

A Study on the Remote Monitoring of Distribution Line for Micro Grid

Sooyoung Jung*, Jun-Ho Huh**, Seung-il Moon***

* Department of Electrical and Computer Engineering, Seoul National University, Seoul,
Republic of Korea

* CEO of Hanmi E&C Inc

[Author: sjung7@snu.ac.kr](mailto:sjung7@snu.ac.kr)

**Department of Software, Assistant Professor of Catholic University of Pusan, Republic of
Korea

[**Corresponding author: 72networks@cup.ac.kr](mailto:72networks@cup.ac.kr)

***Department of Electrical and Computer Engineering, Professor of Seoul National
University, Seoul, Republic of Korea

Abstract. The existing power system is a one-way structure that delivers power produced from the power plant to the consumer directly. However, among existing consumers, a prosumer, who produces power directly and provides power, has appeared. In the existing power system, they used to be self-sufficiency, but do not involve in the overall power grid system. Any residual power after production was disposed, and efficiency was low. Accordingly, a concept of micro grid appeared. Micro grid is a technology to maximize overall network energy using the power energy produced by them. It means the electricity is not only produced in the power plant, but multiple prosumers are responsible for power production of power grid on the basis of two-way transmission. As the power is distributed, stable power supply is made possible and efficient use of recyclable energy seems to be possible. This study is on the remote monitoring for distribution line among distribution technologies. Specifically, it is on the remote monitoring of distribution line for micro grid in order to achieve energy saving and improve the quality of life by real-time monitoring of indoor environment of buildings by utilizing multiple sensors installed on the distribution line after passing the pole transformer.

Keywords: Monitoring, Remote Monitoring, Distribution Line, Micro Grid.