Temperature History Estimation Method for Individual Junction Box Based on Meteorological Data

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Abstract

Most of the electronic components installed in the outdoors such as communication facilities are affected by the temperature level or the temperature cycle history. Therefore, the temperature history data in the junction box is required to predict the lifetime of each electronic component. It is difficult to measure the long-term temperature in an actual product, although, in the laboratory, the cost and time are deliberately controlled or measured to obtain the temperature history necessary for the damage model. In this study, we propose a method of estimating the long - term temperature history including the past and the future through correlation with the meteorological data and short-term data measured in the junction box.

Keywords: Meteorological data, Junction box, Temperature, Lifetime