

## 4500 Series Monitoring System

### General Overview

The 4500 series monitoring system is based upon a 19 inch 3U high rack assembly which can contain a mixture of different modules to achieve particular monitoring functions. The system is powered by a 4508 power supply module fed by either 110 or 240v AC.

The 4508 power supply is a single card construction with a 96 way multiple connector. This mates with a similar socket on the backplane PCB assembly which is mounted across the rear of the rack system. Various connection options are available to use with the basic rack system and they are explained more fully in the section dealing with the model 4524 rack assembly. The connections from the 4500 Series system to the outside world are via ribbon cable connectors mounted on the rack assembly backplane PCB.

### Module Fitting

When manufactured systems are to be supplied with monitors dedicated to particular slot position in the rack assembly, this is achieved by using a red keyed connector which ensures that a module cannot be placed in the wrong slot. In the general case, any type of module except for a power supply or a serial interface module can be inserted into position 1-13. Slot 14 is reserved for a 4506 serial interface module (if required) and the 4508 power supply will always occupy the extreme right hand position, slot 15.

### System Configuration

In normal circumstances a 4500 series system will be assembled to suit a particular customer's requirement and will have the appropriate modules fitted prior to shipment. Of the various modules available. All are separately described within this instruction manual. Each is described as though it were a standalone product, but of course it cannot be used on its own without the connection capability of the module 4524 rack assembly.

### Selection of Filter Components

Some of the 4500 series of monitors have internal filters which restrict their measurement band width to frequencies are of interest.

### Scaling

Modules are scaled to suit the customer's specific requirements.

### Linking Table

Modules in the 4501, 4502,4509,4510,4515 ranges have links fitted to the boards which are specific to the type of the module.

### Module Address Codes (where fitted)

When assembled as a system, modules are assigned address of 1 to 13. numbering from left to right when viewed from the front. Users may set internal switches to other addresses, but must take care to ensure that no two modules are set to the same address. Where no serial interface module is specified for the system, the address code switches and associated components may not be fitted.

**4500 Series Monitoring System**  
**4504 Phase Monitor**

**General Overview**

This module accepts an incoming pulse train from a CML eddy current probe system and conditions it to provide a TTL compatible output pulse to the BNC connector on the front panel.

The application of this module is to assist spectrum or order analysis by providing the rotational reference point for such analysis to be carried out.

The 4504 consists of a single PCB assembly and can be fitted to any position (in the range 1-13) within the 4524 rack assembly.

There are no current outputs for this module although the condition of the input transducers is continuously monitored and when healthy, is signaled via a green LED on the front panel.