Assignment 2

Dew point Generator / Scientific Data Logger

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Intro

This report documents the design process for a RP2040 based embedded system that has the dual purpose of being a scientific datalogger, and a smart interface with an analogue dew point generator.

(explanation on the context)

Digital to analogue conversion and PWM Background (only a couple of sentences) Big Q did stuff on this

(explanation of the dew point generator and how it functions and why it is important for ensuring there isnt any condensation or something like that)

Feature Demonstration

alsdkjfhasdlkdfjh

Components

Feel free to move and change the name of this subsection later

As seen in fig. 1 there were lots of blocks

Sensors

SDI-12

Load Cell (MT603) analogue signal, therefore requires ADC?

Sap Flow Sensor (SF5) uses SDI-12

Leaf thermistor uses SDI-12

Things to Consider: - crystal like in assignment 1? - ADC for load cell? - Interface for DAC?

Discussion

We discuss.

Conclusion

We conclude.

Appendix

References

SDI-12 Support Group, *SDI-12: A Serial-Digital Interface Standard for Microprocessor-Based Sensors*, SDI-12 Support Group, River Heights, Utah, Jan. 2019, version 1.4. [Online]. Available: http://www.sdi-12.org

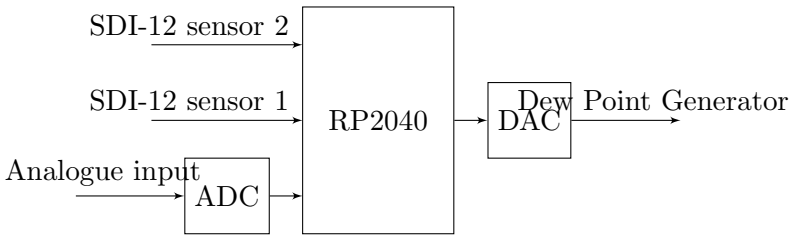

Fig. 1. Block diagram of the system

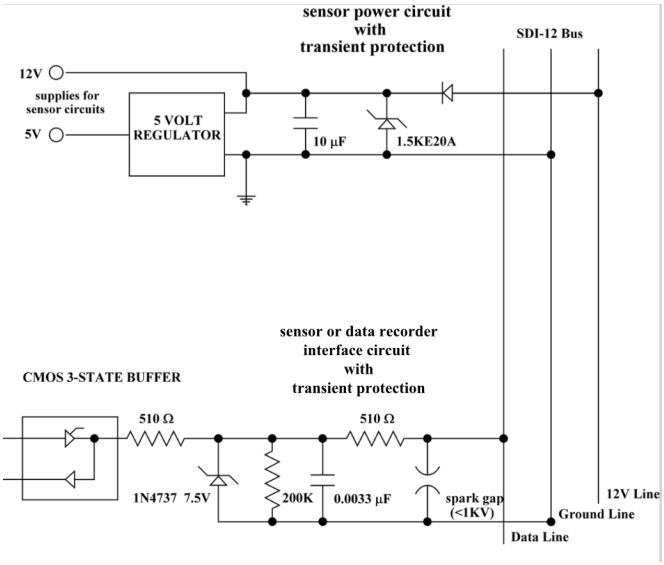

Fig. 2. SDI-12 Circuit Diagram from SDI-12 Support Group (2019)