Temperature Sensor – Part # 134385

Temperature Sensor Wire Definitions

Color	Function
White	1-Bit Bus Data
Black	1-Bit Bus Ground
Blue	Previous Sensor (In)
Red	Next Sensor (Out)

One-Sensor Installation

For the Single sensor applications the Blue wire must be attached to ground in order for the sensor to operate properly.

Color	Function
White	1-Bit Bus Data
Black	1-Bit Bus Ground
Blue	1-Bit Bus Ground
Red	Floating

Multi-Sensor Installation

Sensor 1 of the chain must be wired as follows.

Color	Function
White	1-Bit Bus Data
Black	1-Bit Bus Ground
Blue	1-Bit Bus Ground
Red	Blue of Next Sensor

The Temperature Sensors in the middle of the chain between the first and last sensor.

Color	Function
White	1-Bit Bus Data
Black	1-Bit Bus Ground
Blue	Red of previous Sensor
Red	Blue of Next Sensor

The Temperature Sensor at the end of the chain is configured as follows:

Color	Function
White	1-Bit Bus Data
Black	1-Bit Bus Ground
Blue	Red wire of previous Sensor
Red	Floating

Configuration and Setup

The DS28EA00 can be used as single or multi-sensor applications (1-8 sensors).

The 1-Bit Bus will need to be enabled in the settings of S-Register 171. Setting bit-0 will enable the 1-Bit Bus operations, and bit-6 will configure the 1-Bit Bus for use with a temperature sensor.

```
ATS171=65
```

After S-Register 171 has been correctly set the device will need to be reset for the Temperature sensor Enable settings to take effect.

```
ATRESET
```

Using Start Temperature Accumulator (91) will read the value from the specified sensor into the accumulator. In order to count the number of sensors connected the PEG Action Move Temp Sensors to Accumulator (93) can be used.

```
AT$APP PEG ACTION 91 0  (adds temp sensor 1 to accum. 0)
```