



UltraLow DP Sensor: TPS-30KPA.BOX

Low DP Sensor: TPS-200KPA.BOX

High DP Sensor: TPS-650KPA.BOX

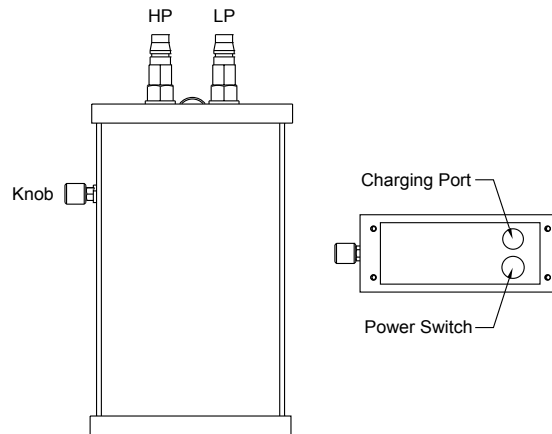
Hydraulic Balancing Debugging Instrument

TPS is a debugging instrument for measuring and documenting of differential pressure, flow, temperature and power consumption in hydronic systems. It connects to the handset APP software via bluetooth which could debug faster and more economical.

TPS-DP Sensor Technical Parameters

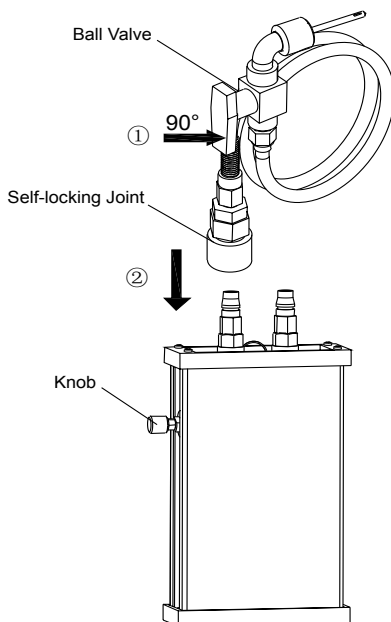
Max. Permissible Pressure	650kPa
	TPS-30KPA.BOX: 0~30kPa (suitable for DRV)
DP Measurement Range	TPS-200KPA.BOX: 0~200kPa(suitable for DRV)
	TPS-650KPA.BOX:0~650kPa(suitable for DPCV)
Pressure Range during Flow measurement (Recommended Value)	TPS-30KPA.BOX: 3~30kPa
	TPS-200KPA.BOX: 3~200kPa
	TPS-650KPA.BOX: 3~650kPa
Medium Temperature	-20~120°C
Measurement Deviation	DP Sensor: ≤0.5%
	Flow: DP Deviation+ Valve Deviation
Battery Capacity	3000mA
Operating Time	>20 h
Charge Time	6 h
Protection Level	IP64
Ambient Temperature	Operating and Charging Status: 0~40°C
	Storage Status: -20~60°C (Do not leave water in the sensor when there is a risk of freezing)
Ambient Humidity	Max. 90%RH
Charger	Output Voltage: 12.6V DC
	Output Current: 500mA
Applicable System	Android
Dimension	L*W*H=470*355*150mm

DP Sensor Panel



- HP : Connect the measuring hose (red) to high pressure end of DP sensor.
- LP : Connect the measuring hose (blue) to low pressure end of DP sensor.
- Knob: Tighten the knob clockwise, unscrew it anti-clockwise
- Charging port: Charge up the DP sensor
- Power switch: Self- return button power switch, press to power on the DP sensor and the power indicator light is lit. Press again to power off the DP sensor and the power indicator light is off.

Operation Instruction



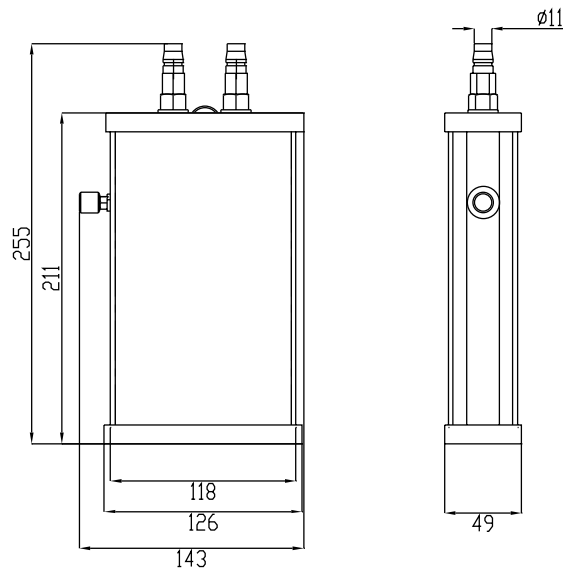
1. Rotate anticlockwise the knob (thread length is 5-7mm), connect the red and blue measuring hoses to the HP end and LP end respectively.
2. Power on and open the APP software "Hydraulic Balancing Debugging Instrument", click "search", connect the sensor according to the MAC on it.
3. Exhaust: Close the ball valve on the red measuring hose, make the measuring needle insert into the testing point of the valve-red one, open ball valves on the red and blue measuring hose separately and exhaust internal air. When the needle of the blue measuring hose exhausts continuous water column, the exhaust was completed. Close the ball valve on the blue measuring hose, make the measuring needle insert into the testing point of the valve-blue one.
4. The exhaust must be completed before click "calibrate" to zero clearing.
5. Open the ball valve on the blue measuring hose, close the knob clockwise and do the debugging.
6. Set relevant parameters in "formula bar".
7. Click "data storage" to record the value after debugging.
8. After testing, rotate anticlockwise the knob, close those two ball valves and pull out the measuring needles, power off the sensor.
9. After all above, open those two ball valves and exhaust the internal water in measuring hose and sensor.

Notice:

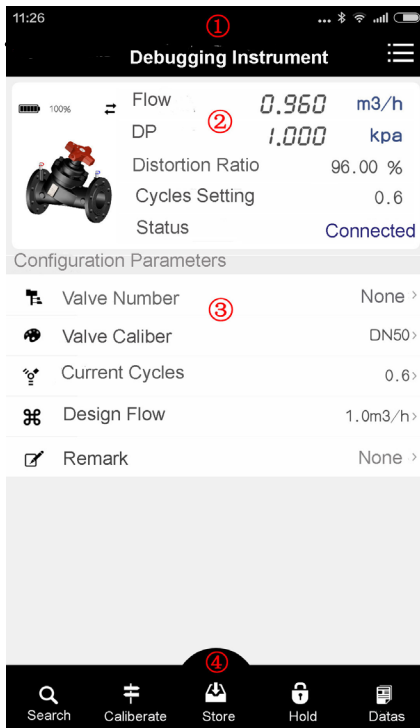
1. All of above operations should be finished when the instrument is placed horizontally.
2. The HP and LP are not allowed to be inversely connected.
3. When test high pressure, high temperature liquid medium, please put on heat-resistant gloves and any other necessary protectors to ensure the security of the testing process.



DP Sensor Dimension



Interface Introduction



① Menu Bar: include language, settings, toolings and about.

Language: chinese-english switch

Settings: set the normal operation information, such as project name, company selection and so on.

Toolings: reserved

About: soft and database version

② Display Bar:

The left: the battery status, product icon. When the connection works, this icon

will flicker.

The right: the current flow, DP and current cycles, Distortion Ratio (actual flow/ setting flow), connecting status of device.

③ Formula Bar: input basic testing parameters, including valve number, caliber choice, current cycles, design flow, remark info. and so on.

④ Operation Bar: include calibrate, search, datas, hold and store

Calibrate: calibrate the zero drift of the instrument.

Search: search for Bluetooth devices.

Store: store the current measuring value.

Datas: view the current records and xls spreadsheet management.

Hold: hold the current data.

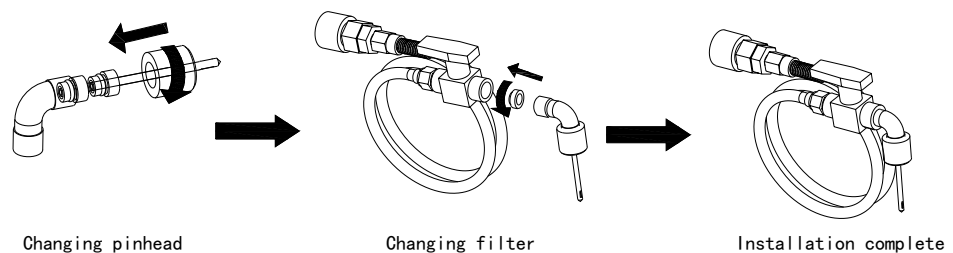
Contents

TPS-30KPA.BOX Contents			
Item	QTY	Item	QTY
DP sensor TPS-30KPA	1	3*150 allen wrench	1
Handheld Unit(With charger)	1	5*200 allen wrench	1
Measuring hose with needle100mm, Red	1	8*350 allen wrench	1
Measuring hose with needle100mm, Blue	1	Utility knife	1
Standby filter	2	Flashlight	1
Standby needle	1	Awl	1
Charger for DP sensor	1	Case	1
Neck strap	1	Operation instruction	1

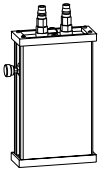
TPS-200KPA.BOX Contents			
Item	QTY	Item	QTY
DP sensor TPS-200KPA	1	3*150 allen wrench	1
Handheld Unit(Charger included)	1	5*200 allen wrench	1
Measuring hose with needle100mm, Red	1	8*350 allen wrench	1
Measuring hose with needle100mm, Blue	1	Utility knife	1
Standby filter	2	Flashlight	1
Standby needle	1	Awl	1
Charger for DP sensor	1	Case	1
Neck strap	1	Operation instruction	1

TPS-650KPA.BOX Contents			
Item	QTY	Item	QTY
DP sensor TPS-650KPA	1	3*150 allen wrench	1
Handheld Unit(Charger included)	1	5*200 allen wrench	1
Measuring hose with needle100mm, Red	1	8*350 allen wrench	1
Measuring hose with needle100mm, Blue	1	Utility knife	1
Standby filter	2	Flashlight	1
Standby needle	1	Awl	1
Charger for DP sensor	1	Case	1
Neck strap	1	Operation instruction	1

Parts Installation Instruction



Accessories



DP sensor (TPS)

Mainly used for measuring differential pressure, handheld unit can connect to the DP sensor by Bluetooth function.

Specifications

Article No

Ultra LP (0~30kPa)	TPS-30KPA
LP (0~200kPa)	TPS-200KPA
HP (0~650kPa)	TPS-650KPA

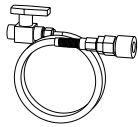


Handheld Unit

With charger

Article No

TMOBILE-1



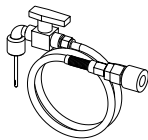
Measuring hose

With shutoff valve

Length[mm]

Article No

100	Red	TPS-001-R
100	Blue	TPS-001-B



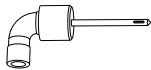
Measuring hose with needle, angle

With shutoff valve and measuring needle

Length [mm]

Article No

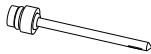
100	Red	TPS-002-R
100	Blue	TPS-002-B



Measuring needle, angle

Article No

TPS-003



Pinhead

Article No

TPS-004



Filter

Measuring hose parts

Article No

TPS-005



Allen wrench

Specifications

Article No

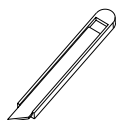
3mm	TPS-006-3
5mm	TPS-006-5
8mm	TPS-006-8



Awl

Article No

TPS-007

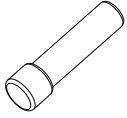


Utility knife

Article No

TPS-008

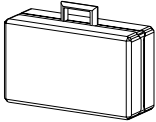
Accessories(cont.)



Flashlight

Article No

TPS-009



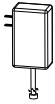
Case

Dimension

Article No

470*355*150mm

TPS-010



Charger

For DP sensor and P/Temp sensor

Article No

TPS-011



Neck strap

Article No

TPS-012

