The Integrated Circuit temperature sensor offers a linear voltage or current output signal that is directly proportional to the ambient temperature. This output signal is scaled to meet the end users requirements.

The LMx34 IC sensor family features both a current and a voltage output signal and is factory calibrated to output either 10 mV/ºC or 1 µA/ºC. The LMx35 IC sensor family features a voltage output signal and is factory calibrated to output 10 mV/ºC .

A precision metal film load resistor is included in the circuit to convert the current signal to the output voltage signal. The PCB includes three connections, a "V+" for the power supply connection, a "COM" for the common connection and a "SIG" for the signal output.

To use the sensor in 2-wire current mode connect the power supply to the "V+" terminal and the output signal (1 µA/ºC) will be available on the "SIG" terminal. In current mode the common is not used. To connect the sensor in 3-wire voltage mode, connect the power supply positive to the "V+" terminal, the power supply and signal common to the "COM" terminal and measure the output signal (10 mV/ºC) at the "SIG" terminal with respect to common.

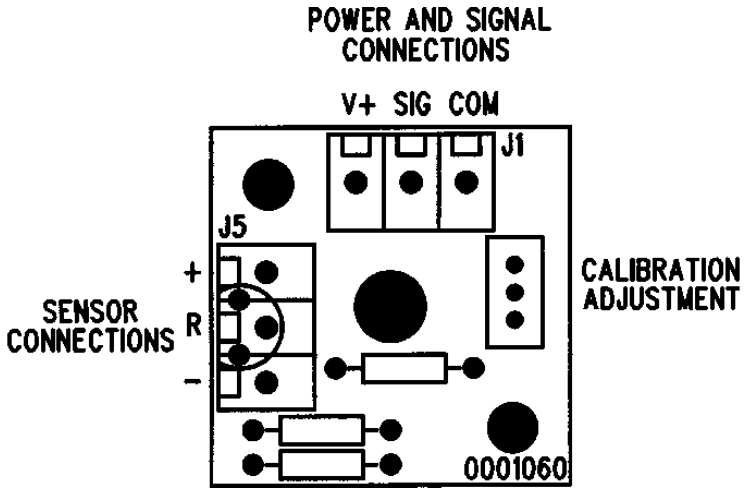
Power supply selection is typically 10 Vdc but can vary from 5 - 25 Vdc with no effect on the output signal.

The sensors are calibrated for a 2.982 Vdc output at 25 ºC (298.2 µA) and the output is linear to 0 Vdc out at -273.2 ºC (0 ºK).

Wiring

V+ Supply (5 – 25Vdc)
SIG Signal Out
COM Common (Voltage Mode Only)

+ RED or ORANGE
R GREEN or WHITE
- BLACK or BLUE



Specifications

	LM134	LM234	LM334	LM135	LM235	LM335
OUTPUT VOLTAGE/ºC	10mV/ºC			10mV/ºC		
OUTPUT VOLTAGE @ 25ºC	2.982 Vdc			2.982 Vdc		
OUTPUT CURRENT/ºC	1µA/ºC			n/a		
OUTPUT CURRENT @ 25ºC	298.16µA			n/a		
OPERATING TEMP. (MIN)	-55ºC	-25ºC	0ºC	-55ºC	-40ºC	-40ºC
OPERATING TEMP. (MAX)	125ºC	100ºC	70ºC	150ºC	125ºC	100ºC