

1. Industry segments

Field of industry

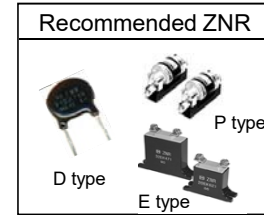
Traffic signal equipment

Product

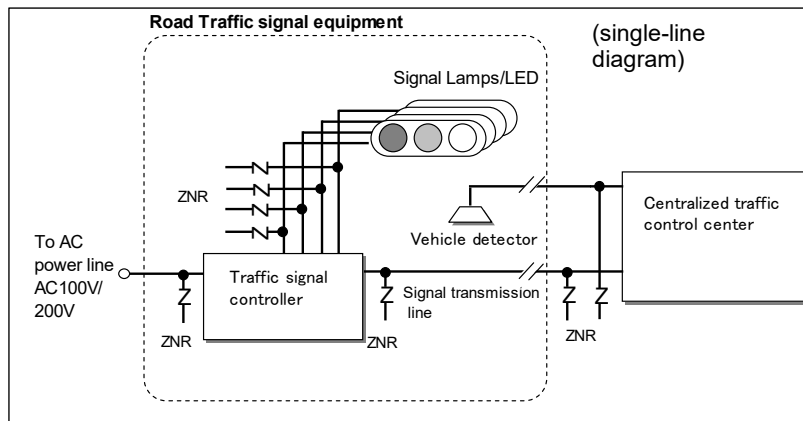
Road traffic signal equipment

Traffic signal controller

Vehicle detector, Signal communication line, LED lamp



2. Transient surge voltage and its protection by using ZNR



1) Aim of ZNR application

Protection of the traffic signal controller against lightning surge voltage

2) Problems with surge voltage

- Kind of surge voltage Induced lightning surge voltage
- Path for surge voltage AC power line, Signal line and structural metal member
- Failed parts or circuits Damage of Traffic signal controller, LED lamp, Vehicle detector etc.

3) How to apply ZNR to the circuits

Connection

AC power lines(line-line, line-ground), Signal lines(line-line)

ZNR part number selection

For 100V system : ERZE14A471, ERZV20D471, ERZC32EK471(line-line)

ERZE14A102, ERZV20D102, ERZC32EK102(line-ground)

For Signal lines: DC12V ERZV20D220

If signal voltage is other than DC12V, ZNR should be selected according to the max. signal line voltage.

Precaution in surge protection designing

ZNR should be connected at load side after over current protector.

Surge voltage test should be conducted, if there is any safety standards for traffic signal equipment.

Equal potential bonding is required for systematic surge protection.

3. Relevant technical information or references