

VINSON DS18B20

DIGITAL THERMOMETER

USER GUIDE v1.0

Contents of Pack

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1. GENERAL OPERATIONAL DESCRIPTION

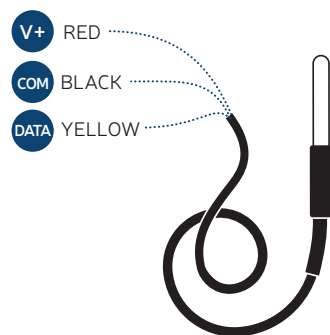
The DS18B20 digital thermometer provides 9-bit to 12-bit Celsius temperature measurements and has an alarm function with nonvolatile user-programmable upper and lower trigger points. The DS18B20 communicates over a 1-Wire bus that by definition requires only one data line (and ground) for communication with a central microprocessor. It has an operating temperature range of -55°C to +125°C (-67°F to +257°F) and is accurate to ±0.5°C over the range of -10°C to +85°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.

Each DS18B20 has a unique 64-bit serial code, which allows multiple DS18B20s to function on the same 1-Wire bus. Thus, it is simple to use one microprocessor to control many DS18B20s distributed over a large area. 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.

TECHNICAL SPECIFICATIONS:

- Power supply range: 3.0... 5.5V
- Measures temperatures 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)

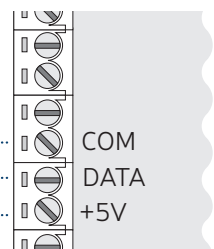
2. WIRING DIAGRAMS



ESIM364/ESIM264



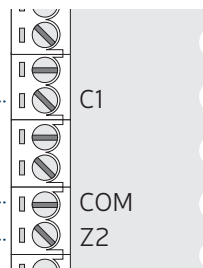
BLACK
YELLOW
RED



ESIM4/ESIM4Q



RED
BLACK
YELLOW



ESIM022



BLACK
YELLOW
RED

