



# SP670 Smart Pressure Probe

## Instruction Manual



Scan to download  
the TPI View app:



## Description

The TPI SP670 Smart Pressure Probe is used to measure pressure on refrigeration systems. It connects to a smart device using the TPI View App. It sends live measurement data and can be used in conjunction with the SP323 Smart Temperature Clamp Probe to calculate Superheat and Subcooling using the App. The angled ¼' fitting allows access to service ports in close spaces.

The SP670 Schrader Valve Depressor is adjustable for use with worn valves in test ports. It can be serviced as well to extend the life of the probe.

## OPERATION

**WARNING:** The SP670 reads up to 870 PSI and is overpressure protected to 1000 PSI. Never apply more than 1000PSI as damage to the sensor may result.

1. Install the TPI View App on your smart device.
2. Press and hold the SP670 on/off key for approximately 2 seconds to turn the smart probe on. An orange LED will blink indicating the SP670 is ready to be paired.
3. Open the View app and tap 'Start Scanning for TPI Smart Instruments'. Tap on SP670 to connect it to the app..
4. The live reading will be displayed on the app. Units are selectable by tapping on the box next to the live reading.

## SUPERHEAT & SUB-COOLING

Connecting two SP670's and two SP323 smart temperature clamps allow superheat and sub-cooling to be calculated.

1. Turn on each SP670 and SP323, open the app and allow the smart probes to connect.
2. Connect the probes to the Suction (low side) and Liquid (high side) lines.
3. Tap on 'Refrigeration' in the app. For the Suction Line tap on 'Pressure Select' to assign the SP670 connected to the suction line from the available devices. Repeat this for the 'Temp Select' to assign the SP323 connected to the suction line. Repeat step 3 for the Liquid Line connected smart probes.
4. Tap on the refrigerant canister to select from favorites. Tapping on the gear also allows units of measure to be changed as needed. The Pressure, Temperature and Vapor Saturation, and Liquid Saturation will be displayed on the app.

**IMPORTANT:** When connecting the SP670 to a test port do not use the body of the instrument to tighten the connection. Only turn the knurled knob of the smart probe. Using the body of the instrument can result in damage to the SP670. Do not overtighten when connecting to the test port or damage to the SP670 and port may result.

## LED INDICATOR

The SP670 uses a multi-colored LED to indicate operational status.

**Orange** blinking LED – SP670 is on and ready to connect to the smart device

**Green** blinking LED – SP670 is connected to a smart device

**Red** blinking LED – Batteries need to be replaced

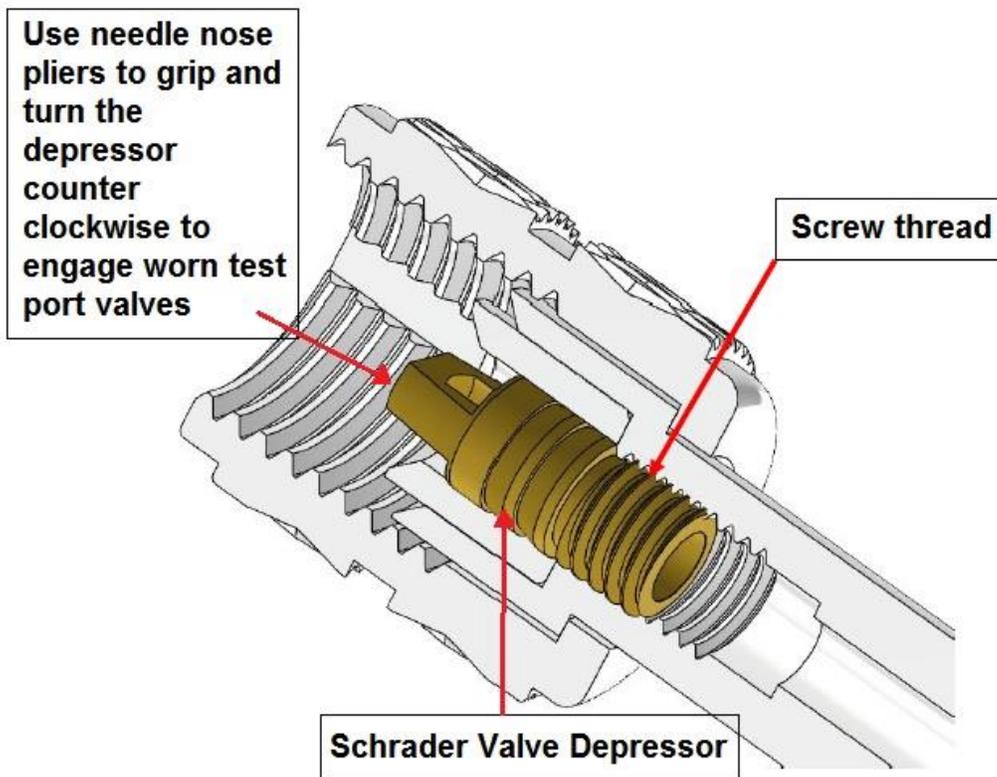
## AUTO POWER OFF

If the SP670 is not connected to a smart device for more than 8 minutes it will auto power off. When connected to a smart device the auto power off is disabled.

## SCHRADER VALVE DEPRESSOR ADJUSTMENT

The SP670 uses an adjustable Schrader valve depressor. This is useful for use on worn Schrader valves. If the depressor is unable to engage the valve enough to open it, the SP670 depressor can be adjusted outward to make better contact.

1. Using needle nose pliers, carefully turn the Schrader valve depressor of the SP670 counter clockwise so it is further out towards the fitting opening. This will allow it to engage the test port valve. See picture below.



## GENERAL MAINTENANCE

**Housing:** The SP670 can be wiped down with a damp lint free cloth. Do not use any cleaning agents including solvent or soap.

**Battery Replacement:** When the LED indicator blinks Red the batteries need to be replaced.

1. Turn the SP670 off. Loosen the battery cover screw and open the cover.
2. Remove the three AAA batteries from the battery holder.
3. Install three new AAA alkaline batteries into the holder observing correct polarity. Note: Battery level is displayed in the Smart Probe app.

**Schrader Depressor and Gasket:** The white gasket that seals the SP670 probe to a service port can wear over time causing leaks. In addition the Schrader depressor can also wear or be damaged. Overtightening or connection to damaged ports can also cause this.

Follow these steps to replace the Schrader depressor and/or the gasket.

1. Using needle nose pliers, grasp the Schrader depressor and turn valve counter clockwise.



- 2 Remove and replace the Schrader depressor and/or the worn gasket.



- 3 Install the gasket and screw in the Schrader depressor. (New Schrader depressor and gasket are part number A670)

## SPECIFICATIONS

<b>Pressure Range</b>	-14.7 psi to 870 psi (-1 bar to 60 bar)
<b>Over Pressure Range</b>	1000 psi (70 bar)
<b>Input Connection</b>	7/16"-20 UNF / 1/4" SAE
<b>Resolution</b>	0.1 psi / 0.01 bar
<b>Accuracy</b>	+/- 0.5% of full scale
<b>Battery Life</b>	Approximately 160 hours
<b>Battery Type</b>	AAA x 3 alkaline
<b>Operating Temperature</b>	32 °F to 122 °F (0 °C to 50 °C)
<b>Storage Temperature</b>	-4 °F to 140 °F (-20 °C to 60 °C)
<b>Humidity</b>	0 to 80 %RH
<b>Weight</b>	5.64oz (160g)
<b>Bluetooth</b>	5.0 (350 foot range depending on obstacles)



FCC ID: QOQBGM113

IC (Industry Canada) ID: 5123A-BGM113



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See [www.tpieurope.com](http://www.tpieurope.com) for CE and UKCA Certificate of Conformity

## **SP670 STANDARD ACCESSORIES**

A670SP – Soft Pouch for SP670

## **SP670 OPTIONAL ACCESSORIES**

A670 – Replacement Schrader valve depressor and gasket

A931 – Carrying case capable of holding (2) SP670 pressure probes, (2) SP323 temperature clamps, and (2) A597 humidity probes

## **WARRANTY**

This product is warranted to the purchaser against defects in material and workmanship for three years from the date of purchase.

**Covered by Warranty:** Repair parts and labor; or replacement of the product at company's option. Normal transportation charges to the purchaser are also covered.

**Not Covered by Warranty:** Damages to the product which are the result of abuse, improper use or maintenance are not covered. Any other expense, consequential damages, incidental damages, or incidental expenses including damages to property are not covered. Transportation expenses to the company are not covered.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

**To Obtain Warranty Performance:** Include with the product: your name, address, phone number, written description of the problem and proof of purchase date. Carefully package and return to:

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**Implied Warranties:** Any implied warranties including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to three years from date of purchase. To the extent any provision of this warranty is prohibited by federal or state law and cannot be preempted, it shall not be

applicable. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**NOTES**

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