

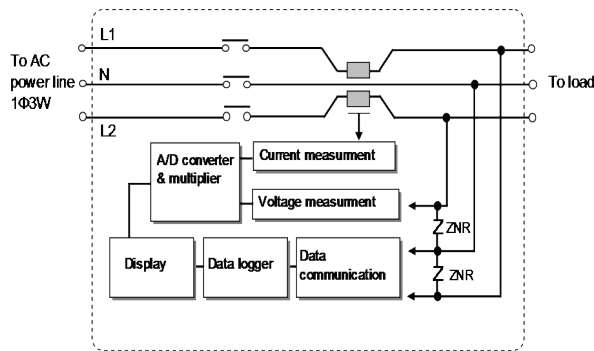
ZNR Application Note

Electronic WH Meter

1. Industry Segments:

Field of Industry: Energy Distribution Equipment
Product: Electronic WH meter, Smart Meter, Telemetry Meter

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



Aim of ZNR Application:

Protection of the measuring, data-logger, communicating circuits in the electronic WH meter against lightning surge.

Problems with Surge Voltage:

Kind of surge voltage: Induced lightning surge
Path of surge voltage: AC power line
Failed parts or circuits: Damage of measuring, data logger, data communication circuit

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

Connection: AC power line (line-line) in an electric WH meter, For wired communication line(line-line)

ZNR part number selection (representative):

For AC100V/200V systems: ERZE A, ERZE A

Nominal size of ZNR: 08(8), 10(10), 11(11) or 14(14)

For wired communication line: The same nominal disc size as the above with varistor voltage selected by the voltage crest of data pulse

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

ZNR should be connected across the AC power line at load side in the electronic WH meter.

Surge voltage test should be conducted, if there is any safety standards for WH meter.

3. Relevant Technical Information and References:

JISC1271-1 Alternating-current static meters for active energy- classes 1 and 2- Part 1: General measuring instrument

IEC62052-11 Electricity metering equipment(a.c) Test Conditions Part 11

4. More Information:

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