

IOT Based Three phase Balancing Smart Distribution Line

Prof. Kute U. V¹, Dome Jayesh², Shete Sai³, Rodge Rohit⁴, Suryawanshi Kunal⁵

¹ Assistant Professor, Department of Electronic and Telecommunications Engineering

^{2,3,4,5} Students, Department of Electronic and Telecommunications Engineering

Amrutvahini Sheti & Shishkan Vikas Sanstha's Amrutvahini Polytechnic, Sangamner.

²jayeshdome@gmail.com, ³officialsaishete@gmail.com, ⁴rodage.rohit15@gmail.com,

⁵suryawanshikunal405@gmail.com

Abstract: *In three phase distribution system the unbalance phenomenon occurs due to single-phase loads and unequal sharing of loads in each phase. To overcome this problem, distribution systems require equal sharing of load in each phase. This is possible by automatic three phase load balancing technique. The automatic three phase load balancing system is possible by the proposed hardware which is microcontroller and relay based hardware. This hardware is installed in the incoming of three phase lines and will accordingly switch the domestic load to the least loaded phase using fast switching relays. The single full house load is connected to the phase that is least loaded by relay switching ON/OFF. The result of the proposed hardware and simulation shows that microcontroller and relays switching is effective in reducing the unbalancing in three phase lines and also reducing the current in the neutral wire of the system. In addition, it retains voltage regulation and stability in the all three phase and display in IOT web sever.*

Keywords: IOT, Three Phase, Load balancing, Smart distribution Voltage, Microcontroller, Energy efficiency, Monitoring

