



## **NYAD MOISTURE SENSOR**

The NYAD, INC. Series 100 Moisture Analyzers are based on the most advanced capacitive sensor technology available today. This advanced sensor is coupled to a state-of-the-art, microprocessor controlled electronics module to produce one of the most effective trace moisture analyzers available today.

### **SENSOR**

The performance of any analyzer is derived from the capabilities of its sensor technology. The NYAD Series 50 Moisture Sensor is a capacitive element utilizing a thin aluminum oxide dielectric that selectively absorbs water vapor causing a change in its electrical characteristics. The moisture induced electrical parameters are then processed and converted to measurements of moisture content. The principle advantages of this sensor technology are:

- High specificity to moisture
- Insensitivity to flow and pressure
- Operable in gas or non conductive liquid streams
- Wide dynamic range (more than six orders of magnitude in concentration)

The NYAD embodiment of the capacitive moisture sensor technology includes advances that give dramatic improvements in its performance when compared to older competitive versions.

- Physically, the NYAD sensing element is produced from a 3/16" diameter metal rod one inch in length. This structure results in a more rugged design than thin metal foils.
- The active surface area of the NYAD sensor is about ten times that of competitive designs. This factor produces a dramatic improvement in its sensitivity to moisture.
- The stability of the heavy rod substrate allows the use of thin dielectric films giving an improvement in speed of response to changes in the moisture content.
- The sensing element is designed to be removable from the mounting probe. This feature allows damaged sensors to be repaired without discarding old probe bodies; a more than 50% savings over a new probe.
- NYAD sensors are mounted on 1/2" diameter probes which internally contain digitizing electronics and calibration data in electronic memory. This feature allows all moisture probes to be completely interchangeable with all NYAD analyzers without the necessity of matching the sensor to its processing electronics.
- No special cable is needed. The moisture signals are transmitted from the probe to the analyzer in a digital form eliminating the need for special signal transmission cable; this will read the true sensors capacitive; common two wire signal cables up to 1,000 feet can be used.

With these improvements in sensing technology, we at NYAD feel that we are offering the most advanced and effective capacitive moisture analyzer available today.