Design and Development of IoT Based Low Cost Syringe Pump

Dhuppe Pallavi¹, Tegampalle Anjana², Waghmare Shabhangi³, Saurabh Kharjule⁴, Ganesh Chaure⁵

Students, Department of Medical Electronics, Government Polytechnic, Nanded, Maharashtra, India¹,²,³
Lecturer, Department of Instrumentation Engineering, Government Polytechnic Jintur, Parbhani, Maharashtra, India⁴
Lecturer, Department of Electrical Engineering, Government Polytechnic Jintur, Parbhani, Maharashtra, India⁵

Abstract: Dispensing various drugs in small volume at different flow rate with high accuracy and precision is required to the critical patients for a long period of time. Continuous monitoring for such a long period is very hectic job for a staff working in Medical Industry. In current scenario various syringe pumps are available in medical industries with high cost and with complex operating mechanism. To overcome aforesaid constraints and to avail it in medical industries as per increased demand in COVID-19 situations a low cost syringe pump is designed. It consist of NEMA 17 stepper motor and Arduino Uno that operates at different flow rates and display the flow rate and volume of drug to be delivered on LCD panel as well as on the website using internet of thing (IoT) platform.

Keywords: Syringe pump, lead screw, NEMA17 stepper motor, Arduino Uno, LCD display, internet of thing (IoT)

REFERENCES
[7]. Rajasekwaran, S., et al. "IOT BASED LOW COST SYRINGE PUMP FOR TELEMEDICINE AND HEALTH CARE."