

Pravit Boonek 2011: Multiplex Time Domain Reflectometer Device. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Associate Professor Nuttaka Homsup, Ph.D. 55 pages.

This research aims to study of Multiplex Time Domain Reflectometer (MTDR), which locates cracks in the transmission line by using the concept of a Time Domain Reflectometry (TDR). By the concept, a test signal is sent into the cable under test. When it reaches fault, the signal will reflect to the transmitter. The delay of the reflected signal is then used to calculate the position of fault. The MTDR invokes a Multiplexing technique which is capable to detect faults as many as 4 pairs in one test. Additionally, the invented equipment can automatically adjust the range of measurement. This eases operating the system and also increases the accuracy, especially the cable in the network, for instance, Unshielded Twisted Pair (UTP) and Shielded Twisted Pair (STP), which is essential to the cable maintenance.

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