

Development of Surge Detection Type Fault Locating System for AC Feeding Circuits

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A precise fault locator helps immediate resumption of normal train operation services when an electrical trouble occurs on contact wire system. However, sometimes it takes a considerable time to detect the substantial fault point at the site, because conventional fault locators sometimes give a location error of one kilometer or more. We have developed a new type of fault locator using the arrival time difference of a surge voltage at each end of the feeder section. This paper describes the development process of the new system from the basic principle to the location result of an actual ground fault observed during the long-term field test.