

---

# Identification Damage of PMT 500KV BAY 7A1 Using the Breaker Analyzer and Contact Resistance Methods at the Substation

## *Identifikasi Kerusakan PMT 500KV BAY 7A1 Menggunakan Metode Breaker Analyzer dan Tahanan Kontak di Gardu Induk*

Helmi Dwi Prasetya  
Ulinnuha Latifa  
Rahmat Hidayat

University of Singaperbangsa Karawang  
University of Singaperbangsa Karawang  
University of Singaperbangsa Karawang

One of the state-owned companies in the electricity sectors, located in South Bandung with the main function of managing distribution installation assets (Transmission and Substation) and maintenance of distribution installation assets to maintain the continuity of efficient and reliable distribution of high voltage electrical energy. In substations, PMT is the most important component, coordination between PMT divisions must be paid more attention. One of the disturbances in PMT is the high value of contact resistance and it is not synchronous during the Open-Close process. The research was aimed to identify how much the value of contact resistance at each PMT, and how much loss of conductivity of PMT and also carried out simultaneous testing to observe the level of synchronization between phases. After various tests were carried out, by looking at the results of these tests, it could be concluded that the PMT 7A1 had no damage, and could still operate normally. Then, the purpose of maintaining high voltage electrical equipment is to ensure the continuity of electricity distribution and ensure reliability, and to extend the life of the equipment by reducing equipment damage.

---

### References

1. IEEE C37.10-1995. 1995. Guide for diagnostics and failure investigation of power circuit breaker.
2. Kadir, Abdul. 1998. Transmisi Tenaga Listrik. Jakarta: Universitas Indonesia.
3. IEEE C37-100-1992. 1992. IEEE Standart Definitions for Power Switchgear.
4. IEV rev 441-14-20, 2000. International Electrotechnical Vocabulary.
5. Surat Keputusan Direksi. 2014. Buku Pedoman GIS. Jakarta: PT. PLN (Persero).
6. Surat Keputusan Direksi. 2014. Buku Pedoman Pemeliharaan Pemutus Tenaga (PMT). Jakarta: PT. PLN (Persero).
7. Surat Keputusan Direksi. 2014. Buku Pedoman Operasi dan Pemeliharaan (O&M). Jakarta: PT. PLN (Persero).
8. Winantara, Bagus. 2017. Evaluasi Tahanan Kontak Pemutus Tenaga Tegangan Tinggi Di Gardu Induk
9. KV Bandung Selatan Berdasarkan Failure Mode Effect Analysis (FMEA). Jakarta: Universitas Mercu Buana.
10. Syahputra, Ramadoni. 2017. Transmisi Dan Distribusi Tenaga Listrik. LP3M UMY Yogyakarta. [http://repository.umy.ac.id/bitstream/handle/123456789/13686/RAMADONI\\_tran smisi&distibusi.pdf?sequence=1](http://repository.umy.ac.id/bitstream/handle/123456789/13686/RAMADONI_tran%20smisi&distibusi.pdf?sequence=1)
11. F.J Tasiam, "Proteksi Sistem Tenaga Listrik", Univesitas Negeri Manado, 2017. [Online], <http://repository.unima.ac.id/bitstream/123456789/238/1/PROTEKSI%20SISTEM%20TENAGA%20%20%20%20LISTRİK-COMBINE.pdf>.