

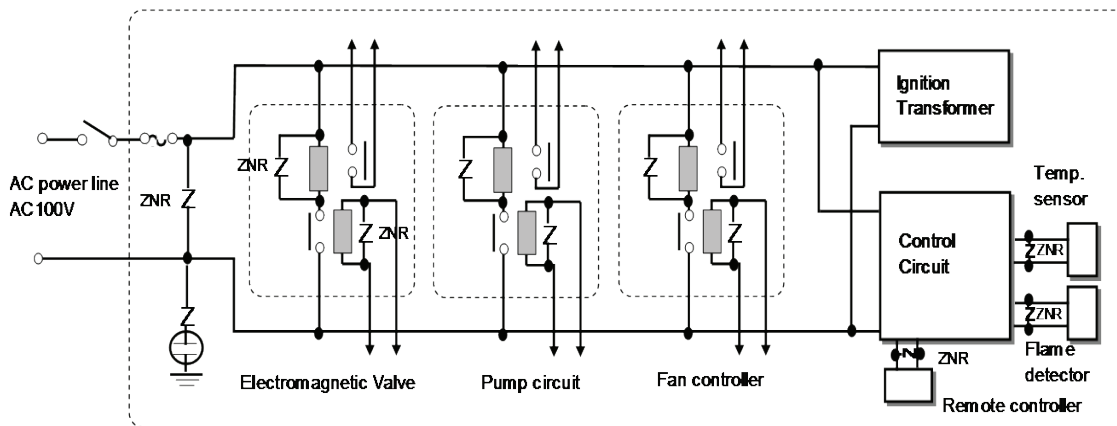
ZNR Application Note

Oil/Gas Burning Equipment for Water Heating

1. Industry Segments:

Field of Industry: Water Heating Equipment
 Product: Water heating equipment with gas or oil for home and industrial use

2. Transient Surge Voltage and its Protection by Using ZNR:



Aim of ZNR Application:

Protection of a control circuit against lightning surge voltage and switching transients

Problems with Surge Voltage:

- Kind of surge voltage: Induced lightning surge voltage and switching surge voltage
- Path of surge voltage: AC power line, a power line of inductive loads, sensor wiring
- Failed parts or circuits: Damage or malfunction of control circuit, and sensors/detectors

How to Apply ZNR to Circuit: (Blue Part Numbers Indicate NEW "E-Series")

Connection: AC power line(line-line and line-ground), the inductive load line(line-line), and sensor signal lines(line-line)

ZNR part number selection (representative):

For AC100V system : ERZE07A271 or ERZE08A271 (line-line), ERZV10D182 or ERZE07A431/ERZE08A431+GDT combi. (line-ground)

For sensor/detector line(line-line): ERZV05D220

Precaution in surge protection designing (Parameters to be considered for ZNR selection):

Chassis of water heating equipment should be connected to ground and ZNR is also connected line-to-chassis(ground) via GDT(gas discharge tube).

3. More Information:

Home page for up-to-date information: <http://na.industrial.panasonic.com/products/circuit-thermal-protection/circuit-protection/znr-transientsurge-absorbers>