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FOR IMMEDIATE RELEASE

Moore Industries Introduces HTZ Smart® HART Humidity and Temperature Transmitter

A request from a semiconductor manufacturer led to the HTZ, which offers HART Communications and high accuracy for both humidity/dewpoint and temperature measurements.

NORTH HILLS, CA— The HTZ Smart HART® Humidity and Temperature Transmitter from Moore Industries simultaneously measures temperature and humidity in processes that require extremely close monitoring of humidity, temperature and dewpoint. This includes clean rooms, assembly areas and storage facilities in the pharmaceutical, semiconductor, food processing, biotechnology and similar industries. HART communications, an industry first for a humidity transmitter, allows the unit to be programmed or queried from any point along one of the transmitter's dual 4-20mA loops.

The loop-powered (2-wire) HTZ provides exceptional measurement accuracy for humidity, temperature and dewpoint in a single instrument, which eliminates the cost of using multiple transmitters. Accuracy of the relative humidity measurements is up to ±0.75%RH, the temperature measurements is up to ±0.036°C, and the dewpoint calculation is within ±0.5°C.

The HTZ incorporates a sensor module which consists of two parallel probes, one containing a capacitance-based humidity sensor and the other containing a highly-accurate temperature sensor. The sensor module can be mounted on any surface or pipe, such as an HVAC duct or a clean room wall. Either probe can be removed for easy cleaning, calibration or replacement. The HTZ also incorporates a humidity and temperature display module that can be mounted up to 30 feet away from the sensor module. The display module provides power to the sensor probes and produces two 4-20mA output signals. Each output can be programmed to represent relative humidity, temperature or dewpoint. The display can be programmed to show humidity, temperature, dewpoint, analog output #1, analog output #2 or scroll between the values.

Meeting the Need for Accuracy

Many accurate humidity transmitters are available on the market, but few also have an accurate temperature measurement. Calculating dewpoint requires accuracy in both measurements, so the previous solution was to combine an expensive humidity instrument with a highly accurate temperature transmitter, such as the Moore Industries TRX. The resulting solution essentially cost twice as much as it should.

“We developed this product at the request of a major semiconductor manufacturer,” says Tina Lockhart, Director of Engineering at Moore Industries. “The semiconductor company manages its processes based on dewpoint. It was using dozens of our TRX temperature transmitters with other vendor’s humidity sensors, so they asked us to develop a humidity instrument with the same high-accuracy features as the TRX. They also wanted HART communications capability and a local display.”

Features and Benefits
The HTZ Smart HART Humidity and Temperature Transmitter has all the capabilities of a modern HART-enabled instrument, plus the accuracy needed for precise measurement of humidity, temperature and dewpoint in a processing environment. Features include:

- *PC-based or HART-based configuration*: The HTZ can be programmed on site in minutes, using free Intelligent PC Configuration software, a HART-based system, or by using a standard hand-held HART Communicator from any point along the 4-20mA loop.

- *Set Input Failure Mode*: Via the programming capability, the failure mode for each 4-20mA output can be set to drive upscale, downscale or hold last value in case of a sensor failure or if the cable between the sensor module and display module is disconnected.

- *Simple maintenance*: The humidity and temperature probes can be removed for cleaning, calibration or replacement. The humidity sensor can be removed from the probe for cleaning or replacement.

- *Dual outputs:* One output is a standard 4-20mA signal, which can take one variable of interest to a control system, while the other—with full HART capability—can be connected to any HART-based system or hand-held communicator.

- *Display Module*: Shows real-time status of relative humidity, temperature, dewpoint, analog output #1, analog output #2, or scrolls among all variables in four-second intervals.

- *Operating Range*: The HTZ operates in temperatures from -40 to 185°F (-40 to 85°C), allowing installation in almost all environments, indoors and outdoors.

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