ABSTRACT

STATION-BUILDING POWER SUPPLY DEVICE AND METHOD OF CONTROLLING THE SAME

A station-building power supply device, as well as a method of controlling thereof, is provided. The device can be easily installed, operated, and configured according to an amount of power required for each station building, which can realize both effective utilization of surplus regenerative power and supply of emergency power to a station building. A station-building power supply device 1 is provided in each station building 2 and supplies low-voltage AC power to station building facilities 3 of each station building 2. There are two mode therein: a regenerative mode in which, when regenerative power regenerated by a train 7 to an overhead wire 8 becomes surplus, the surplus regenerative power supplied from the overhead wire 8 and power supplied from a high-voltage distribution line 5 are used together to supply low-voltage AC power corresponding to an amount of normal power consumption of the station building 2; and a standby power supply mode in which, when a power outage of the high-voltage distribution line 5 occurs, power supplied from the overhead wire 8 is used to supply low-voltage AC power corresponding to an amount of emergency power of the station building 2.

Figure. 2