PeakTech 5150 Differential Pressure Meter with USB User Manual

Unser Wert ist messbar….

**PeakTech® 5150
Operation Manual
Differential Pressure Meter**

Contents

Safety precautions

This product complies with the requirements of the following directives of the European Union for CE conformity: 2014/30/EU (electromagnetic compatibility), 2011/65/EU (RoHS).
To ensure safe operation of the equipment and eliminate the danger of serious injury due to shortcircuits (arcing), the following safety precautions must be observed. Damages resulting from failure to observe these safety precautions are exempt from any legal claims whatever.

- Do not use this instrument near high-energy circuits.
- Do not operate the equipment near strong magnetic fields (motors, transformers etc.).
- Do not place the equipment on damp or wet surfaces.
- Do not place water-filled containers on the equipment (danger of short-circuit in case of knockover of the container)
- Do not operate the meter before the cabinet has been fully closed.
- Comply with the warning labels and other info on the equipment.
- The measurement instrument is not to be to operated unattended.
- Always start with the highest measuring range when measuring unknown values.
- Do not subject the equipment to direct sunlight or extreme temperatures, humidity or dampness.
- Do not subject the equipment to shocks or strong vibrations.
- Keep hot soldering irons or guns away from the equipment.
- Allow the equipment to stabilize at room temperature before taking up measurement (important for exact measurements).
- Replace the battery as soon as the battery indicator appears. With a low battery, the meter might produce false reading.
- Fetch out the battery when the meter will not be used for long period.
- Periodically wipe the cabinet with a damp cloth and mid detergent. Do not use abrasives or solvents.
- The meter is suitable for indoor use only
- Do not store the meter in a place of explosive, inflammable substances.
- Do not modify the equipment in any way
- Do not place the equipment face-down on any table or work bench to prevent damaging the controls at the front.
- Opening the equipment and service – and repair work must only be performed by qualified service personnel

- Measuring instruments don't belong to children hands.

Cleaning the cabinet:
Clean only with a damp, soft cloth and a commercially available mild household cleanser. Ensure that no water gets inside the equipment to prevent possible shorts and damage to the equipment.

Features

1. Large LCD display with backlight.
2. Relative time clock on MAX MIN and AVG provides a time reference for measurement.
3. Zero and differential function for pressure measurement.
4. USB interface, for data connection to a PC.
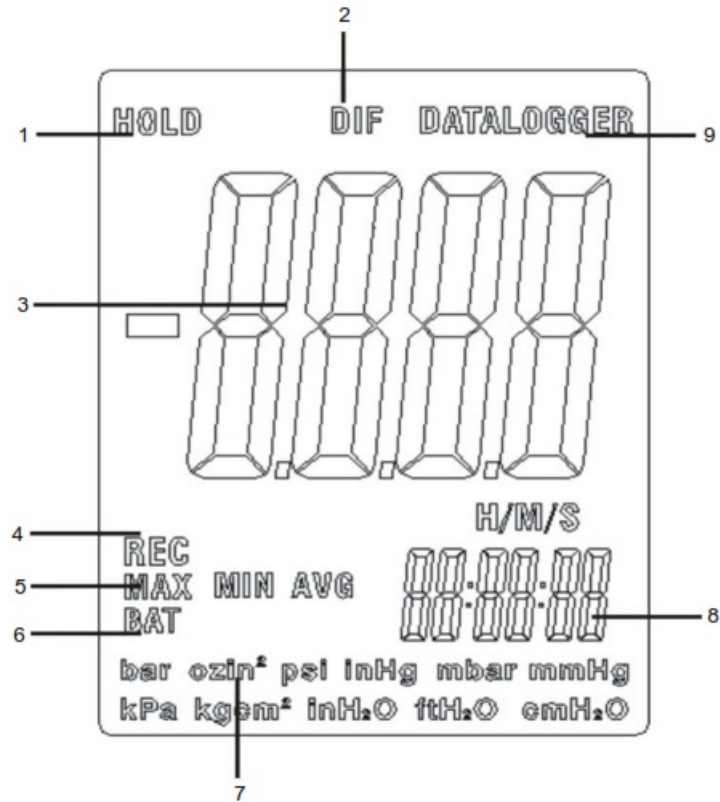5. Low battery indication, and Auto Power Off mode (Sleep mode) increases battery life.

Front Panel Description

1. Pressure input (+)
2. Differential pressure (-)
3. LCD-display
4. Press the "UNITS-button" to change the measurement unit.
5. Press the „☼-button" to turn on the backlight. Press it again to turn off the backlight.
6. Press the "DIF-button" during a measurement to start a differential pressure measurement between the following measurement value and the value while pressing the "DIF-key".

7. Press the "REC-button" to step through the maximum, minimum, and average readings.

   To exit the MAX/MIN/AVG mode, press the "REC-button" for 2 seconds to return to normal operation.
8. battery cover
9. Press the "ON/OFF-button" to turn the thermometer on or off.
10. Press the "HOLD-button" to freeze or unfreeze the displayed readings. Press the "HOLDbutton" and hold 2 seconds to zero out thedisplay.

Display Elements

1. Hold Function
2. Differential Mode
3. Primary Data screen
4. Record Mode
5. MAX/MIN/AVG
6. Low Battery indicator
7. Pressure Unit indicator
8. Relative Time Clock
9. Data output from USB
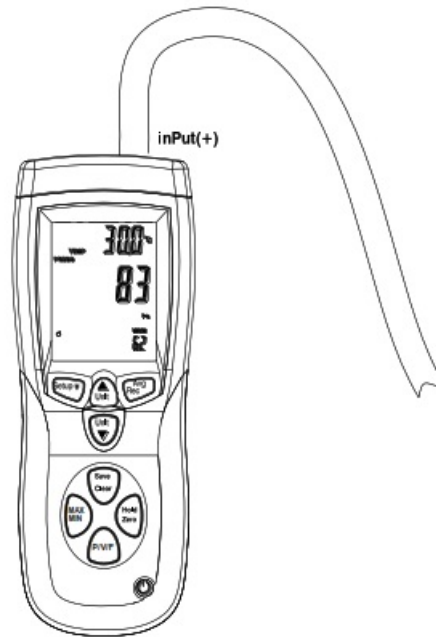
Auto Power Off Mode

The meter enters sleep mode (default). That is to say, the meter will automatically shut off after 20 minutes if no button press occurs for 20 minutes.

Operation

6.1. Measuring Pressure

The Primary Display number is Pressure value, the device measures Gauge/Differential Pressure, it features 11 selectable units of measure: PSI, mbar, hPa, inH2O, mmHg, ozin O, cmH2O, kgcm 2 , ftH 2 , bar 2

1. Press the "UNITS-button" to enter the pressure mode and press the "UNITS-button" to select unit.
2. Connect a single hose to the "Input (+)" port, leaving the "Ref (-)" port unconnected.

3. With the tubing open to ambient conditions press the "HOLD-button" and hold for 2 seconds to zero out the display.
4. Place the input hose in a different zone than the Meter.
5. The Meter displays the differential pressure of the input zone with respect to the reference zone.

For instance, a positive reading means that the input zone is positively pressured with respect to the Meter location or its reference zone.

6.2. Holding the Displayed Readings

1. Press the "HOLD-button" to freeze the readings on the display .The display shows HOLD.
2. Press the "HOLD-button" again to turn off the HOLD function

6.3. Viewing the MIN, MAX, and AVG Readings

1.   Press the "REC-button" to step through the maximum (MAX), minimum (MIN), or the average (AVG) readings. The elapsed time since entering MAX/MIN/AVG mode, or the time at which the minimum or maximum occurred appears on the display.
2. Press the "REC-button" for 2 seconds to exit MAX/MIN/AVG mode.

Specifications

7.1. General Specifications

Operating Conditions	0 to 50°C; <80% RH
Storage Conditions	-10 to 60°C; <80% RH
Power Supply	9V Battery
Low Battery Indicator	Yes
Dimensions (WxHxD)	75x203x50mm
Accessories	black and white hose, USB-cable, software for windows, battery and operation manual

7.2. Manometer specification

Accuracy	±0.3% FSO (25°C)		
Repeatability	±0.5% FSO		
Linearity/Hysteresis	±0.29% FSO		
Pressure Range	± 5 psi		
Maximum Pressure	20psi		
Response Time	0.5 Seconds typical		
Over range Indicator	Err. 1		
Under range Indicator	Err. 2		
	Units	Range	Resolution
	PSI	5.000	0.001
	mbar	344,7	0.1
	inH2O	138,3	0.1
	mmHg	258,5	0.1
	kPa	34,47	0,01
	in Hg	10,158	1
	Ozin2	80,00	0,01
	ftH2O	11,50	0,01
	cmH2O	351,5	0,1
	kgcm2	351	1
	Bar	344	1

1psi*27.68=inH2O
1psi*68.947=mbar
1psi*703.072=1*mmH2O
1psi*6894.6=Pa
FSO: Full Scale Output (The difference signal between zero and end point of range)

Error Codes

An error message will appear on the display if the meter fails an internal diagnostic test. And it will freeze all the buttons.

Err. 1: Pressure value is over the range.

Err 2.: Pressure value is below the range.

Err 3.: DIF function, the differential pressure value is over range.

Err 4.: DIF function, the differential pressure value is below range.
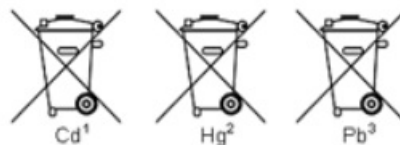
Replacing the Battery

When the entire display shows the low battery indication, the 9 V battery has fallen to a critically low voltage level and should be replaced as soon as possible.

1. Take off the battery cover at the button side of the instrument,

2. Remove the old battery and replace the new 9 V battery.

3. Make sure that the battery is installed to the right position and connected to the proper polarisation with the battery snap.

4. Put on the battery cover and let it snap in to secure.

Notification about the Battery Regulation

The delivery of many devices includes batteries, which for example serve to operate the remote control. There also could be batteries or accumulators built into the device itself. In connection with the sale of these batteries or accumulators, we are obliged under the Battery Regulations to notify our customers of the following:

Please dispose of old batteries at a council collection point or return them to a local shop at no cost. The disposal in domestic refuse is strictly forbidden according to the Battery Regulations. You can return used batteries obtained from us at no charge at the address on the last side in this manual or by posting with sufficient stamps.

Contaminated batteries shall be marked with a symbol consisting of a crossed-out refuse bin and the chemical symbol (Cd, Hg or Pb) of the heavy metal which is responsible for the classification as pollutant:

1. "Cd" means cadmium.

2. "Hg" means mercury.

3. "Pb" stands for lead.

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Documents / Resources

	PeakTech 5150 Differential Pressure Meter with USB [pdf] User Manual 5150, Differential Pressure Meter with USB, Differential Pressure Meter, Pressure Meter, Differential Meter, 5150, Meter

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