Arduino Base Multimeter

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Abstract: *The main objective of this project is to build an Arduino nano based All in one multimeter, a device that can be used to measure the voltage, current and the power consumed by a load. There are number of ways that you can implement the Arduino nano based all in one multimeter Project. One of the easy ways is to interface a Voltage Sensor and a Current Sensor with Arduino, measure the voltage and current values and finally with some mathematics, you can calculate the Power in Watts. The Sensor Part of the circuit is responsible for measuring the Voltage across the load and Current through the load. Both these values, which are analog in nature, are given to the Arduino to its ADC. Arduino converts these values to digital values and makes a few calculations as displays the results on the LCD.*

Keywords: Micro controller, Sensor unit, Aurdino Board, Wattmeter, Measuring Instruments

REFERENCES

[1]. Brunner, H., Hierholzer, M., Laska, T., &Porst, A. "Progress in development of the 3.5 Kvhigh voltage IGBT/diode chipset and 1200 A module applications." Proceedings of 9th International Symposium on Power Semiconductor Devices and IC's. IEEE, (1997).

[2]. Pili, U., Violanda, R., &Pili, J. "Using a digital voltmeter and a smartphone camera to investigate the RC circuit." Physics Education 54.3 (2019): 033004.

[3]. Alam, A., Chowdhury, M. A. M., &Akter, F. "Design and Development of Arduino Based Radiation Survey Meter with Two Scintillation Detectors." (2019).

[4]. Pan T., Zhu Y., "Designing Embedded System with Arduino", Springer, New York, P- 17, 45, (2017).

[5]. DhudduHaripriya, Venkatakiran S, Gokulachandar A, "UWB-Mimo antenna of high isolation two elements withwlan single band-notched behavior using roger material",Vol 62, Part 4, 2022, Pg 1717-1721, https://doi.org/10.1016/j.matpr.2021.12.203.

[6]. Gokula Chandar A, Vijayabhasker R., and Palaniswami S, "MAMRN – MIMO antenna magnetic field", Journal of Electrical Engineering, vol.19, 2019.

[7]. Rukkumani V , Moorthy V, Karthik M , Gokulachandar A, Saravanakumar M, Ananthi P, "Depiction of Structural Properties of Chromium Doped SnO2 Nano Particles for sram Cell Applications", Journal of Materials Today: Proceedings, vol.45, pp.3483-3487, 2021. https://doi.org/10.1016/j.matpr.2020.12.944.

[8]. Gray, G. W., & Stephen M. K. "Liquid crystals for twisted nematic display devices." Journal of Materials Chemistry 9.9 (1999).

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