

DS18B20

Digital Thermometer



What is it?

The DS18B20 digital thermometer provides 9-bit to 12-bit Celsius temperature measurements and has an alarm function with nonvolatile user-programmable upper and lower trigger points.



What it does?

The DS18B20 communicates over a 1-Wire bus that by definition requires only one data line (and ground) for communication with a central microprocessor.

It has an operating temperature range of -55°C to $+125^{\circ}\text{C}$ (-67°F to $+257^{\circ}\text{F}$) and is accurate to $\pm 0.5^{\circ}\text{C}$ over the range of -10°C to $+85^{\circ}\text{C}$ (14°F to 185°F).

In addition, the DS18B20 can derive power directly from the data line ("parasite power"), eliminating the need for an external power supply.

Applications that can benefit from this feature include HVAC (heating, ventilation, and air conditioning) environmental controls, temperature monitoring systems inside buildings, equipment, or machinery, and process monitoring and control system.

Specifications

Power supply range	3.0... 5.5V
Measures tmperatures	from -55°C to +125°C (-67°F to +257°F) ± 0.5°C accuracy from -10°C to +85°C (14°F to 185°F)
Cable length	3m (9.84ft)



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