

# TA-SCOPE

## Quick Guide

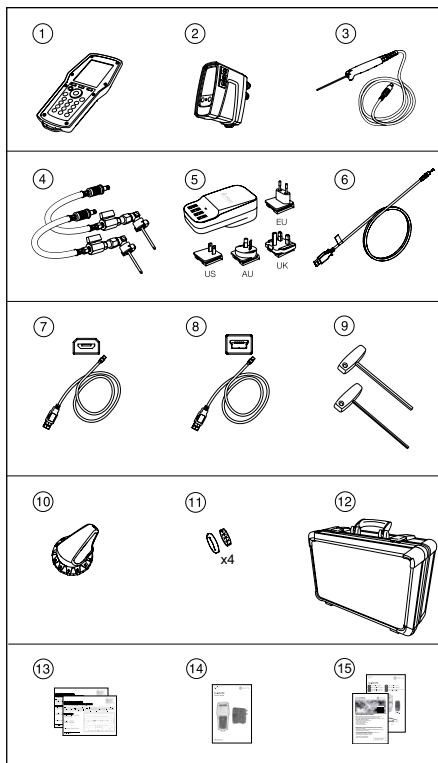


# Welcome to your new TA-SCOPE

## Instrument and measuring equipment



- 1 Handheld unit (Hh)
- 2 Dp Sensor unit (DpS-Visio)
- 3 Digital Temperature Sensor (DTS)
- 4 Measuring hoses with probe
- 5 Multi-charger for Handheld and Dp Sensor(s)
- 6 USB charging cable; Hh - Multi-charger
- 7 USB-cable for connection; Hh - DpS-Visio / PC - DpS-Visio / DpS-Visio - Multi-charger
- 8 USB-cable for connection; Hh - PC
- 9 Allen Keys 3 mm/5 mm
- 10 Presetting tool TBV-C, -CM, (-CMP)
- 11 Spare filters and O-rings for hoses (4 pcs)
- 12 Case
- 13 Calibration certificates for DpS-Visio and DTS
- 14 Quick Guide
- 15 TA-SCOPE Portal / Guarantee/Service/ Calibration form



**CAUTION!** Read the user manual before using the product. Complete TA-SCOPE manual available on [www.imi-hydronic.com](http://www.imi-hydronic.com).

## Handheld

The display is divided into three areas, the Information bar, the Main display and the Function keys.



### Information bar

Icons on the Information bar display details of battery status, connection type and intensity.

	Battery status bar
	Charging of battery
	Battery symbol
	Handheld
	Dp sensor DpS-Visio
	Dp sensor (older version)
	Wireless communication
	Intensity of wireless signal
	Wireless signal set to Off
	Connection by cable

### Main display

Instructions on how to carry out hydronic functions are shown on the Main display.

### Function keys

The three top keys on the keypad are used for selecting options shown in the lower part of the Main display. The options vary depending on which menu is currently shown.

### Keypad

The keypad has alphanumeric keys. Select a letter by repeatedly pressing the key until the desired letter appears. Prolonged press enters a digit.

Press function key “Language” to select desired language.

	Function key <i>Options depend on text in display</i>
	On/Off
	Flow adjustment (Computer method) <i>Short cut button</i>
	Return/Escape
	Enter
	Navigation up/down
	Navigation right/left
	Alphanumeric <i>0-9, A-Z plus symbols</i>

## DpS-Visio

The display is divided into three areas, the Information bar, the Main display and the Function keys.



**Note!** Never leave water in the Dp sensor unit when risk of freezing exists (i.e., in the car during winter).



### LED for battery status

### Information bar

Icons on the Information bar display details of battery status, connection type and intensity.

### Main display

Shows status and measurement, see page 5, 6 and 8.

### Function keys

#### Arrow button

- Press button to start measurement or change settings

#### On/Off button

- Long press for switching unit on or off  
- Short press for display on or off

#### Navigate button

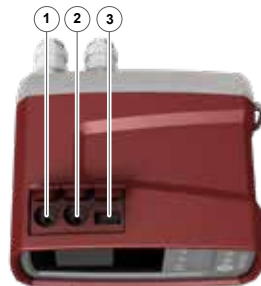
- Jump between menus

## Connections for cables



### DpS-Visio connections

- 1 Temperature probe 1 (SPTP or DTS)
- 2 Temperature probe 2 (SPTP or DTS)
- 3 Charger and USB to Handheld



### Handheld connections

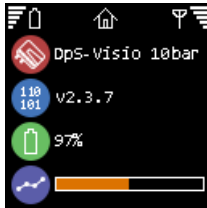
- 1 Charger
- 2 USB to PC
- 3 Temperature probe (SPTP or DTS)
- 4 USB to Dp Sensor

## DpS-Visio – Main screen sequences



### Navigate button

Short press: Browse between menus described here  
Long press: Entering setting menu (see page 6)



### Home

DpS-Visio type (5 or 10 bar)

Software version number

Battery level

Logging progress (Replaced by  when a logging is waiting to start)



### Logging

Logging progress (Replaced by  when a logging is waiting to start)

Progress in time / Total logging time

Time-step

Last logged values

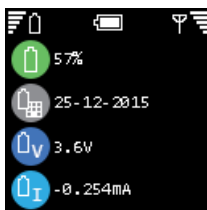


### Info

Software version number

Wireless software version number

Serial number



### Battery

Battery level

Battery installation date

Battery voltage

Battery current (+ when charging)



### Calibration

Dp range

Date of last factory calibration

Date of next recommended factory calibration

## DpS-Visio – Settings menu

In the settings menu, customised adjustments of the DpS-Visio and information representation are managed.



Long press to open settings menu  
Long press to close settings menu  
Short press - jump to next screen



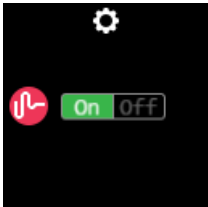
Arrow button to change settings



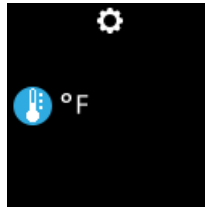
Settings are open



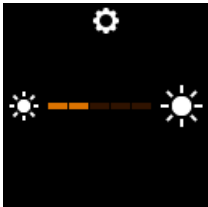
Change Dp measuring unit



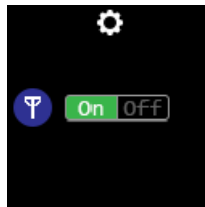
Toggle Dp filtering on/off



Change temperature unit



Change display brightness level



Toggle radio on/off



Change time to display auto off



Long press ⓘ to close settings menu

# Quick measure – Handheld + DpS-Visio

## Measure flow



**Warning!** Beware of hot fluid in the valve. Always follow the sequence described in the manual when connecting and disconnecting the measuring equipment.



**Warning!** The surface on the Dp sensor unit can be hot while measuring on hot media. Always use suitable safety equipment.

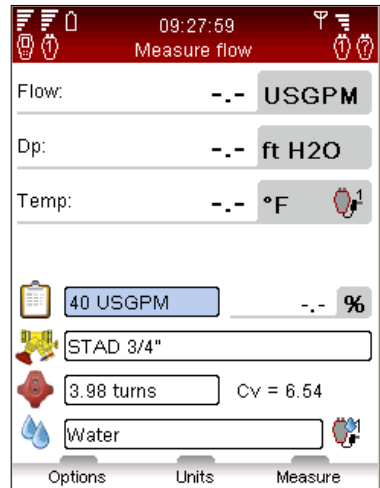
1. Turn the handheld (Hh) and the Dp sensor (DpS-Visio) on.
2. Connect measuring equipment.



3. Hh: Navigate to **Quick Measure** in the main menu and press enter.
4. Hh: Navigate to **Measure Flow** and press enter.

Water temperature over 125°F (52°C) can cause severe burns instantly or death from scalds. Always consider the risks of injury from hot water before starting any measurement on a heating system and follow relevant local legislation, regulations, standards and good industry practice for working with pressurised hot water systems. Always use appropriate personal safety equipment when working on a heating system. Examples of appropriate safety equipment include (but are not limited to) a face shield, heat resistant rubber gloves and boots and a long sleeved apron (long enough to cover the tops of the boots). Always wear your boots inside your trouser legs to prevent/minimise any hot water flowing into your boots. IMI Hydronic Engineering will not take any responsibility for injury howsoever caused by hot water during measurement.

5.



5:1

5:2

5:3

5:4

- 5:1 Input the given Design Flow for the terminal.
- 5:2 Define valve.
- 5:3 Input Valve Opening.
- 5:4 Define fluid.

6. Hh: Press function key **Measure** to start measuring.  
(The DpS-Visio will automatically calibrate and then go to measuring mode.)

# Quick measure – DpS-Visio

## Measure differential pressure and temperature



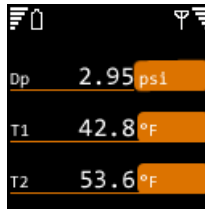
Short press or long\* press



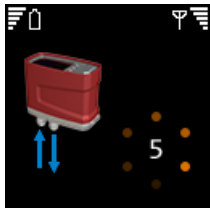
Double press



By-pass valve opening



Measurement without flushing and calibration



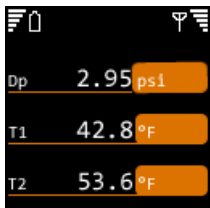
Flushing and calibration





By-pass valve closing



Brings back to main screen sequence



Measurement

\*) Keeping  pressed from the start keeps the calibration sequence in flushing phase. Flushing phase is ended by releasing 



# PC communication

## Download HySelect

Download and install HySelect from [www.imi-hydronic.com](http://www.imi-hydronic.com).

## Transfer of data

Connect TA-SCOPE to your PC to transfer data, e.g., hydronic networks and collected system information to and from the HySelect software.

Use the USB-cable to connect the Handheld to a PC and the HySelect software will automatically connect to TA-SCOPE. Simply follow the instructions on the PC.

## Software upgrade

When a new version of the TA-SCOPE software is available, HySelect will automatically suggest an upgrade. Simply connect your TA-SCOPE and follow the instructions on the PC.



# Care and storage recommendations

- TA-SCOPE can be cleansed with a damp cloth and a lenient cleaning-agent.
- Change filter in the hoses regularly.
- Never leave water in the Dp Sensor when risk of freezing exists (i.e., in a car during winter)!
- Do not expose to extreme temperatures, the battery may explode if disposed of in fire.
- Storage above 140° F is not allowed.
- Other usage than specified in this manual may cause damage to the unit or user.



**Warning!** Do not open the instrument. This can damage the instrument and void your guarantee! See user manual for further information.

# Calibration/Service

The instrument (Dp sensors, temperature sensors) has been calibrated before delivery. IMI Hydronic Engineering recommend a yearly calibration and service. (See Guarantee/Calibration/Service form).

Contact your local sales office for more information.

# Batteries

## Capacity and charging

Upon delivery the TA-SCOPE is partly charged and prepared to start balancing immediately. The Information bar on the Handheld displays the battery status for both Handheld and DpS-Visio whenever communication is established.

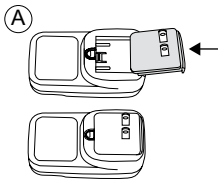
The Handheld and Dp sensor(s) can be charged at the same time through the multi-charger. The TA-SCOPE is delivered with one multi-charger and 2 charging cables.

Handheld is charged with a special charging cable. DpS-Visio with the same cable as used for communication with handheld (Hh) and PC.



## Charging – Operation instruction

(Choose the correct plug (fig A).)



1. Connect the multi-charger to the wall socket. Wait for the indicator to show green colour.
2. Plug the device(s) into the USB port(s).



**Warning!** The supplied multi-charger from IMI Hydronic Engineering must be used!



### CAUTION! (Multi-charger)

1. Do not bend the blade or pins of the plug.
2. If there are any strange sound, smoke or odor, pull of the cable(s) immediately.
3. Do not disassemble. (it may cause fire or electric shock).
4. Do not put any sharp objects into the venting hole. (it may cause fire or electric shock).
5. Ensure to plug the multi-charger firmly.
6. Ensure not to use damaged cable(s). (it may cause fire or electric shock).
7. Ensure not to place the multi-charger on a bed, bag or inside a closet that is not good for ventilation.
8. Always wipe off the multi-charger with a soft fabric, not water mop. (water may cause electric shock).
9. Keep the power plug and outlet clean. (dirt may cause a short circuit and fire).
10. Keep the product out of reach of children.

# Technical specification

## Measurement range

### Total pressure

-TA-SCOPE .....	max. 232 psi
-TA-SCOPE HP .....	max. 362 psi

### Differential pressure

-TA-SCOPE .....	0 - 72.5 psi
-TA-SCOPE HP .....	0 - 145 psi

### Recommended pressure range during flow measurements

-TA-SCOPE .....	0.02 - 72.5 psi
-TA-SCOPE HP .....	0.5 - 145 psi
Temperature liquid medium measurement .....	-4 - +248°F

## Measurement deviation

### Differential pressure

- TA-SCOPE .....	0.015 psi or 1% of reading, whichever is the highest
- TA-SCOPE HP .....	0.029 psi or 1% of reading, whichever is the highest
Flow .....	as for differential pressure + valve deviation
Temperature .....	<0.36°F

### Ambient temperature

During operation .....	+32 - +104°F
During charging .....	+32 - +104°F
During storage * .....	-4 - +150°F

*\*) Do not leave water in the sensor when there is a risk of freezing*

### Humidity

Ambient humidity .....	max. 90%RH
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### Sealing

Handheld unit (in wireless mode) .....	IP 64
Dp sensor unit DpS-Visio (in wireless mode) .....	IP 64
Digital temperature sensor .....	IP 65

*IP6X = dust tight*

*IPX4 = protected against splashing water*

*IPX5 = protected against water jets*

### Multi-charger

Input voltage .....	100-240 VAC
Input frequency .....	50-60 Hz
Output voltage .....	5 VDC
Output current .....	6800 mA
Connectors .....	EU, UK, US, AU/NZ

*Technical specifications valid at an altitude of max. 6560 ft.*

*We reserve the right to introduce technical alterations without prior notice.*

*IMI International Sp. z o.o., Olewin 50A, 32-300 Olkusz, Poland.*