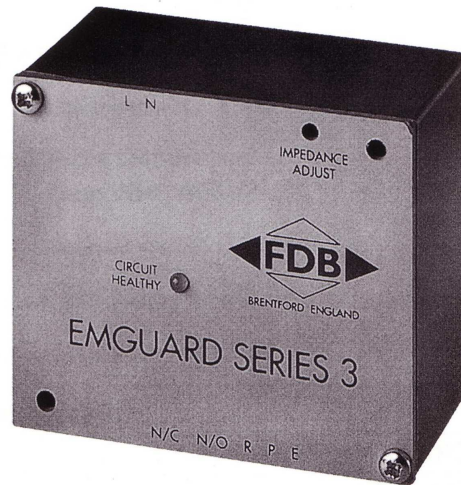
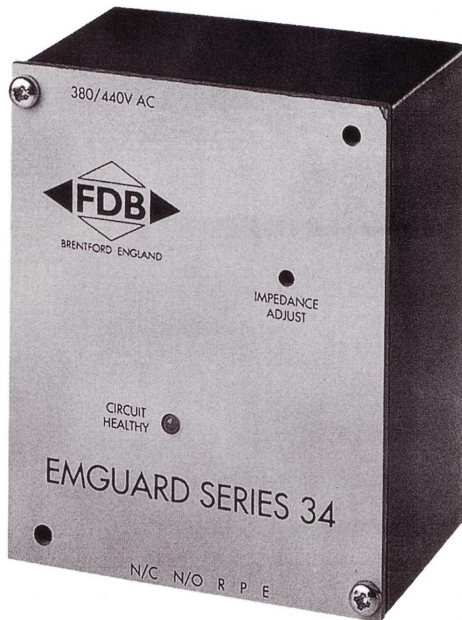


# EMGUARD Earth Line Monitor



An effective method of ensuring Earth Continuity to particular pieces of equipment is by the use of Earth Monitoring, the principal of which is as follows. An extra conductor (Pilot) is utilised and this is connected via an end of line terminator to the framework of the machine at a different point to that of the Earth Conductor. A circulating current is passed round the pilot/earth loop which, when interrupted due to impedance increase, short circuit or open circuit (loss of earth) causes the opening of the supply to the machine.

The **EMGUARD** is a low priced, very compact **EARTH CONTINUITY MONITOR**, having a wide range of earth continuity impedance settings but is so designed that it is possible to set beyond the parameters specified by **BS4444**. The ultra-low power circulating in the pilot earth/loop (**0.06W**) means that it can be readily incorporated into **intrinsically safe** systems.

As well as precise **Impedance Increase** detection, the **EMGUARD** will also detect a **SHORT CIRCUIT** between pilot and earth or

**open circuit** of the earth conductor. The **EMGUARD** is **fail-safe** in operation, i.e. will trip on loss of energising supply and features auto reset (when system correct), remote **test** facility and **LED** status indication.

The **Emguard** can be connected to any existing "active" end of line **terminator** (diode or zener diode) and can be supplied complete with this type of terminator. Also available is our unique **passive resistor** type end of line device which will give much higher levels of stability especially where temperature variation can take place at the remote apparatus.

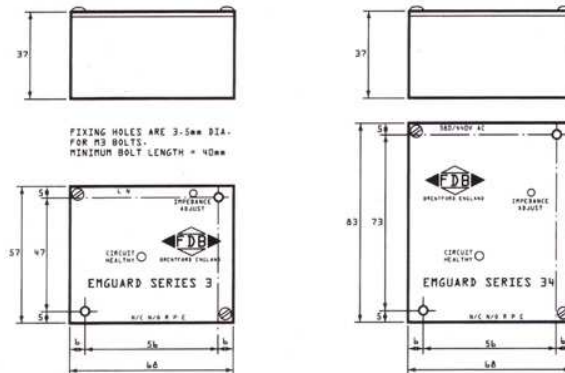
A major advantage of the **EMGUARD** is its high immunity against **AC** induced voltage in the Earth conductor (even where relatively tight limits are required on Earth continuity impedance increase) so making it possible to accurately monitor long cable runs (**in excess of 1 Km**) without nuisance tripping.

**See overleaf for full specification.**

# SPECIFICATION

- Control Voltage : 110V or 240V or 440V 30-120Hz
- Impedance Range : 1 to 20 ohms (adjustable)
- Response Times : Impedance increase  $\pm$  3 Seconds  
Short circuit or Open circuit  $\pm$  1 Second
- Proving Voltage/Current : 12 volts 5mA DC
- Temperature range : -15 degrees C to +60 degrees C 24 November 1995
- Relative Humidity : 95% non-condensating
- Output Relay : Separate N/O and N/C contacts 5A  
1250 VA (440V max)
- Indication : LED System healthy
- Connections : Colour coded flying leads (500mm)
- Construction : Fully encapsulated and house in flame retardant ABS case.

ORDER REFERENCE			
DESCRIPTION	110V	240V	440V
EARTH MONITOR	EMG31	EMG32	EMG34
TERM/DIODE	TER/D		
TERM/RESISTOR	TER/R		



In line with our policy of constant improvements, we reserve the right to vary the specifications contained in this leaflet.

The services of our Technical support staff are available for assistance or guidance on earth leakage problems and possible solutions please contact us at:

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