## **ABSTRACT**

Currently humans have a dependency on electrical energy. Electricity has become one of the basic human needs in everyday life. Almost all sectors of household, government, public facilities, industry, to social facilities require electrical energy. The reliability of the distribution network in the distribution of electrical energy must be properly considered because of the high probability of voltage drop and power losses in the cable. This study is used to find out the magnitude of voltage drops on the cable used in the building admissions Muhammadiyah University of Yogyakarta and the standard has been determined. Cables used include NYY 4 x 6 mm², NYY 4 x 10 mm², NYY 2 x 6 mm², and NYY 4 x 50 mm² based on PUIL 2000. Drop voltages obtained results ranging from 0.005-0.188%, making it safe according to the standard PUIL 2000 and SPLN 72 1987 for no more than 5 %.

Keyword: Voltage Drop, Drop Voltage