

# **BTM-Series Quick Start Guide**

# Notes Before Starting:

- 1. The sensors may be connected either way round, they are not polarity conscious.
- 2. The relays are 'fail-safe', i.e., they are continuously energised, and de-energise at a fault condition, including loss of unit power.
- 3. The microprocessor inside the unit updates change in conditions every four seconds.

# About LEDs:

### Open circuit LED on control box illuminates fully on:

- 1. If power is switched on with an open circuit condition
- 2. If power is switched on with more than four over-temperatures
- 3. With the unit operating, if 3 over temperature occur within 1/second of the first over-temperature

# With one over-temperature on one sensor the following will be indicated:

- 1. The 1+ LED on the control box with flash on/off in a period of 1/second
- 2. The LED on the sensor with the over-temperature will flash from low to high intensity at a rate of 1/second

# With over-temperatures on 4 or more sensors the following be indicated:

- 1. The 1+ LED and the 4+ LED will flash alternatively at a rate of 1/second
- 2. The LED's on the sensors with the over-temperatures will flash from low to high intensity at a rate of 1/second

## **Operation of the Relays Indicates the Following:**

- 1. Relays 1+ off, Relay 4+ off
  - a. Four or more over temperatures exist OR
  - b. No power to the control box
- 2. Relay 1+ off, Relay 4+ on
  - a. Over temperature on one sensor
- 3. Relay 1+ on, Relay 4+ off
  - a. Open circuit connection

### **General Information:**

In the unlikely event of the sensors being connected after power up the following will occur after illumination of the open circuit LED

- 1. No over-temperature, the open circuit LED will go out
- 2. 4+ over-temperatures, the open circuit LED will stay on and the sensors that are over-temperature will show low intensity for 4 seconds then flash high intensity for 1 second. This will be repeated every 5 seconds
- 3. 1+ over-temperature, the open circuit LED will go out and the 1+ LED will flash from low to high intensity at a rate of 1/second