



# Humidity measurement

## KS98-application



**Calibrated humidity measurement**  
**Integrated in laboratory equipment housing**  
**Optional humidity and temperature control**  
**Calibration certificate for hole unit**

### KEY WORDS

**humidity calculation, psychrometer, calibration, wet and dry bulbs, laboratory equipment**

### DESCRIPTION

ECE Fast was recently approached by the testing laboratory of a large paper manufacturer to repair and calibrate their 20 years old psychrometer. This device is used in the lab for independent special checks throughout the lab. The original manufacturer still exists however was unable to assist the client.

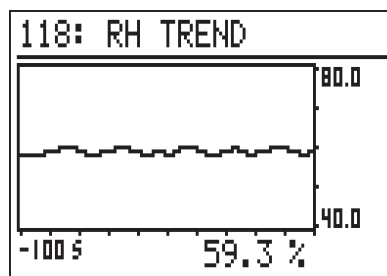
Operation: The equipment uses wet and dry bulbs in the path of a forced air-flow via a fan to measure relatively humidity.

### IMPLEMENTATION:

The existing electronics board was replaced with a PMA KS98 instrument. The ECE Fast Technical Center and ECE Fast Manufacturing designed a "top hat" enclosure fitted onto the existing enclosure to house the KS98.

ECE Fast Sensors manufactured new high accuracy RTD Pt100 matching sensors to replace the existing units.

The ECE Fast Technical Center in consultation with the customer programmed the KS98 functionality in accordance to the special customer's requirements. Finally ECE Fast NATA



117: LAB Survey	
DRY	= 27.2 deg.C
WET	= 21.4 deg.C
RH	= 59.3 %

*Example of Displays on KS98 for Wet Bulb, Dry Bulb and Humidity Instrument*



*The old (left) and the new (right) unit*

Laboratory provided a calibration certificate for the complete unit.

Using this functionality and with the power of the KS98 this can easily be

adapted to also control humidity and temperature.

**PMA**

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