

[Home](#) > [Product Information](#) > [Noise Filters](#) > NBH Series

## ● PRODUCT INFORMATION ..... [Selection guide](#)



**Ultra high-attenuation type(2-Stage filter)(Single Phase)**

**Difference from old single phase 250V noise filters:**

- (1) Can select leakage current
  - (2) Withstand voltage 4,000VAC(Line to ground capacitor code -000 to -471)
  - (3) Push-down style terminal block prevents screw drop-out and cover loss
- Can be used for many purposes.

❖ [Product Lineup](#)

| NBH |

❖ CATALOG DATA DOWN LOAD

❖ [Technical Data](#)

❖ [Specifications, circuit diagram and derating curve](#)

❖ [Characteristic data](#) • [Instruction manual](#) • [About noise filters](#)

**NBH Series : Ultra high-attenuation type of common mode noise from 10KHz to 10MHz(2-Stage filter)(Single Phase)**

• **Features**

- Ultra high-attenuation type of common mode noise from 10kHz to 10MHz
- Single Phase 250 VAC
- Selectable leakage current
- Withstand voltage 4,000VAC(Line to ground capacitor code -000 to -471)
- Quick and easy push-down terminal
  - Just connect the wires, push down and tighten the screws with a screwdriver
- DIN rail installation type(Optional)

• **Safety agency approvals**

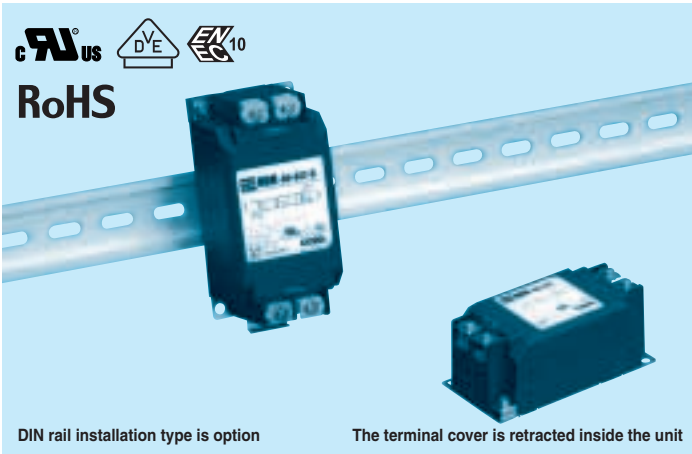
- UL1283
- CSA C22.2 No.8 (C-UL)
- DIN EN60939 VDE0565 Teil 3-1
- ENEC

• **Environment**

- RoHS directive

• **5-year warranty**

# NBH series



DIN rail installation type is option

The terminal cover is retracted inside the unit

## Ordering information

NBH -10 -432 -□

- 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<br>(Input 125/250V 60Hz) | Line to ground capacitor<br>(nominal value) |              | Test voltage<br>(Terminal- Mounting Plate) |
|------|------------------------------------------|---------------------------------------------|--------------|--------------------------------------------|
|      |                                          | CY1                                         | CY2          |                                            |
| 000  | 5 $\mu$ A/ 10 $\mu$ A max                | Not Provided                                | Not Provided | 4,000VAC                                   |
| 101  | 12.5 $\mu$ A/ 25 $\mu$ A max             | 100pF                                       | Not Provided |                                            |
| 221  | 25 $\mu$ A/ 50 $\mu$ A max               | 220pF                                       | Not Provided |                                            |
| 331  | 37.5 $\mu$ A/ 75 $\mu$ A max             | 330pF                                       | Not Provided |                                            |
| 471  | 50 $\mu$ A/100 $\mu$ A max               | 470pF                                       | Not Provided |                                            |
| 681  | 75.5 $\mu$ A/150 $\mu$ A max             | 680pF                                       | Not Provided | 2,500VAC                                   |
| 102  | 0.13mA/0.25mA max                        | 1000pF                                      | Not Provided |                                            |
| 202  | 0.25mA/0.5 mA max                        | 1000pF                                      | 1000pF       |                                            |
| 322  | 0.38mA/0.75mA max                        | 2200pF                                      | 1000pF       |                                            |
| 432  | 0.5 mA/1.0 mA max                        | 3300pF                                      | 1000pF       |                                            |

\* 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.

## Features of NBH series

### Ultra high-attenuation type of common mode noise from 10kHz to 10MHz (2-stage filter)

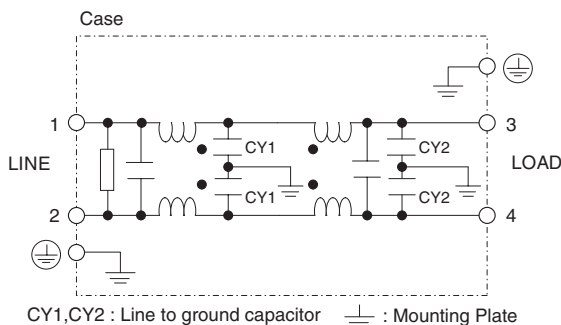
- Single Phase 250 VAC
- Withstand voltage 4,000 VAC  
(Line to ground capacitor code -000 to -471)
- Quick and easy push-down terminal  
Just connect the wires, push down and tighten the screws with a screwdriver

## Specifications

| No. | Items                                          | NBH-06-432                                                                          | NBH-10-432 | NBH-16-432                              | NBH-20-432 | NBH-30-432 |
|-----|------------------------------------------------|-------------------------------------------------------------------------------------|------------|-----------------------------------------|------------|------------|
| 1   | Rated Voltage[V]                               | AC 1 ϕ 250 / DC250                                                                  |            |                                         |            |            |
| 2   | Rated Current[A]                               | 6                                                                                   | 10         | 16                                      | 20         | 30         |
| 3   | Test Voltage (Terminal-Mounting Plate) *1      | 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 125/250V 60Hz                  | 0.5mA/1.0mA max                                                                     |            |                                         |            |            |
| 6   | Voltage drop                                   | 1.0V max                                                                            |            |                                         |            |            |
| 7   | Safety agency approval temperatures            | -25 to +85℃ (Refer to Derating Curve A)                                             |            | -25 to +85℃ (Refer to Derating Curve B) |            |            |
| 8   | Operating temperature                          | -40 to +85℃ (Refer to Derating Curve A)                                             |            | -40 to +85℃ (Refer to Derating Curve B) |            |            |
| 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) /Mass           | 53×43×104 mm (W×H×D) /320g max (Option : -D refer to external view)                 |            |                                         |            |            |

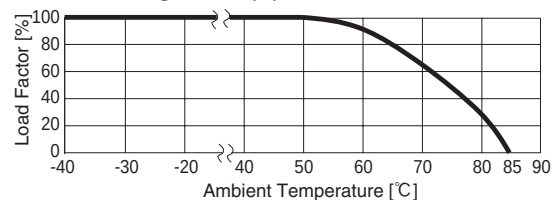
\*1 When the line to ground capacitor code is different, the test voltage characteristic is different. (See table 1.1)

## Circuit Diagram

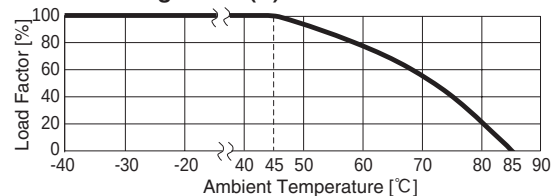


## Derating Curve

Derating Curve (A) 6,10A



Derating Curve (B) 16 to 30A

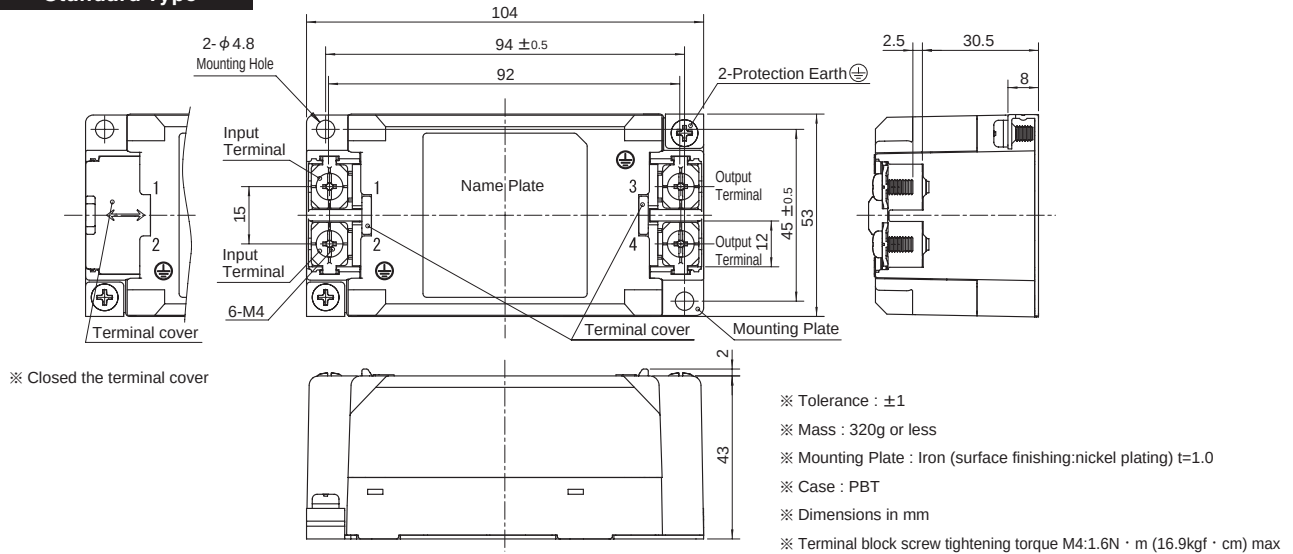


## External view

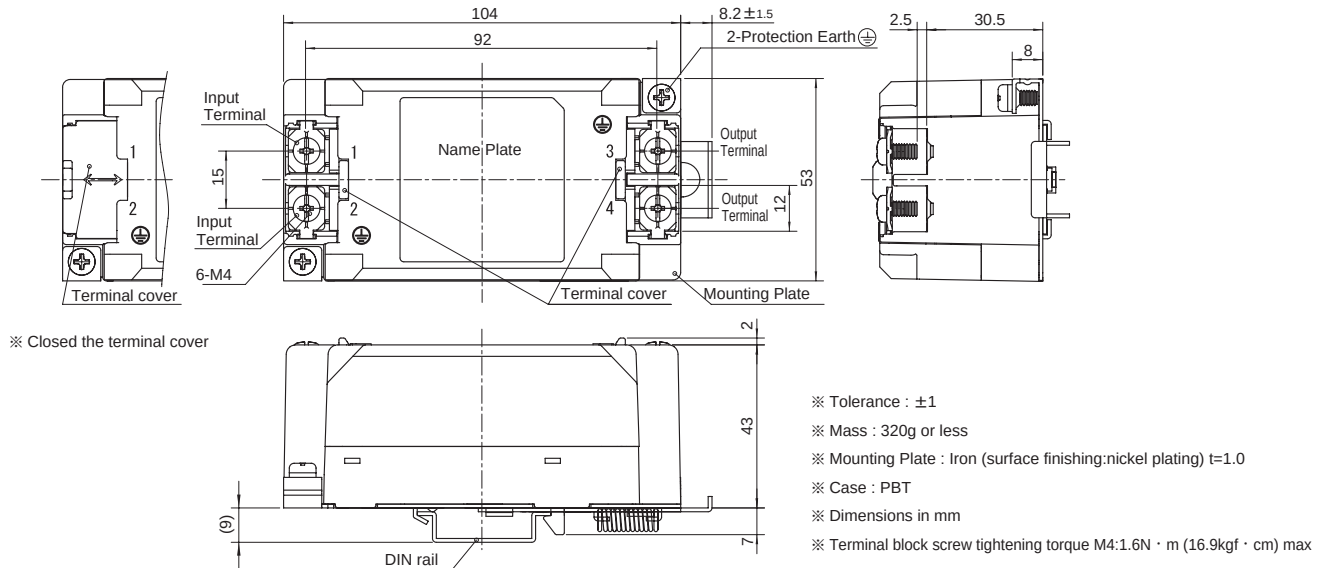
This product is shipped in the following condition, because it is equipped with push-down terminals.

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

## Standard Type



## DIN rail installation Type



### ■Note when installing the noise filter on a DIN rail.

When the noise 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 noise filter body to the earth.

