



## HD310 Series Nuclear Data Acquisition System Overview



- **Signal Conditioning for Sensors**
- **Accepts Strain Gages, VR Sensors, DC Volts**
- **Standard +/-10 Vdc Analog Outputs**
- **A/D Conversion, Serialization and Transport**
- **Fiber Optic or Serial Data Streams**

### Description

The Validyne HD310 Data Acquisition System provides high speed monitoring of multi-channel nuclear power plant systems. Its modular flexibility allows for economic modification or expansion to meet changing requirements. It is designed to provide high speed data during transients in the operating parameters of nuclear power plants and provides a maximum of electrical isolation from critical operating circuits.

The HD310 can process up to 4096 channels of analog data, convert it to digital data and transmit it over fiber optic or twisted pair cables to the Validyne MR312 Master Receiver. The Master Receiver interfaces with a computer to store and operate on any or all of the digital data. All channels can be fed simultaneously to a PCM tape recorder for bulk storage.

The basic system can process 32 thru 512 channels of analog data from 1 to 16 Remote Multiplexers, but can be further expanded from 512 to 4096 channels with Validyne MX311 Submultiplexers.

The modular concept utilized in the design of the HD310 makes the system expandable, so it is never too small or too large for your present requirements.

### System Components

#### **MC370AD Remote Multiplexer/Module Case**

The MC370AD accepts 25 validyne plug-in signal conditioning modules and seven direct analog inputs for a total of 32 channels. The analog inputs are buffered, filtered, multiplexed and converted to serial data for transmission to a Submux or Master Receiver.

#### **RM334 Remote Multiplexer**

The RM334 is similar to the MC370AD but is used to adapt existing signal conditioning equipment for use with the HD310 system.

#### **MX311 Digital Submultiplexer**

The MX311 is an optional unit that can be installed between remote multiplexer and Master Receiver to expand channel capacity.

#### **MR312 Master Receiver**

The MR312 accepts up to 16 data streams from MC370AD and RM334 multiplexers for output to a computer, PCM tape drive, or other storage device.