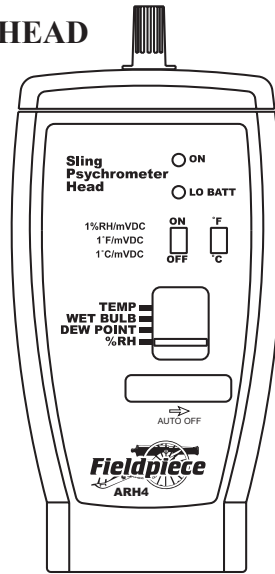


RELATIVE HUMIDITY HEAD Model ARH4



OPERATOR'S MANUAL

Specifications:

Low battery indication: Red LED is lit when the voltage drops below the operating level.
 Output impedance: 500Ω approx
 Operating environment: 32°F to 120°F (0 °C to 50 °C) at <95%RH
 Storage temperature: -4°F to 140°F (-20°C to 60°C) <80%RH with battery removed
 Accuracy: Stated accuracy at 73°F±10°F (23°±5°C), <95%RH
 Battery: 9V
 Dimensions: 146mm(H) x 67mm(W) x 32mm(D)
 Weight: approx. 180g including battery

Introduction

The Fieldpiece model ARH4 measures both relative humidity and ambient air temperature. The ARH4 also calculates dew point and wet bulb temperatures.

The head converts RH%, ambient temperature, dew point temperature, and wet bulb temperature to a voltage at a rate of 1 RH% or degree to 1mVDC. Set the meter to mVDC to display RH% or temperature directly.

The ARH4 snaps directly onto the Fieldpiece HS series DMM. For other meters, use Fieldpiece ADLS2 test leads or AHD1 handle adapter.

To get an accurate reading, allow enough time for the sensors to come to equilibrium. The bigger the change, the longer the time the ARH4 may need to calibrate to ambient conditions. Usually not more than a couple minutes for even large changes.

Auto off

The accessory head turns off automatically after approximately 10 minutes to lengthen battery life. To disable "Auto off" function, remove rubber cover on front and slide switch to right.

Temperature

Sensor: thermister temperature sensor
 Range: -4°F to 140°F (-20°C to 60°C)
 Resolution: 0.1°C / 0.1°F
 Accuracy:
 ±1°F 32°F to 113°F
 ±2°F -4°F to 32°F,
 113°F to 140°F

 ±0.5°C 0°C to 45°C
 ±1°C -20°C to 0°C,
 45°C to 60°C
 Output: 1mV/°C, 1mV/°F

Relative Humidity

Sensor: Capacitive humidity sensor
 Range: 0% to 100%RH
 Accuracy:
 ±2.5% @ 77°F (25°C), 10% to 90% RH
 ±5% @ 77°F (25°C), <10%RH, >90%RH
 Output: 1mV/%RH
 Sensor response time: 60 seconds typical for 90% of total range
 Sensor hysteresis (excursion of 10% to 90% to 10% RH): ±1%RH typical

Features:

1. Measures Temp and RH%
2. Calculates wet bulb and dew point temperatures

Dew point and wet bulb

The "dew point" is the temperature at which water vapor condenses forming fog or dew. Wet bulb is the temperature measured after cooling by evaporation of water. If you know temperature and relative humidity, dew point and wet bulb temperatures can be calculated.

The ARH4 measures relative humidity and ambient temperature. The ARH4 calculates wet bulb and dew point temperatures. The chart on the back of the accessory head can be used to estimate wet bulb temperature if you know RH% and ambient temperature (dry bulb).

Operating instructions

1. Remove cap covering sensor at the top.
2. Connect to COM and Volts jacks. To use with any Fieldpiece "stick" meter, slide the head over the meter. For most other meters, use the Fieldpiece ADLS2 test leads or AHD1 adapter handle.
3. Select parameter on accessory head.
4. Select mVDC range on meter and read parameter directly on meter.

Warranty

The ARH4 is warranted to the original purchaser against defects in material or workmanship for a period of one (1) year from the date of purchase. During the warranty period, Fieldpiece Instruments will, at its option, replace or repair the defective unit.

This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument. Any implied warranty arising out of the sale of Fieldpiece's products including but not limited to implied warranties of merchantability, and fitness for purpose, are limited to the above. Fieldpiece shall not be liable for incidental or consequential damages.

State laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service

Call Fieldpiece Instruments for one-price-fix-all warranty service pricing. Send check or money order for the amount quoted. Send the meter freight prepaid to Fieldpiece Instruments. Send proof of date and location of purchase for in-warranty service. The meter will be repaired or replaced, at the option of Fieldpiece, and returned via least cost transportation.

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