

# TRACE HEATING MONITORING UNIT— TYPE THMU3B



## FEATURES

- \* Automatic Power monitoring for both Primary & Secondary circuits
- \* Automatic changeover from Primary To Secondary Circuit
- \* Removable Gear Tray - only 2 screws
- \* 30 watt- 3000 watt power range
- \* Sensor Circuit monitoring for both O/C And S/C
- \* Automatic calibration for both Primary and Secondary Circuits
- \* 1 Set of Fault CHO contacts - failsafe
- \* Internal Fault Buzzer
- \* LED Bar Display for Sensor Temperature
- \* Manual Test mode switch
- \* Primary & Secondary Circuit Heating Status LED's
- \* 16 amp MCB output protection
- \* Plastic enclosure to IP55
- \* Complies with the requirements for BS EN 12845/LPC/FPA(RC38) regulations
- \* Temperature Sensor Assembly Supplied

## GENERAL DESCRIPTION

The THMU3B is a dedicated low cost automatic monitoring and control Trace Heating unit for use in Sprinkler Systems as required by BS EN 12845/LPC/FPA(RC38) regulations. The unit is housed in a weatherproof plastic enclosure to IP55 rating with a latching hinged viewing window with the user access to all the controls. The unit come complete with a Temperature sensor assembly .

If the Sensor Temperature falls below the Heating Set Point ( Pre Set for 5 °C ) the unit will automatically provide Heating power to the primary circuit . Should a fault occur in the Primary circuit the unit will automatically switch to the Secondary circuit output. The unit's design monitors the actual power integrity of both the Primary and Secondary heating outputs at 2 hourly intervals. The Heating tape outputs are protected via a 16 Amp Type " B " MCB. The Unit has two heating Set Points 5 or 8 °C selected via an internal DIL switch. The Sensor temperature is indicated by an LED Bar display. A remote ( N/O ) input is also provided for a external Thermostat/Switch to be fitted to override the sensor circuit setting.

The Temperature sensor circuit is monitored for both open & short circuit conditions with LED indication. Should a fault occur in the sensor circuit the unit will automatically provide Heating power thus providing Failsafe operation

The THMU3B monitors Trace heating in the range from 30 W to 3.0 KW for Constant wattage Heating tape or 30 W to 2.0 KW for Self regulating Heating tape. On initial setup the unit will auto calibrate the heating load of both The Primary and secondary circuits.

LED indicators provide for visual indication's for " Heating On " & " Fault " for both primary and secondary circuits. A " TEST " switch is fitted to enable manual testing of both primary & secondary outputs. On any fault condition the appropriate Fault LED will illuminate together with the internal buzzer. One set of Fault CHO contacts will also operate ( failsafe operation ) in any fault condition. The System ON LED will Flash under normal operating conditions. The unit can also be used as a " Single Heating " monitored unit selected by a DIL switch ( The secondary output monitoring/ Switching being isolated ).

All indications and controls together with user operating instructions are provided on the inner facia. The unit is Designed for ease of installation. After removable of the front lid ( via 4 front screws ) the complete internal assembly Can be removed via just two screws, thus giving complete back box access.

## TECHNICAL SPECIFICATION

Mains Input	—	230v AC 50/60 Hz
Power Heating monitoring range	—	30 Watts to 3.0K Watts ( Constant Wattage ) 30 Watts to 2.0K Watts ( Self regulating )
Power Heating Selection	—	Automatic Measurement for both Primary & secondary outputs on Initial Setup
Number of Heating Circuits	—	2 ( Primary & secondary ) each with 2 output terminals
Heating monitoring	—	Automatic testing of both circuits at 2 hour intervals
Heating Circuit Protection	—	Short Circuit Protection via 16 Amp Type “ B “ , 6KA MCB
Monitoring Trip Fault condition	—	Constant Wattage - Measurement setting less 25 - 30 % Self Regulating - Measurement setting less 35 - 40 % ( Will automatically switch from Primary to Secondary Output )
Heating Set Point	—	5 or 8 °C via DIL switch ( factory set to 5 °C )
Sensor Temperature Indication	—	LED Bar Display
External Remote Input	—	N/O - closing to Power heating circuit
Common Fault Auxiliary Output	—	1 set CHO rated at 1 amp 50V DC
Temperature sensor type	—	NTC Thermistor—10K
Temperature sensor Cable Length	—	1.5 metre
Enclosure Construction	—	Impact resistant IP55 rated, Grey ABS to RAL 7035 with hinged latching smoked transparent door for access to user controls Internal metal fascia with Blue screen printing
Cable entry	—	3 cable entries Top & Bottom : 2 cable entries on each side
Enclosure Size	—	180mm ( wide ) x 180mm(high) x 100mm (deep)

**TYPICAL WIRING SCHEMATIC  
THMU3B**

