

ZNR Application Note

Electronic WH Meter

1. Industry segments

•Field of industry

Energy Distribution Equipment

•Product

Electronic WH meter

Smart meter

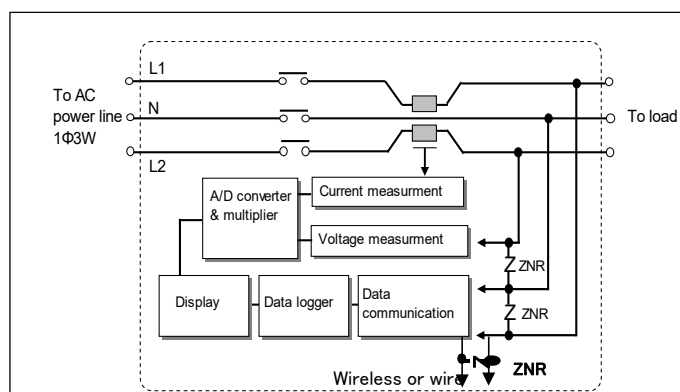
Telemetry meter

Recommended ZNR



D type

2. Transient surge voltage and its protection by using ZNR



1) Aim of ZNR application

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

2) Problems with surge voltage

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

3) How to apply ZNR to the circuits

•Connection

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

•ZNR part number selection

For AC100/200V systems : ERZE□□A431, ERZE□□A471, ERZV□□D431, ERZV□□D471

□□ : Nominal size cord of ZNR [ERZE : 08, 11, 14 ERZV : 10, 14, 20]

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

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 or references

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

IEC62052-11 IEC62052-11 『Electricity metering equipment(a.c) General Requirements, Tests and Test Conditions Part 11』