Quick Start

1. Install six AA batteries into rear battery compartment. Batteries included in packaging.
2. Press the center blue button for 1 second to turn on your new manifold.
3. Connect hoses and pipe clamps to the manifold and the system.
4. See real-time pressure and temperature measurements all at once!

Description

Your SMAN360 is the top of the line two-valve Digital Manifold and Micron Gauge for HVACR professionals. See all your pressures and temperatures at the same time on the redesigned large display with bright blue backlight.

SMAN360 combines high precision, absolute pressure sensors, a superheat/subcooling calculator, true micron gauge for vacuum, and dual temperature measurements. Your SMAN360 calculates and displays target superheat and actual superheat to verify proper charge.

SMAN360 is designed to meet the demands of HVACR field service with a rugged rubber boot for durability, a strong metal hanger for easy storage and a form fitting, water resistant, padded nylon pouch. SMAN360 has a very intuitive user interface and long battery life.

Certifications

- RoHS Compliant
- C-Tick (N22675)
- CE

Functions

Superheat and Subcooling

Your SMAN360 can calculate and display both superheat and subcooling simultaneously.

1. Select the appropriate refrigerant using the REFRIGERANT button. Connect EPA-approved refrigerant hoses to low and high side on SMAN360. Plug Type K thermocouple pipe clamps to SLT and LLI.
2. Connect your SMAN360 to the system:
   - Superheat: Hand tighten low side hose to suction line service port. Place the SLT pipe clamp thermocouple on the suction line between the evaporator and compressor, no closer than 6 inches to compressor.
   - Subcooling: Hand tighten high side hose to liquid line service port. Place the LLI pipe clamp thermocouple on the liquid line between the condenser and expansion valve (OXV), as close to the service port as possible.
3. Turn your SMAN360 to the system wait 15 minutes before changing superheat or subcooling to ensure the system is stabilized.
4. To add or remove refrigerant connect a refrigerant or recovery tank to the center port on SMAN360. Follow recommended charging or recovery practices from equipment manufacturer. Use the low side and high side valves on SMAN360 to charge or recovery refrigerant as needed. Let system stabilize for 15 minutes.

- Note: When superheat and/or subcooling cannot be calculated within these ranges to calculate target superheat.
- Note: If the inputted temperature is out of the calculable range for vacuum levels are low enough, the display will automatically display a static target superheat calculation.

Changing Units

Your SMAN360 can display and pressure and temperature measurements in English, Metric, or combination of both units.

1. Press UNITS to enter unit selection screen.
2. Use ARROW to select your desired pressure units. Press ENTER.
3. Use ARROW to select your desired temperature units. Press ENTER to return to pressure units.
4. Press UNITS to return to normal SMAN display.

Pulling a Vacuum

Follow all manufacturers’ evacuation procedures over those in this manual.

1. Connect your SMAN360 to your vacuum pump and the system, then power on your SMAN360.
2. Set vacuum alarms. There will notify you when you’ve reached your desired vacuum and stabilization levels. See Set Vacuum Alarm instructions below.
3. Pull a vacuum on the system. SMAN360 will automatically sense the negative pressure and begin to display in microns. Once the vacuum alarms are low enough, the display will automatically change to show subcooling in microns. Once in micron mode the inflection readings will no longer display.
4. The rate at which the vacuum levels are changing will be displayed in microns per minute. The smaller the rate of change, the closer you are to stabilization.

Set Vacuum Alarms

1. Hold ALARM for 1 second to enter Alarm Set Mode. The first digit of LI alarm will blink.
2. Use ARROWS to change the blinking number. Press ENTER to lock in a digit and move to the next digit. Repeat for all HI alarm digits.
3. Press UNITS to return to pressure units.
4. Repeat steps 2 and 3 for the other temperature. The calculated target superheat will show in the center column of the display. A solid red module will display to the left of the TIH calculation indicating a static target superheat calculation.

- Note: In the inputted temperature is out of the calculable range for vacuum levels are low enough, the display will automatically display a static target superheat calculation.

Auto Power Off (APO)

To conserve battery life, your SMAN360 will power down after 30 minutes of inactivity. APO is activated by default and APO displays above the battery icon. In deactivate, press and hold ENTER while powering on the SMAN. When deactivated, APO will no longer show above the battery icon.
1. Stabilize a large cup of ice water by stirring. Pure, distilled water will prevent contaminants from affecting your temperature readings.
2. Open all knobs/valves, and cap all the ports except for the central port.
3. Drop enough Isopropyl (rubbing) alcohol (>70%) into the central port to cover the condenser. Note: You may cause damage to the sensor.
4. Cap central port and gently shake your SMAN upside down to mix and out contaminents.
5. Turn right side up. Open a port to pour out the rubbing alcohol and open all ports to allow sensors to dry out; usually an hour or so.

Cleaning the Sensors
Over time, the vacuum of the SMAN360 may become contaminated with dirt, oil, and other contaminants introduced from pulling vacuums.

1. Never use an object such as a cotton swab to clean the sensor, you may cause damage to the sensor.
2. Open all back/valves, and cap all the parts except for the center port.
3. Drop enough Isopropyl (rubbing) alcohol (>70%) into the uncapped port using an eye dropper or funnel so that it can flush out contaminents.
4. Cap central port and gently shake your SMAN upside down to clean sensor.
5. Turn right side up. Open a port to pour out the rubbing alcohol and open all ports to allow sensors to dry out; usually an hour or so.

Obtaining Service
Email Fieldpiece warranty department at fpwarranty@fieldpiece.com for current fixed price repair service. Send check or money order made out to Fieldpiece Instruments for the amount quoted. If your meter is not in warranty there will be no cost for the repair/replacement. Send your 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 conventional mail.

For international customers, warranty for any Fieldpiece product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to a Fieldpiece 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 of such damage, expenses, or economic loss. State laws vary. The above limitations or exclusions may not apply to you.