

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
Model 4509 Two Input, Dual
Channel Vibration Module

General Overview

This model 4509 is a dual channel vibration module accepting signs from CML 1900 series probe drivers configured to have a sensitivity of 200mV/mil.

The input signals are checked by window comparators which confirm the status of the transducers and the signal from the module is configured as a 4-20mA with the full scale selected to suit particular customer applications.

A BNC test point on the front panel provides a buffered vibration signal which can be used with external test equipment such as a FFT analyzer, Oscilloscope or digital volt meter.

The module finds wide use as an X/Y monitor on rotating machinery and can occupy any module position within 1-13 of the 4524 rack assembly. It is normally however dedicated to a position during the manufacturing process with the use of the red keyed connectors fitted on the backplane of the rack assembly and the near edge of the module PCB assembly.

Filters are fitted to the modules which are again configured to suit customer requirements but consist of four , two pole Butterworth filters allowing 24db/octave band pass filtering.