ABSTRAK

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Program Studi : Teknik Elektro

Judul : Perancangan system distribusi daya listrik untuk Data Centre

Perancangan distribusi daya listrik (900 kw) untuk Data Centre membutuhkan perancangan yang sangat baik. Tingginya kebutuhan akan data service online dalam bidang teknologi informasi, pemenuhan kebutuhan ekonomi masyarakat dan akibat dampak pandemi covid-19 membuat beberapa system usaha perusahaan besar mengarah kepada investasi khususnya pada bidang pembangunan sebuah pusat layanan data (data centre). Beberapa perusahaan besar seperti Amazon, Alibaba, Microsoft dan perusahaan lainnya mulai mengembangkan bisnisnya di Indonesia. Teknik Tenaga listrik memiliki peranan penting dalam perancangan tersebut. Disamping sebagai sumber power utama pengoperasian, sistem distribusi power listriknya juga harus diatur, direncanakan, dikontrol dan disesuaikan dengan standar pelayanan data centre seperti TIA-942 dan Uptime Institute. Dua standar tersebut menjadi syarat dasar dalam perancangannya. Perancangan ini diaplikasikan untuk memenuhi keinginan investor dan menyesuaikan dengan TIA-942 ataupun dari Uptime Institute. Untuk perusahaan yang berskala besar minimal klasifikasi tier yang dipilih pada Tier-III. Sebagai bahan simulasi digunakanlah etap sebagai tolak ukur keberhasilan desain dalam perancangannya.

Kata kunci :
Perancangan distribusi daya, pusat layanan data, data centre, TIA-942, uptime institute, Tier

ABSTRACT

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Study Program : Electrical Engineering

Title : Design of electrical power distribution systems for The Data Center

The design of the electric power distribution (900 kw) for the Data Center requires a very good design. The high need for online data services in the field of information technology, meeting the economic needs of the community and the impact of the Covid-19 pandemic has made several business systems that lead to investment, especially in the field of building a data service center (data center). Several large companies such as Amazon, Alibaba, Microsoft, and other companies have started to develop their businesses in Indonesia. Electric power engineering has an important role in this design. Apart from being the main source of warfare, the electric power distribution system must also be regulated, planned, controlled and adapted to data center service standards such as the TIA-942 and the Uptime Institute. The two standards are the basic requirements in its design. This design was applied to meet investor desires and adapt to TIA-942 as well as adjust to the Uptime Institute. For large-scale companies the minimum classification is selected at Tier-III. As a simulation material, etap is used as a benchmark for design design in its design.

Keywords:
Power distribution design, data service center, data center, TIA-942, uptime institute, Tier