Detection of Groundwater Level with Hydraulic Pressure Sensor

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Abstract:

Worldwide, about one out of two people depend on groundwater resources to satisfy their drinking water needs. While groundwater typically is of higher quality than surface water, pollution and geologic conditions may require treating groundwater to meet safe water quality criteria. Groundwater is present under the earth in soil spores or the fractures of rocks. The device which we are building will help us to know about the level of groundwater through various software and by adding different processes. Many devices have been made but this one will be a good and efficient device for everyone. Those who are facing problems with such resources can know information about their groundwater level and act accordingly. As the process is based on steps. We'll explain it in terms you can readily grasp. We utilized a hydraulic pressure sensor (a water-detection sensor) in the first phase, which will link to an electronic device called an Arduino kit (or another device such as a Nano device), a 16-bit 12C ADC, and a Max 485 module. An extra HC 12 module will be connected to a laptop. Power will be provided directly or through batteries. The reading from the sensor is saved on a hard disc or USB flash. On our laptop, we will get reading continuously. Our sensor will function and provide a reading in this manner. The value you see on the software will increase depending on the length of the wire you dip the sensor in. The wire's length is completely adjustable.

Keywords: Groundwater level, Groundwater monitoring, Pressure sensor