "155" of "NA□-□□-□□□" : 2,800VDC (Cutoff Current = 10mA) , 1 minute at room temperature and humidity.
∗3 Capacitor code "224" and "155" : isolation resistance specification is deleted.

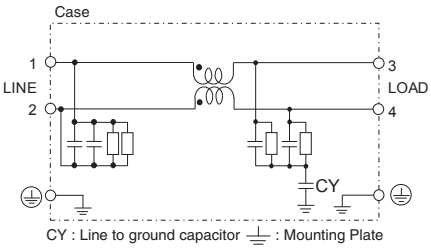
Circuit Diagram

(1) Line to ground capacitor code :000,471,222,472,223



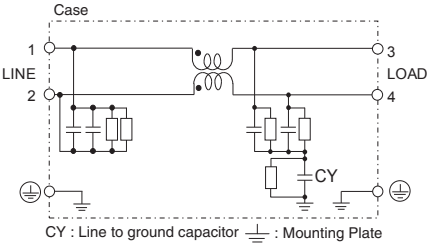
CY : Line to ground capacitor ⏚ : Mounting Plate

(2) Line to ground capacitor code :683



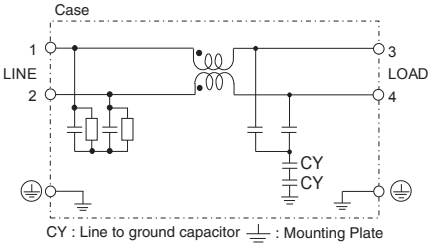
CY : Line to ground capacitor ⏚ : Mounting Plate

(3) Line to ground capacitor code :224,155



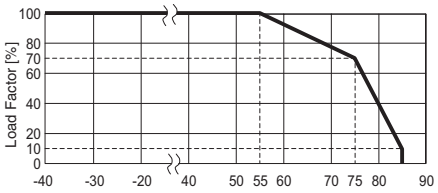
CY : Line to ground capacitor ⏚ : Mounting Plate

(4) Line to ground capacitor code :103,223,683
Option : F



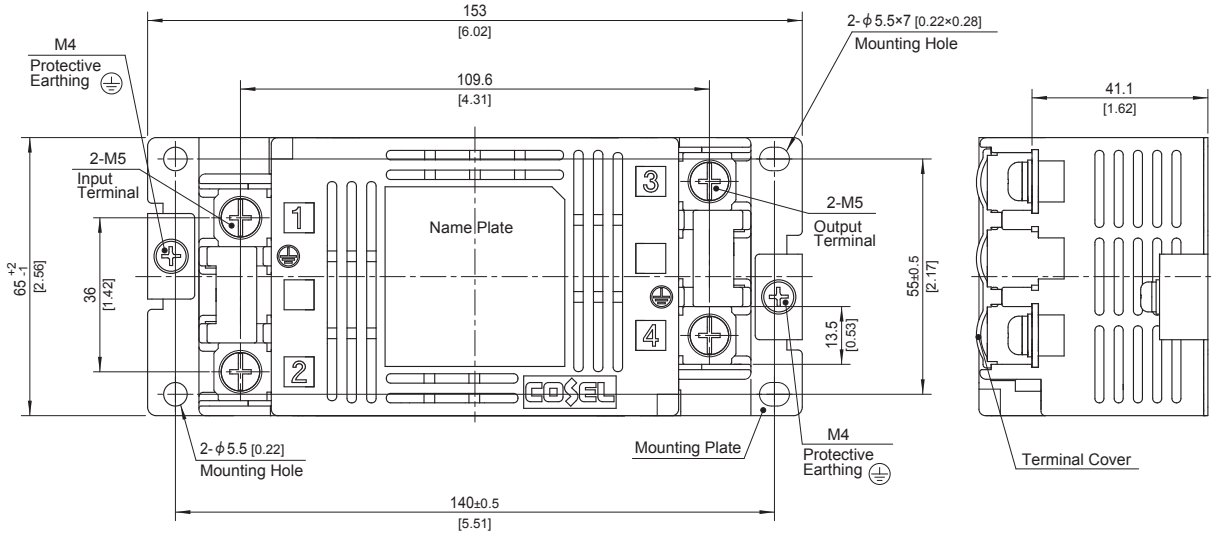
CY : Line to ground capacitor ⏚ : Mounting Plate

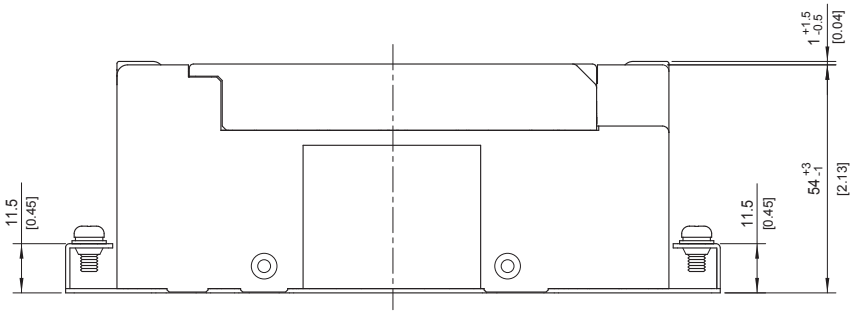
Derating Curve



＊Keep free ventilation holes for cooling.

External view





※ Dimensions in mm, [ ]=inches
※ Tolerance:±1 [±0.04]
※ Weight:750g max
※ Mounting Plate:Hot-dip Galvanized Steel board t =1.0 [0.04]
※ Case Material:PBT
※ Terminal block screw tightening torque M5:3.0N·m max
※ Protective Earthing (PE) screw tightening torque M4 :1.6N·m max
※ Can not be mounted upside-down. (mounted the top surface)
※ Keep free ventilation holes for cooling.
※ Can be mounted using the 2 corner mounting holes.