

Development of a Lightning Surge Calculation Model on Railway Level Crossing

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The development of the effective and economical lightning protection measures is very important for the railway signalling systems because the lightning damages cause the disruption of the railway transportation systems. This paper proposes a calculation model of the lightning overvoltages on the railway level crossing controller. The calculation model consists of the surge propagation model along the rails and the equivalent circuit model of equipment. The authors indicated the validity of the calculation model by comparing with the results of the field test. This model is applicable to the quantitative estimation of lightning protection measures for the railway signalling equipment.