

## CN232 and CN233 arresters (surge protective devices) for low voltage circuit

### ■ Description

Arresters (surge protective devices) protect devices connected to power supplies from lightning damage by absorbing inductive lightning surges from power supply.

### ■ Features

- Normal-mode surges and common-mode surges can be absorbed using only one arrester.
- Coordinated operation of 2 types of varistor enables extremely fast response to surges and a high level of surge absorption.
- Built-in thermal fuses prevent problems such as short-circuit due to deterioration of elements.
- Indicators for easy confirmation of device status (i.e., normal or malfunction)
- Integrated terminal construction reduces space and wiring requirements for easier handling of the arrester.
- Mount to rails, using screws, or to brackets for standardized distribution boards.
- Standard-feature terminal cover to protect against electrical shock

### ■ Specifications

Type	Rated voltage (V)	Reference voltage V <sub>1mA</sub>		Clamping voltage V <sub>1500A</sub>		Max. discharge current (kA)		Operating duty	
		Line	Ground	Line	Ground	Line	Ground	Testing voltage (V)	Discharge current (A)
<b>CN23211</b>	Single phase, 2-wire 110	240 to 310	420 to 520	700 max.	1100 max.	5 2 times	10 2 times	110	3000
<b>CN23212</b>	Single phase, 2-wire 220	420 to 520	610 to 750	1100 max.	1500 max.	5 2 times	10 2 times	220	8/20μs
<b>CN23232</b>	3-phase, 3-wire 220 Single phase, 3-wire 100/200	420 to 520	610 to 750	1100 max.	1500 max.	5 2 times	10 2 times	220	
<b>CN2324E</b> For common-mode surges	3-phase, 3-wire 440	–	1700 to 2000	–	3800 max.	–	10 2 times	440	
<b>CN2324L</b> For normal-mode surges	3-phase, 3-wire 440	800 to 1100	–	2000 max.	–	5 2 times	–	440	
<b>CN23311</b>	Single phase, 2-wire 110V	240 to 310	420 to 520	7000 max.	1000 max.	5 2 times	20 2 times	110	5000
<b>CN23312</b>	Single phase, 2-wire 220V	420 to 520	610 to 750	1100 max.	1500 max.	5 2 times	20 2 times	220	8/20μs
<b>CN23332</b>	3-phase, 3-wire 220V Single phase, 3-wire 100/200	420 to 520	610 to 750	1100 max.	1500 max.	5 2 times	20 2 times	220	
<b>CN2334E</b> For common-mode surges	3-phase, 3-wire 440V (Voltage to ground)	–	850 to 1100	–	2500 max.	–	20 2 times	440	

Note: \* Waveform 8/20μs

### ■ Type number nomenclature

CN23 2 32

#### Rated voltage

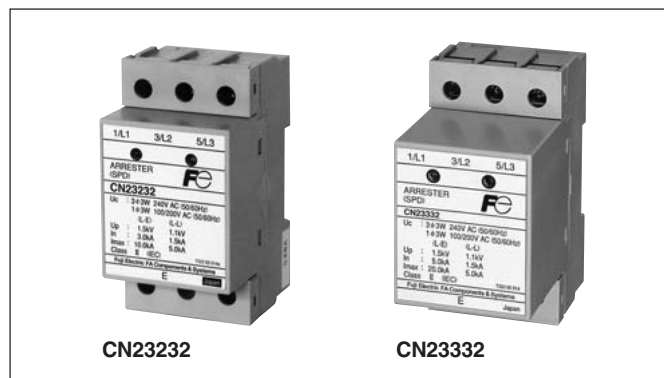
- 11: Single-phase 2-wire, 110V
- 12: Single-phase 2-wire, 220V
- 32: 3-phase 3-wire, 220V  
Single phase 3-wire, 100/200V
- 4E: 3-phase 3-wire, 440V (for common-mode surges)
- 4L: 3-phase 3-wire, 440V (for normal-mode surges)

#### Discharge current (ground)

- 2: 10kA    3: 20kA

#### Basic type

Fuji Electric FA Components & Systems Co., Ltd./D & C Catalog  
Information subject to change without notice



### ■ Applications

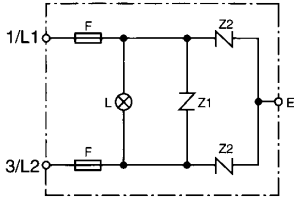
- Electronic devices, such as computers, measurement devices, and communications devices
- Inverters
- Electronic devices inside distribution boards (e.g., power distribution boards and lighting distribution boards)

# Arresters

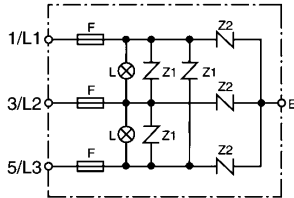
## CN232, CN233

### Internal circuit diagrams

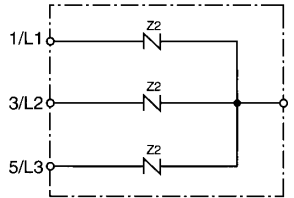
CN23211, CN23212  
CN23311, CN23312



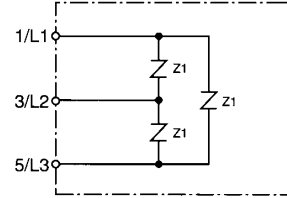
### CN23232 CN23332



### CN2324E CN2334E



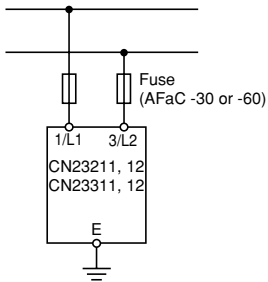
### CN2324L



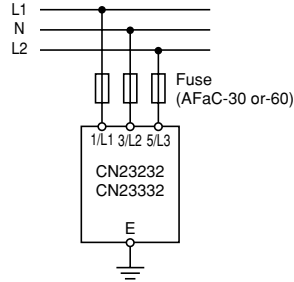
F: Thermal fuse  
L: Indicator  
Z1, Z2: Components for surge protective devices

### Application examples

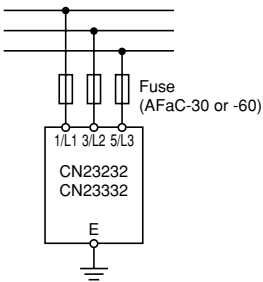
#### Single-phase 2-wire, 110V, 220V AC



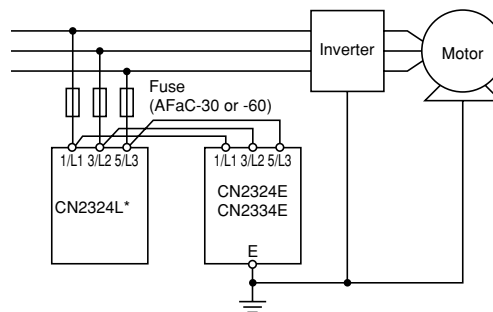
#### Single-phase 3-wire, 100/200V AC



#### 3-phase 3-wire, 220V AC



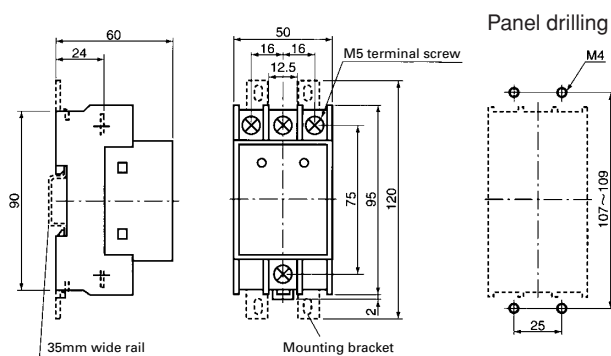
#### 3-phase 3-wire, 440V AC



\* Do not wire to the black-colored screw terminal.

### Dimensions, mm

#### CN232



#### CN233

