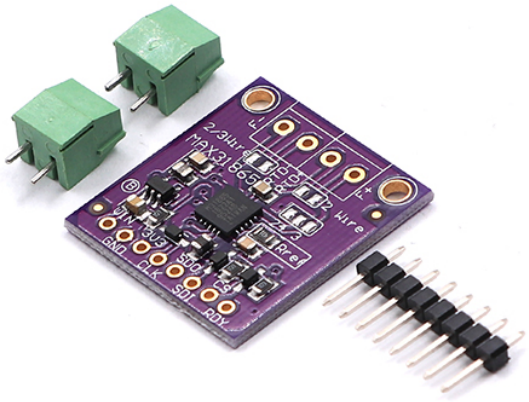
PT100 PT1000 RTD Digital Converter Temperature Sensor Amplifier Module

Model: MAX31865



Description:

For precision temperature sensing, nothing beats a Platinum RTD. Resistance temperature detectors (RTDs) are temperature sensors that contain a resistor that changes resistance value as its temperature changes, basically a kind of thermistor. In this sensor, the resistor is actually a small strip of Platinum with a resistance of 100 ohms at 0°C, thus the name PT100. Compared to most NTC/PTC thermistors, the PT type of RTD is much most stable and precise. PT100's have been used for many years to measure temperature in laboratory and industrial processes, and have developed a reputation for accuracy (better than thermocouples), repeatability, and stability.

However, to get that precision and accuracy out of your PT100 RTD you must use an amplifier that is designed to read the low resistance. Better yet, have an amplifier that can automatically adjust and compensate for the resistance of the connecting wires.

The MAX31865 handles all of your RTD needs, and can even compensate 3 or 4 wire RTDs for better accuracy. Connect to it with any microcontroller over SPI and read out the resistance ratio from the internal ADC. We put a 430Ω 0.1% resistor as a reference resistor on the breakout. We have some example code that will calculate the temperature based on the resistance for you.

We even made the breakout 5V compliant, with a 3.3V regulator and level shifting, so you can use it with any Arduino or microcontroller.

Please note: this does not include a PT100 sensor!

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