

1. Industry segments

•Field of industry

Electric Battery Charger

•Product

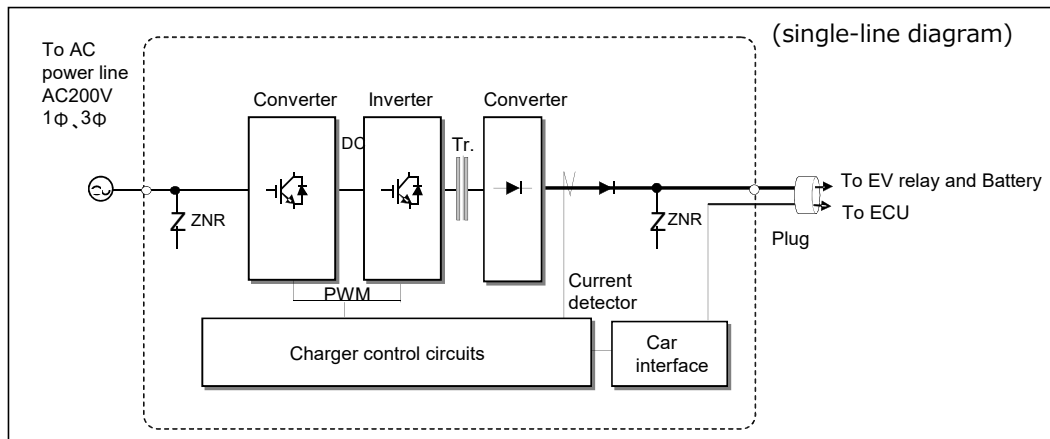
Electric battery Quick Charger for EV

Recommended ZNR



D type E type

2. Transient surge voltage and its protection by using ZNR



1) Aim of ZNR application

Protection of power semiconductors in converter/inverter and their controller

2) Problems with surge voltage

- Kind of surge voltage Lightning surge voltage
- Path for surge voltage AC power line
- Failed parts or circuits Converter and inverter circuits

3) How to apply ZNR to the circuits

- Connection AC power line(line-line, and line-ground)
- ZNR part number selection
For AC 200V system ERZE14A471, ERZV20D471(line-line)
and ERZE14A102, ERZV20D102(line-ground)
For heavy duty use, ERZC32EK471(line-line) and ERZC32EK102(line-ground)
- Precaution in surge protection designing
ZNR should be connected at load side after over current protector.

3. Relevant technical information or references

JIS D 0115 : 『Glossary of terms relating to electric vehicles (Chargers)』