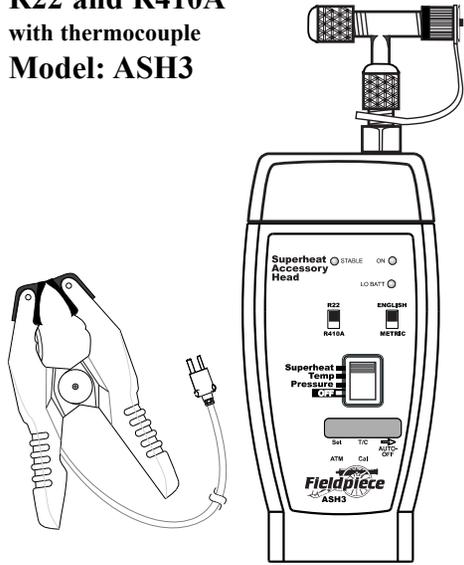


# Superheat Head R22 and R410A with thermocouple Model: ASH3



## OPERATOR'S MANUAL

### SPECIFICATIONS

**Operating environment:** 32°F to 122°F; 0°C to 50°C at <75%RH

*Allow ~5 min. for ASH3 to come to ambient temp.*

**Storage environment:** -4°F to 140°F; 0°C to 50°C at <80%RH with battery removed from meter.

**Battery life:** 25 hours typical. No measurable current draw when in "off" position.

**Low battery indication:** Red LED lights

**Battery:** 9V

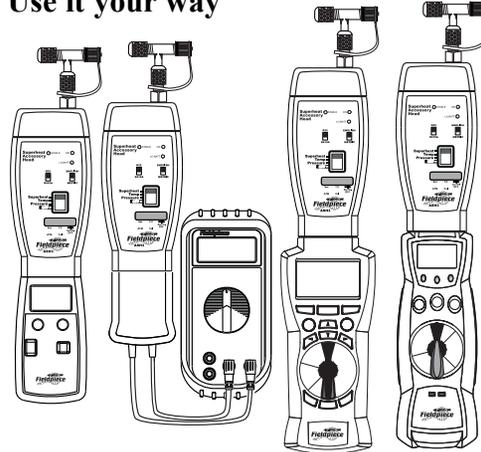
**Auto off:** Approx. 15 minutes

**Overloads:** The ASH3 outputs 3.4V when temperature or pressure is outside of their working range (overloaded). For ranges below 3400mVDC, the normal overload symbol will be displayed on the meter ("OL" or depending in the meter). For ranges above 3400mVDC, reading displayed will be approximately 3.4VDC.

### Description

The model ASH3 superheat accessory head measures refrigerant pressure and temperature simultaneously. It then calculates and displays superheat. It has a 1/4" industry standard fitting for actual pressure. A pipe clamp thermocouple is included for temperature. Select R22 or R410A. Select english or metric units.

### Use it your way



EHDL1 AHDL1 w/ Meter DL3 HS30

### Pressure and vacuum

**Working range (pressure):**

0 to 500 psi; 0 to 4000 kPa

**Maximum displayed pressure:** 800psi

**Working range (vacuum):**

29"Hg vac. to 0; 74cmHg vac. to 0

*Vacuum will show up as negative value on meter.*

**Resolutions:** 0.1psi, 0.1"Hg vac.

**Accuracy:**

@ 50°F to 115°F ambient, ±1 psi, ±6.9 kPa

@ 32°F to 122°F ambient, ±2 psi, ±13.8 kPa

**Sensor breakdown pressure:** 1300psi

### Temperature

**Range (temperature):** -40°F to 400°F;

-40°C to 204°C

**Resolutions:** 0.1°

**Sensor type:** k-type thermocouple

**Pipe clamp thermocouple accuracy:** ±4°F or

±0.75%, whichever is greater, -30°F to 200°F

**System accuracy:** ±1°F; ±0.06°C @ 73°F ± 5°F

after ice water calibration (see Field calibration).

### Superheat

**Range (temperature):** 0°F to 80°F; 0°C to 27°C

**Resolutions:** 0.1°

**System Accuracy:** ±1°F; ±0.06°C @ 73°F ± 5°F after calibration (see Field calibration).

### How to use

1. Connect to COM and Volts jack. Slide ASH3 superheat head onto Fieldpiece "stick" meter, data logger, electronic handle or connect to most other meters using Fieldpiece ADLS2 deluxe test leads or AHDL1 handle.
2. Set meter to mVDC range.
3. Calibrate if needed (see Field calibration)
4. Hand tighten 1/4" flare to suction line as close to the evaporator as possible using an EPA approved service hose (not included).
5. Select refrigerant (R22 or R410A) and units (English or metric).
6. Connect the pipe clamp to the suction line at least six inches from the compressor and slide it under the insulation for best accuracy isolating the pipe clamp from the ambient air (pg. 2).
7. Select parameter to display (superheat, pressure, or temperature).
8. You must wait until the system you are testing has stabilized completely before you can take an accurate superheat reading, this usually takes about 10-15 minutes. The STABLE LED lights when superheat is stable.
9. Disable Auto-off to data log any of the above parameters with the DL2 data logger.
10. Once you have the superheat reading follow the manufacturer of the air conditioner's specifications to properly charge or diagnose the system.

### One year limited warranty

This head is warranted to the original purchaser against defects in material and workmanship for a period of one year from the date of purchase. During the warranty period, Fieldpiece will replace or repair the defective unit, subject to verification of the defect.

Any damage to the sensor from dirt, mechanical abuse, or overexposure to damaging chemicals, including overexposure to carbon monoxide, are not covered under this warranty. Also not covered are defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use.

ANY IMPLIED WARRANTIES ARISING OUT OF THE SALE OF A FIELDPIECE INSTRUMENT PRODUCT, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE ABOVE. FIELDPIECE SHALL NOT BE LIABLE FOR LOSS OF USE OF THE INSTRUMENT OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, OR ECONOMIC LOSS, OR FOR ANY CLAIM OR CLAIMS FOR SUCH DAMAGE, EXPENSES, OR ECONOMIC LOSS.

Local laws vary. 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 by location.

### Field calibration

**Temperature:** To calibrate the system (ASH3, pipe clamp thermocouple, meter), adjust the calibration pot underneath the rubber covering while measuring a known temperature. Ice water is very close to 32°F and is readily available.

1. Stabilize a large cup of ice water.
2. Select temperature on ASH3, plug in the pipe clamp thermocouple and then immerse entire clamp into the ice water.
3. Adjust the calibration pot to read 31.3 on the DMM for optimum accuracy at room temp.

**Pressure:** The pressure/vacuum reading prior to connecting to an A/C system should always be zero. If you see that you're getting pressure readings of something other than zero without your service hose attached, you need to set atmospheric pressure before connecting the ASH3 to the system. To set atmospheric pressure, press the button underneath the rubber covering entitled "Set ATM". You usually have to set atmospheric pressure each time you dramatically change elevations. For example, if you "Set ATM" in Denver and take a pressure reading of an A/C system in Los Angeles, the pressure reading in Los Angeles will be lower than it actually is.

### Service

Return any defective SVG2 to Fieldpiece for warranty service along with proof of purchase. Contact Fieldpiece for out of warranty repair charges.



Fieldpiece Instruments, Inc.  
California, U.S.A.  
[www.fieldpiece.com](http://www.fieldpiece.com)

