



#### Reference Number: 025418/0056

#### **Title of the Invention**

### ANALOG CIRCUIT FOR WIDE RANGE SENSOR LINEARIZATION **OPTIMAL IN UNIFORM NORM**

## Invention

It is the principal object of the present invention to provide an accurate, reliable linear operating physical property measurement device which is highly stable, fast-acting, inexpensive and yet simple to design and manufacture. Generally speaking, this is accomplished by the provision of a novel multiple sensor based single operational amplifier circuit in all forms of circuits described herein. Therefore, the present invention becomes especially useful for measuring/controlling a physical property in an analog front-end circuit providing relatively wide and linear range, particularly employing plurality of sensors.

#### Advantages

With the present invention, it may be possible to achieve temperature measurement linearity of less than 0.004°C in a 100°C range for thermistors, for example, by using three thermistors at the input part of the integrated circuit. This is less than half the measurement linearity value that the prior art circuit can provide.

## **Current Status**

Turkey: Registered Germany: Registered France: Registered Netherlands: Registered

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# Keywords

Sensor, connected circuit, nonlinear.

# **TRL: 2**

# FIGURE 1



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