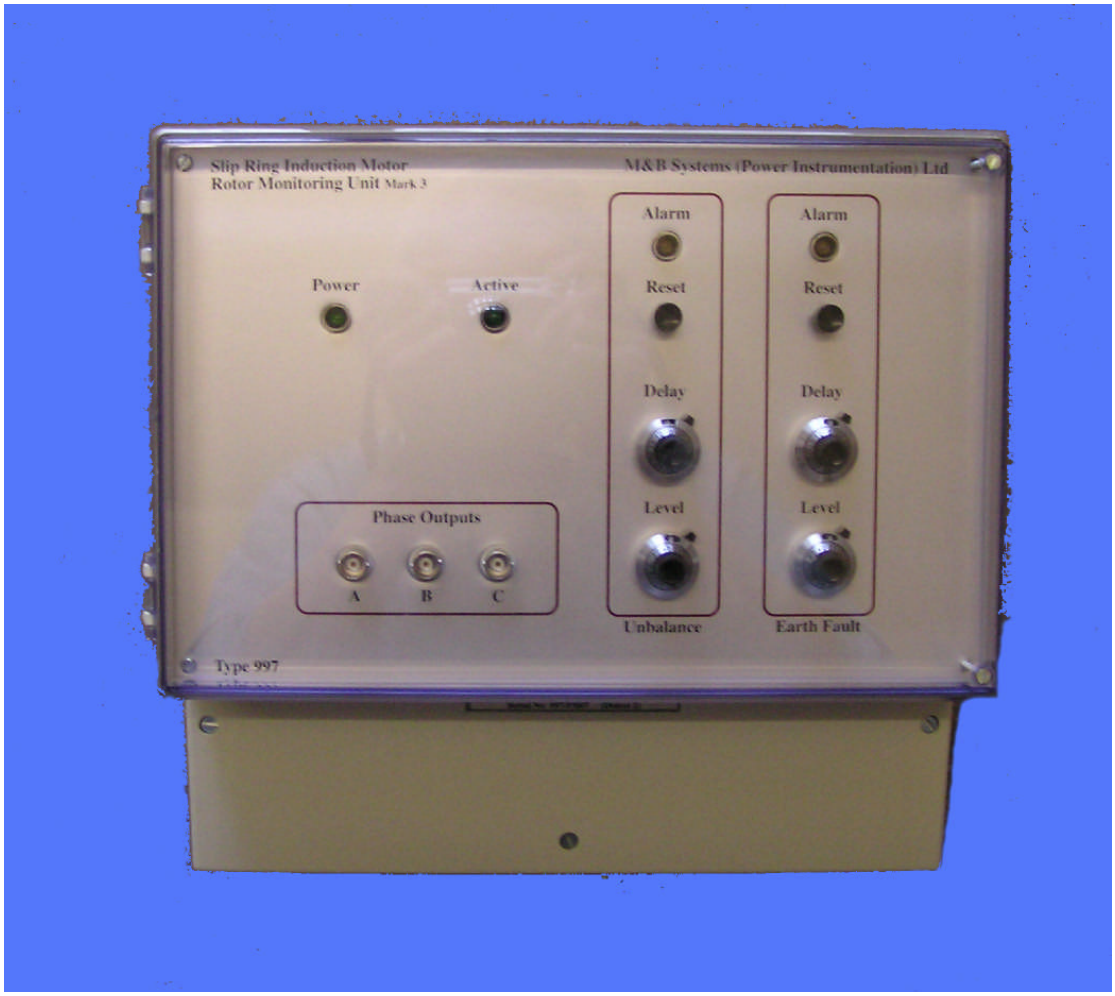
M&B Systems Power Test Equipment

# Slipring Induction Motor Monitor Type 997




## Advanced Technology for Industry

# Monitor for the Rotor Circuit of Slipring Induction Motors

**Purpose**

The Slipring Induction Motor Monitor has been designed to monitor the rotor

circuit (rotor winding, cables and regulator) of large rated slipring induction motors such as those used as start and standby boiler feed pumps. The primary function is to detect

current unbalance that can arise from regulator unbalance, rotor winding faults and cable problems. It also has an earth fault function available.

**Functional Description**

3 Rogowski Coils (air cored current transducers) are installed, one on each phase, on the connectionns from the sliprings and the cable ends (bus bars in some cases).

Following the conditioning of the signals from these transducers, the average magnitude of the current is deduced. Then the magnitude of each of the currents in each phase is compared with this average value and if the difference is greater than a preset level, an alarm status is created

For earth fault detection, the output from each transducer is instantanously added

and the resultant residual current (earth fault or spill current) is compared with a reference level to produce an alarm status.

The technology for this system is developed from technology originally produced within the CEGB and reported in 'Developments in Power-System Protection' 10-12 June 1980

**Outputs**

The design of the processor unit permits several outputs to be made available. Isolated contacts are provided to indicate alarm status. 4 to 20 mA signals and 0 -10V signals can be provided to indicate the magnitude of the various currents.

**Design and Installation**

The current transducers are mounted in metallic cases, which provides protection and screening, These are slid over the bushings that connect the cable to the slip rings. Screened cables connect the transducers to the signal Processor Unit that is installed

locally to the plant. The Processor Unit is of a double box construction, the outer box

providing environmental protection. The inner box provides screening for the electronics and mechanical protection when the unit is being installed. Input and output cables are terminated in a zone between the two boxes. The units are mains powered.

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