Station Energy Saving Inverter

Features

◆ Directly supplies regenerative power generated when brakes are applied in railway cars to electrical equipment at station
◆ Size allows installation at edge of station platform or in electrical room
◆ Adoption of SiC (silicon carbide) power module achieves low power loss
◆ Ensures reliability and electric power quality in accordance with JEAC9710-2010 Grid Connection Regulations
◆ Provision of dust-proof/splash-proof (IP54) rust-resistant structure means that it is maintenance free over a long period of time
◆ Monitoring and Operation panel enables recording and displaying measured trend data such as operation condition, electricity energy, and etc.

Basic Concept or Summary

Flow of Regenerative Power

Regenerative Starting Voltage for Station Energy Saving Inverter

Station Energy Saving Inverter Converts into Low Voltage Here

Voltage Increased by Railway Car Regeneration

Voltage Decreased by Railway Car Acceleration

Train Line Waveform

Train Line Voltage

0.00 0.05 0.10 0.15
Time

1400V 1500V 1600V 1700V

Acceleration  Braking

Monitoring and Operation panel enables recording and displaying measured trend data such as operation condition, electricity energy, and etc.

Station Energy Saving Inverter

Source: JASE-W Japanese Smart Energy Products & Technologies
https://www.jase-w.eccj.or.jp/technologies/index.html
Effects or Remarks

- Energy savings of approximately 600kWh per day can be expected (equivalent to electricity consumption by 60 ordinary households).
- Measured data and accumulated data can be visualized with mobile PC, and with the information the actual energy saving effect can be measured.

Installation in Practice or Schedule

**Domestic**
- Launched in fiscal 2013
- 9 units delivered in fiscal 2013/2014
- Expect to delivery 10 units in fiscal 2015

**Overseas**
- Implementing sales promotion activities