

## ● 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 |

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❖ [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

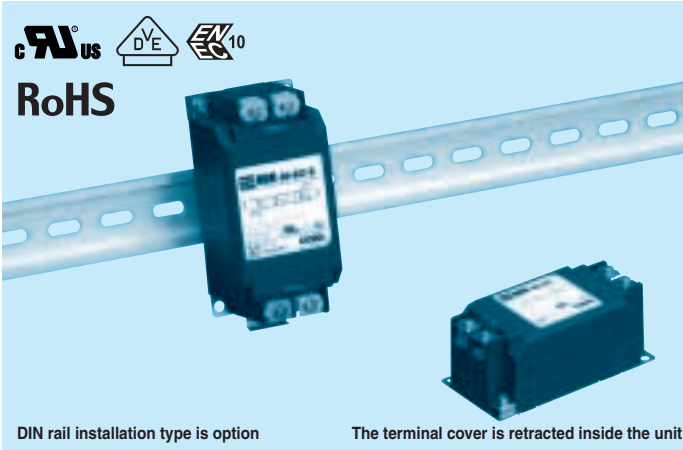
- UL1283
- CSA C22.2 No.8 (C-UL)
- DIN EN60939 VDE0565 Teil 3-1
- ENEC

#### • Environment

- RoHS directive

#### • 5-year warranty

# NBH series



NBH -10 -432 -□

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)		Test voltage (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)

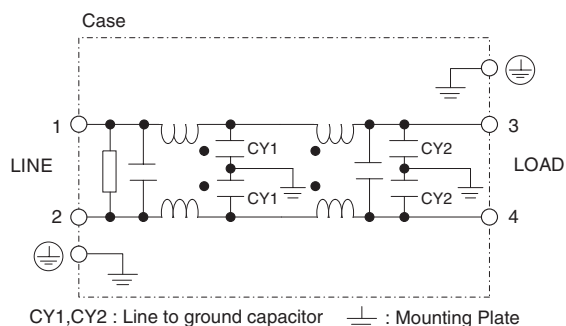
- Single Phase 250 VAC
- Withstand voltage 4,000 VAC (Line to ground capacitor code -000 to -471)
- Quick and easy push-down terminal
- Just connect the wires, push down and tighten the screws with a screwdriver

### Specifications

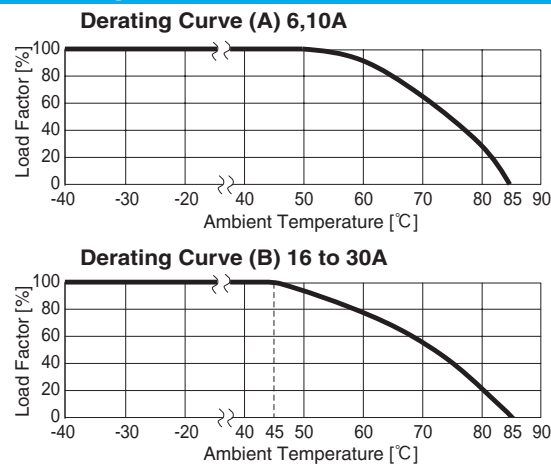
No.	Items	NBH-06-432	NBH-10-432	NBH-16-432	NBH-20-432	NBH-30-432
1	Rated Voltage[V]	AC 1 $\phi$ 250 / DC250				
2	Rated Current[A]	6	10	16	20	30
3	Test Voltage (Terminal-Mounting Plate) *1	2,500 VAC (Cutoff Current = 20mA), 1minute at room temperature and humidity				
4	Isolation Resistance (Terminal-Mounting Plate)	500 VDC 100M $\Omega$ 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 $^{\circ}$ C (Refer to Derating Curve A)		-25 to +85 $^{\circ}$ C (Refer to Derating Curve B)		
8	Operating temperature	-40 to +85 $^{\circ}$ C (Refer to Derating Curve A)		-40 to +85 $^{\circ}$ C (Refer to Derating Curve B)		
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) /Mass	53 x 43 x 104 mm (W x H x 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

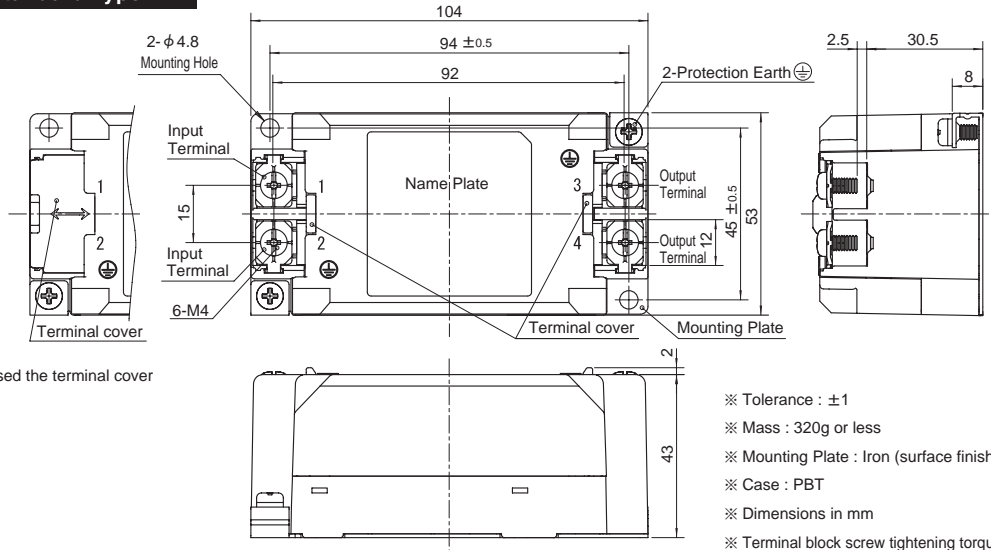


**External view**

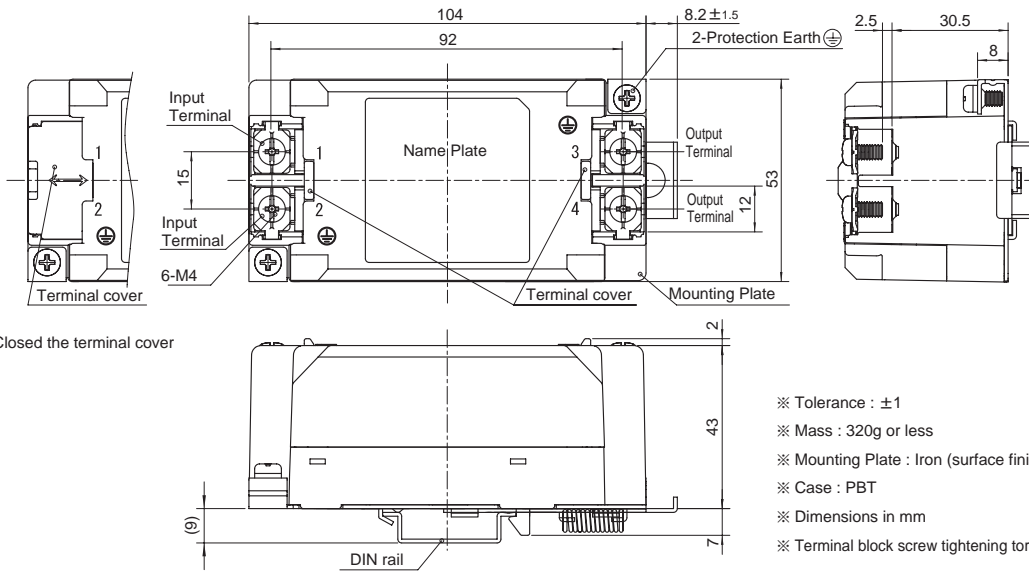
This product is shipped in the following condition, because it is equipped with push-down terminals.

- 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**

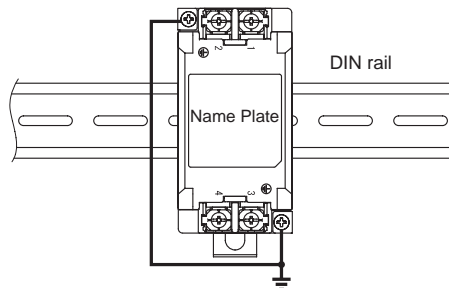


**DIN rail installation Type**



**■ Note when installing the 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.



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