



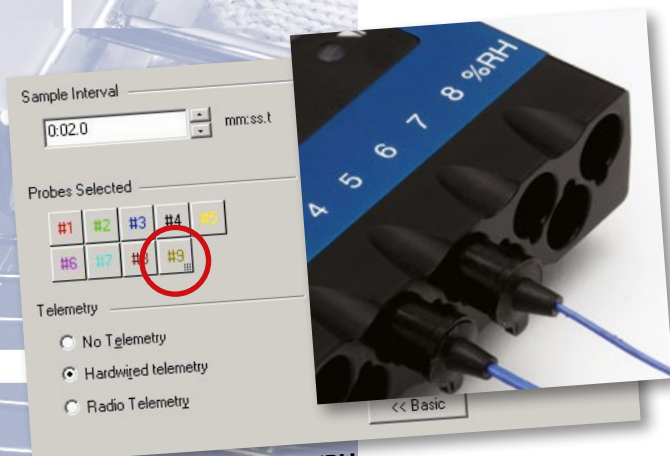
Fluke Process Instruments

Food Tracker[®]

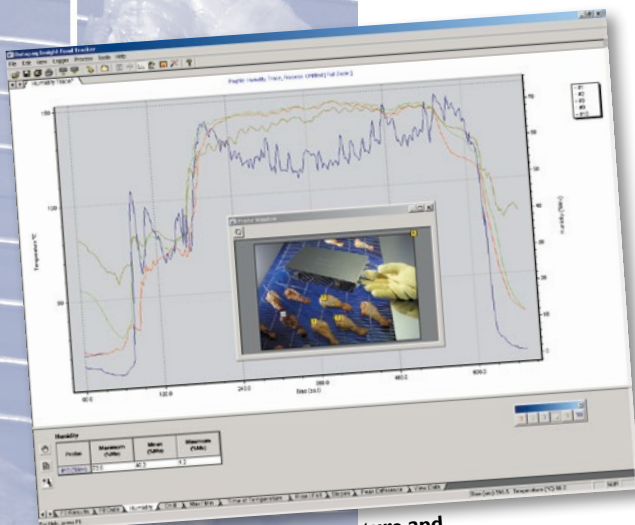
Humidity Sensor

With the MultiPac21, it is possible to complement temperature measurement data with in-process humidity measurement.

This capacitive sensor reads percent relative humidity and temperature, and provides the means to measure moisture levels in processes up to 200°C (392°F). This information is ideal for baking applications, such as proving or other processes, where moisture level is critical to product cook quality and yield.



MultiPac21 channel 9 equals %RH



Graphing and analysis of temperature and absolute humidity profile (blue trace)



Humidity Sensor (PA2020) and Logger Connecting Cable (PA2030)

The humidity sensor is mounted on the outside of the barrier to guarantee reproducibility of measurement and easy placement of the system on the oven conveyor.



TB9773 Mount

TECHNICAL SPECIFICATIONS



PA2020



PA2030



PA2040

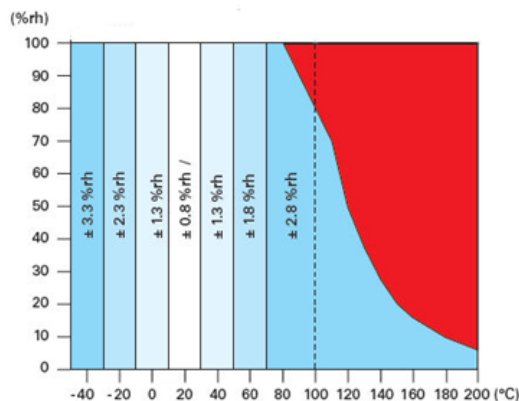


PA2041



CS3050

Humidity Sensor	Rotronic HygroClip2 Industrial Probe
MultiPaq21 Logger Compatibility	DP2182A & DP2186A
Sensor Parameters	The humidity sensor provides both RH and temperature data (Environmental)
Humidity Sensor Type	Capacitive – Relative Humidity %RH
Temperature Sensor Type	Pt100 I/3 Class B
Temperature Operating Range	Sensor Head -100 to 200°C / -148 to 393°F Sensor Electronics -50 to 85°C / -58 to 185°F
Environmental Operating Conditions	Non-Condensing
Humidity Units (Sensor)	Standard – Relative Humidity %RH
Humidity Units (SW Conversion)	Relative Humidity %RH Absolute Moisture by volume (%Mv) Parts Per Million Dew point Temperature (°C or °F)
Accuracy at 23°C / 73°F	+/- 0.8% rh & +/- 0.1 K
Response time	t63 <15s without filter



Note: Although the sensor operates up to 200°C the ability to measure moisture content with accuracy is restricted by the decreasing theoretical %RH values above 100°C as shown in the accuracy diagram.

Sensor accuracy (%RH) with changing humidity levels and temperature

SYSTEM COMPONENTS AND ACCESSORIES

PA2020 MultiPaq21 HC2 Humidity Sensor

Requires PA2030 connecting cable to be interfaced to MultiPaq21 logger.

PA2030 MultiPaq21 Logger to HC2 Humidity Sensor Connecting cable

Connects PA2020 HC2 Humidity Sensor to MultiPaq21 Data Logger

PA2040 Complete PA2020 HC2 Metal Humidity Sensor Cap

Supplied with user replaceable PTFE filter (PA2041). PTFE filter ideal for processes where sensor contamination possible by process (meat and poultry). Filter may be removed to increase response characteristics where risk of contamination is low (Clean applications – proving in bakery).

PA2041 Replacement PTFE Filter for HC2 Metal Humidity Sensor Cap (PA2040)

(Fitting screws included)

TB9773 MultiPaq21 Humidity Sensor Mount Bracket

Fitted to non-submersible thermal barriers (TB5009/10/11) to allow the humidity sensor to be fixed on front of barrier.

CS3050 Humidity Sensor Conditioning Unit

Programmable conditioning unit used to heat sensor to match process environmental temperature (ambient to 150°C/302°F). Conditioning the sensor optimizes the response characteristics. The process also prevents condensation on the sensor when placed in oven reducing sensor saturation problems.

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