

## 1. Industry segments

### •Field of industry

Inductive devices

### •Product

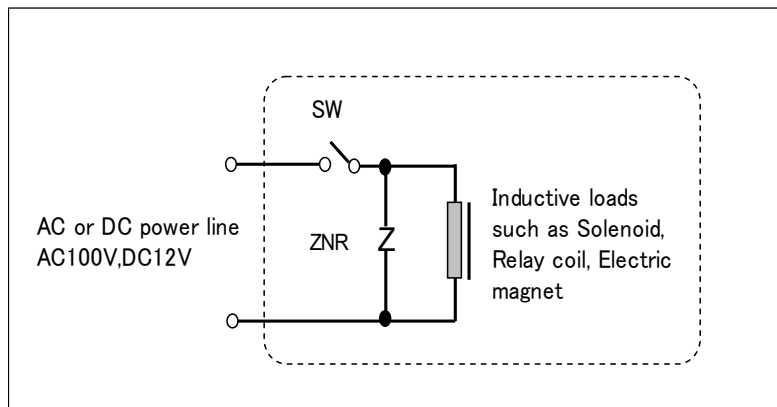
Relay coil, Electric magnet, Solenoid,  
 Motor, Transformer, Inductive actuator  
 Magnetic contactor, etc.

#### Recommended ZNR



D type

## 2. Transient surge voltage and its protection by using ZNR



### 1) Aim of ZNR application

Suppression of switching surge voltage from the inductor

### 2) Problems with surge voltage

- |                           |   |
|---------------------------|---|
| •Kind of surge voltage    | Switching surge voltage   |
| •Path for surge voltage   | Power line connected to Inductive loads                                 |
| •Failed parts or circuits | Malfunction of the electronic circuits connected to the same power line |

### 3) How to apply ZNR to the circuits

#### •Connection

Power line of inductive loads (line-line forming loop circuit)

#### •ZNR part number selection

For AC100V : ERZE□□A271, ERZV□□D271, For AC200V : ERZE□□A471, ERZV□□D471

For DC12V : ERZV□□D220

□□ is a nominal disc size code of ZNR and should be selected by an inductive load energy etc.

#### •Precaution in surge protection designing

Maximum power line voltage, current into inductive load, switching repetition and their interval should be taken into account.

## 3. Relevant technical information or references