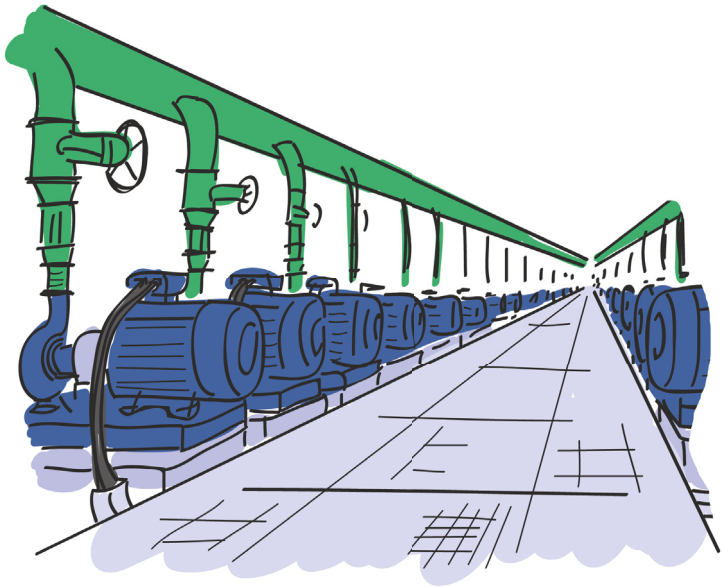
A4900 Step by Step

MASTER THE LANGUAGE OF YOUR MACHINERY



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Top Panel

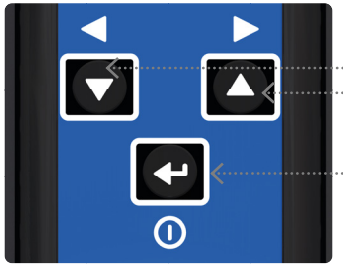
LED stroboscope

ACC ICP® - input

IR no-contact temperature sensor

Phones output

Buttons



Arrow buttons

Enter button

Batteries

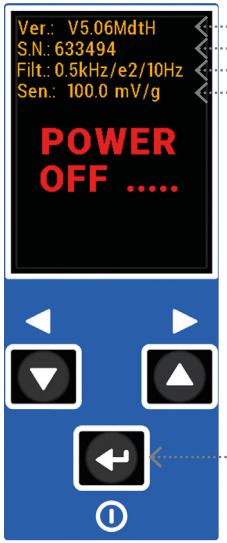
USB-C connector for charging and data transfer

Fast charging

Slow charging

Fully charged

Press the Enter button to switch on the device



Firmware version

Serial number

Filters

Sensor sensitivity

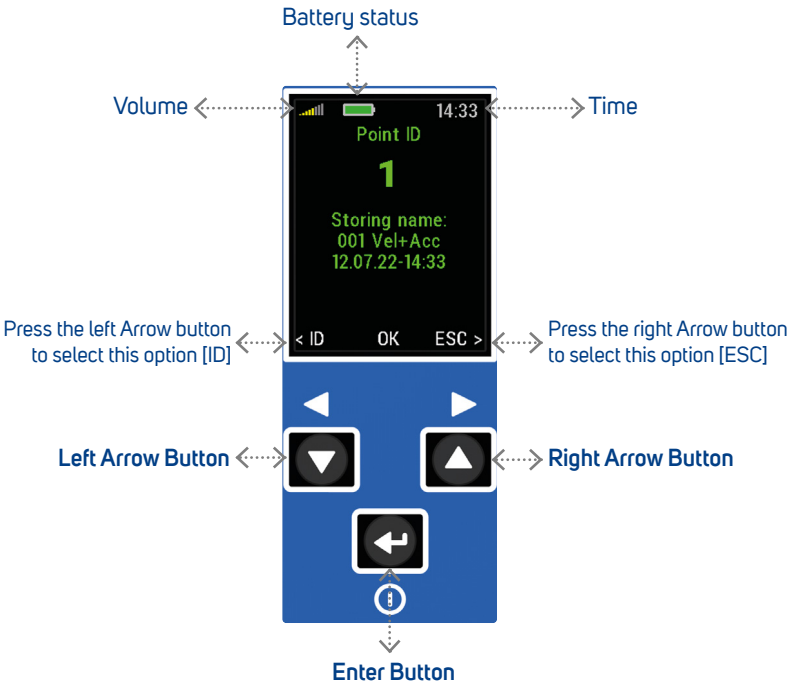
Press and hold the Enter button to switch off the device

Arrow Buttons

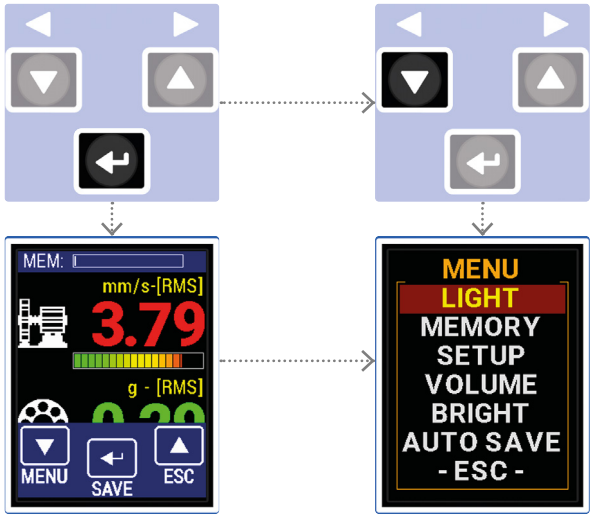
- switch between the measurement modes
- select the right or left item from the menu at the bottom
- move between items (up/down) in menu

Enter Button

- switches the instrument on/off
- confirmes the selection
- selects the middle item from the menu at the bottom
- opens the Basic menu

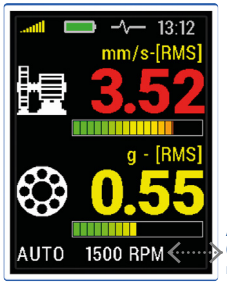


1. To open the Basic menu press the Enter button (on any measurement screen)
2. Then press the left Arrow button to open the Menu



3. You can select the following items from the menu:
   - **Light**
     to switch on the torch or the stroboscope (see page 11)
   - **Memory**
     for route measurement (see page 12 - 13)
   - **Setup**
     setup of speed, alarms, units, time, etc. (see page 14)
   - **Volume**
     for headphones volume setup (see page 15)
   - **Bright**
     setup of display brightness (see page 15)
   - **Auto Save**
     on-line data saving (see page 16 - 17)
   - **-Esc-**
     back to the measurement screen

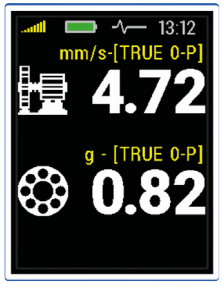
Overall values - RMS



Automatic speed detection (the speed can also be set manually)

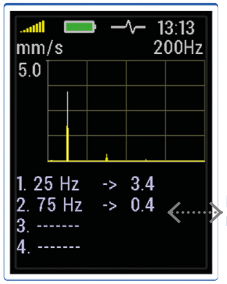
RMS vibration values:
10 - 1000 Hz in mm/s (ips)
0.5 - 16 kHz in g

Overall values - PEAK



Peak vibration values (0-P):
10 - 1000 Hz in mm/s (ips)
0.5 - 16 kHz in g

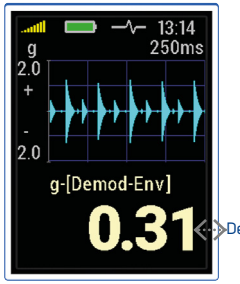
Spectrum



Displays the 4 top peaks found

FFT analysis of vibrations:
1 - 200 Hz in mm/s (ips) RMS

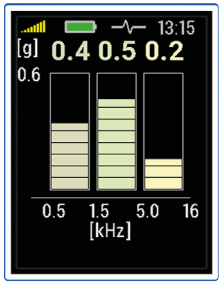
Demod time signal



Demod-Envelope value

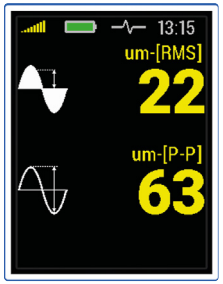
Demod time signal:
0.5 - 16 kHz in g

Frequency bands



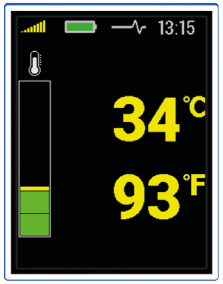
RMS vibration values:
0.5 - 1.5 kHz in g
1.5 - 5 kHz in g
5 - 16 kHz in g

Displacement



Overall RMS and Peak displacement:
2 - 100 Hz in µm (mils)
(see page 14 for setup)

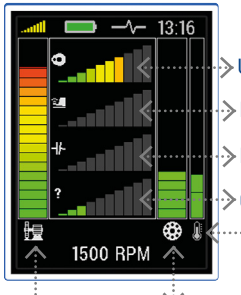
Temperature



Temperature in degrees Celsius and Fahrenheit:

- less than 30°C (86°F)
- 30 - 45°C (86 - 113°F)
- 45 - 60°C (113 - 140°F)
- 60 - 75°C (140 - 167°F)
- more than 75°C (167°F)

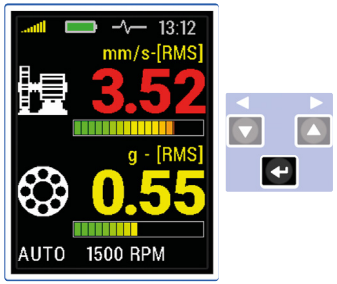
FASIT (Fault Source Identification Tool)



Unbalance
Looseness
Misalignment
Other failure
Bearing condition
Temperature
Overall machine condition

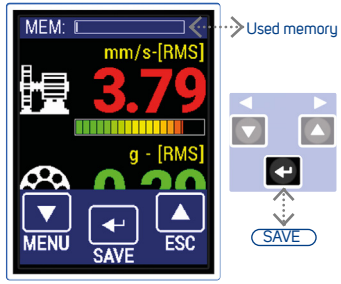
Saving Data From Measurement Screen (Vibrio M only)

1.



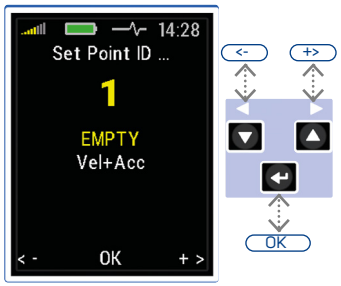
Press the Enter button on any measurement screen

2.



Press the Enter button [SAVE]

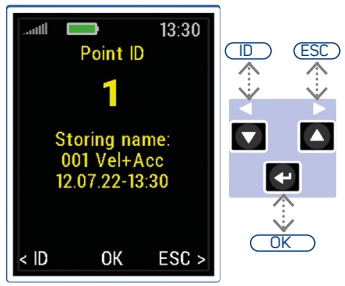
3.



Select the Point ID (1-250) with the Arrow buttons

Press the Enter button [OK] to confirm

4.



[ID] go back to the Point ID setting

[ESC] go back to the measurement

Press the Enter button [OK] to save the data

Light

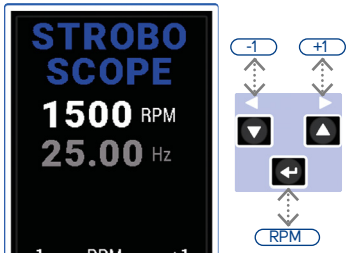
1.

2.

Torch

Press any button to switch off the Torch mode

Strobo

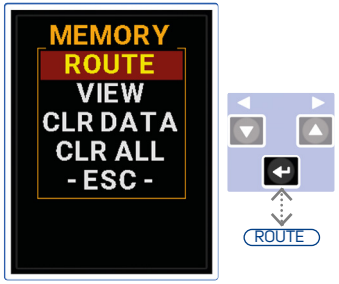


Memory - Route Measurement (Vibrio M only)

1.

Firstly the route must be loaded to the device from the DDS software

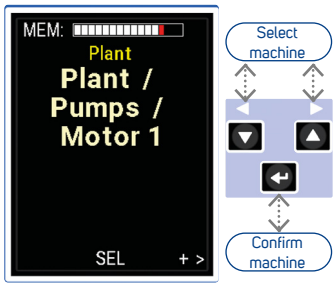
2.



Go to MENU/MEMORY/ROUTE

VIEW ... view off-route readings
CLR DATA ... delete all readings
CLR ALL ... delete all readings and route structure

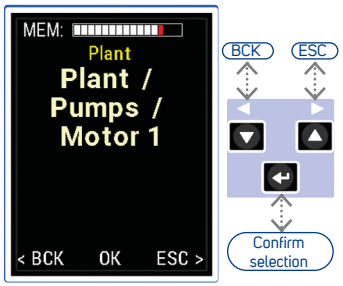
3.



Use the Arrow buttons to switch between the machines in route

Press the Enter button [SEL] to confirm the selection

4.

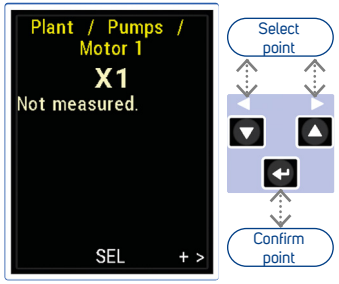


[BCK] go back to machine selection

[ESC] escape from the route

Press the Enter button [OK] to confirm the selection

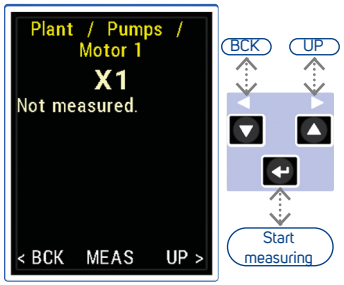
5.



Use the Arrow buttons to switch between the points in route

Press the Enter button [SEL] to confirm the selection

6.



[BCK] go back to point selection

[UP] go back to machine selection

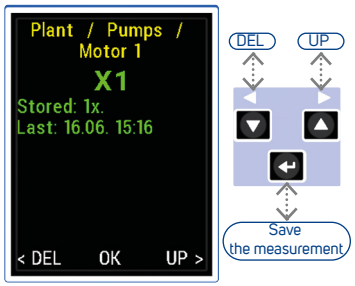
Press the Enter button [MEAS] to start measuring

7.

Measurement progress can be seen on the screen

If the temperature is defined in the route, this measurement is taken first

8.



[DEL] delete the measurement

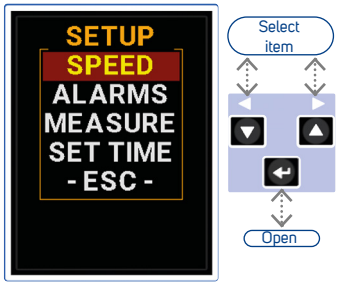
[UP] save and move to the next point

[OK] save the measurement

Setup

1.

2.



Go to MENU/SETUP

Speed
- Auto
- Manual
- Off

Alarms
- Adash (speed is required)
- R13 (rigid, group 1 and 3)
- F13 (flexible, group 1 and 3)
- R24 (rigid, group 2 and 4)
- F24 (flexible, group 2 and 4)

(R13, F13, R24, F24) → ISO 10 816

Measure
- Units
  - Metric
  - Imperial
- Disp.val.
  - RMS/0-P
  - RMS/P-P
  - 0-P/P-P

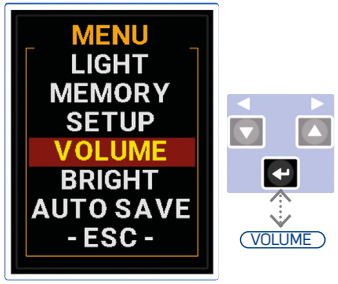
(RMS/0-P, RMS/P-P, 0-P/P-P) → Displacement

- RTE mode
  - Normal (black background)
  - Inverse (available for route only)

Set time — Setup of time and date

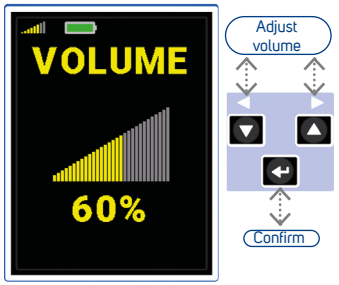
Volume, Brightness

1.



Go to MENU/VOLUME

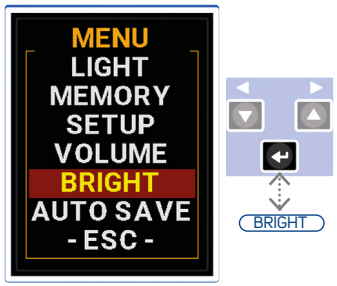
2.



Adjust the phones volume with the Arrow buttons

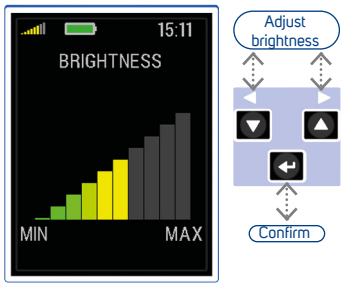
Press the Enter button to confirm

1.



Go to MENU/BRIGHT

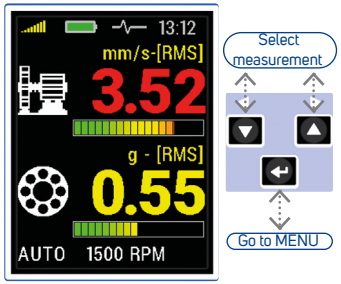
2.



Adjust the brightness with the Arrow buttons

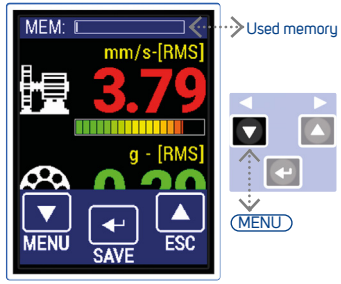
Press the Enter button to confirm

1.



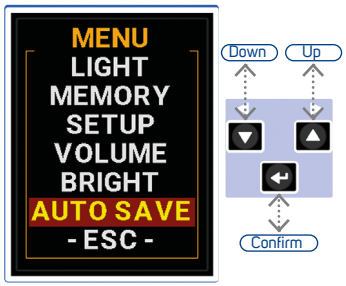
Select the type of measurement you want to save and press the Enter button

2.



Press the left Arrow button [MENU]

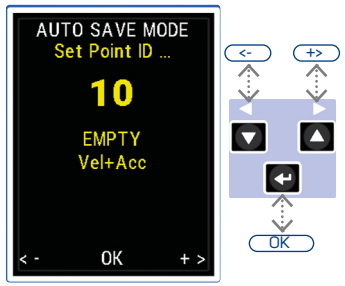
3.



Select AUTO SAVE item

Press the Enter button [OK] to confirm

4.

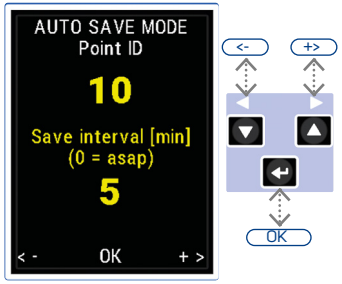


Select the Point ID (1-250) with the Arrow buttons

Press the Enter button [OK] to confirm

Auto Save (Vibrio M since 2022 only)

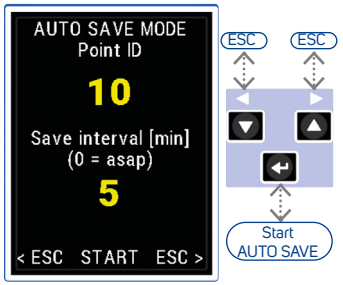
5.



Select the time interval for data saving (1-60 minutes, 0 is for the maximum speed of data storage)

Press the Enter button [OK] to confirm

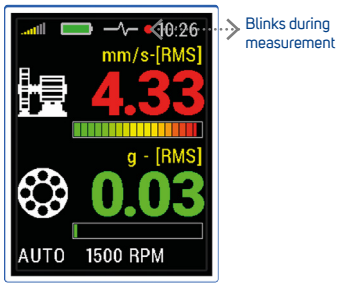
6.



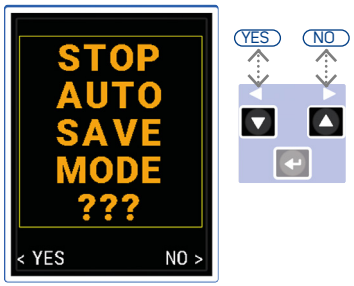
[ESC] escape from the AUTO SAVE

Press the Enter button [OK] to start data saving

7.



To stop AUTO SAVE mode press any button and confirm on the next screen



Press the left Arrow button [YES] to switch off the AUTO SAVE mode

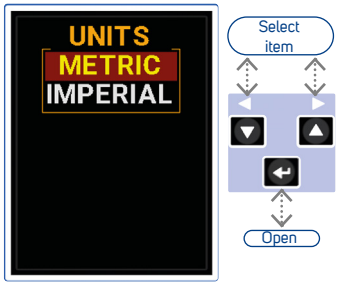
Press the right Arrow button [NO] to continue measurement

Proximity Option (Vibrio MP only)

1.

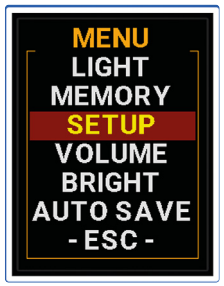
When the device is switched on, select Prox for proximity option

2.

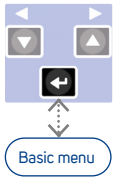


Select Metric or Imperial units

The A4900 Vibrio MP needs to be connected to a proximity sensor for proximity measurement! (The default sensor sensitivity is set to 7.87 mV/µm, 200 mV/mil)



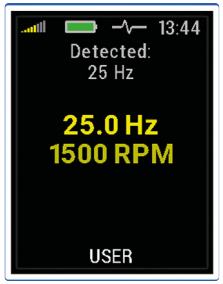
Press the Enter button for the Basic menu



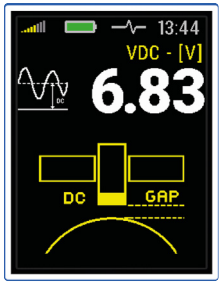
Off route data can be saved to the memory (the route cannot be performed with the proximity measurements)

Proximity Measurements (Vibrio MP only)

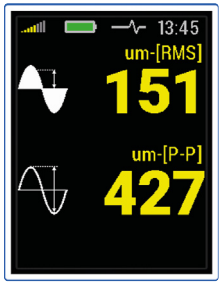
Speed



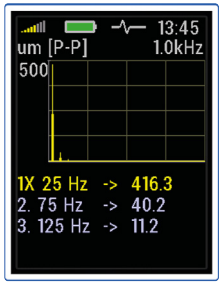
DC part of signal



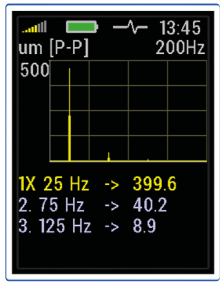
Displacement 1 - 1000 Hz



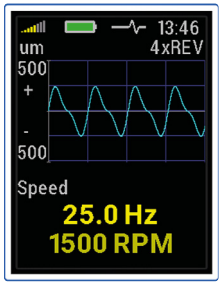
Spectrum 1 kHz or 2.5 kHz



Spectrum 200 Hz



Time signal 1 - 1000 Hz



Technical Specifications

Input:	1 x ICP® powered accelerometer
Input range:	60 g PEAK with standard 100 mV/g sensor (e.g. 600 g PEAK for 10 mV/g sensor, the sensitivity is editable in the unit)
Measurements:	Velocity RMS: 10 - 1 000 Hz [mm/s, ips] Velocity PEAK: 10 - 1 000 Hz [mm/s, ips] Acceleration RMS: 500 - 16 000 Hz [g] Acceleration Peak: 500 - 16 000 Hz [g] Velocity time: 1 - 1 000 Hz [mm/s, ips], 2048 samples * Velocity spectrum: 1 - 200 Hz [mm/s, ips], 200 lines Velocity spectrum: 1 - 1 000 Hz [mm/s, ips], 800 lines * Acceleration time: 1 - 16 000 Hz [g], 2048 samples* Acceleration spectrum: 1 - 16 000 Hz [g], 800 lines* Acceleration Demod-Envelope RMS: 500 - 16 000 Hz [g] Acceleration Demod-Envelope Peak: 500 - 16 000 Hz [g]* Acceleration Demod-Envelope time: 500 - 16 000 Hz [g], 2048 samples Acceleration Demod-Envelope spectrum: 500 - 16 000 Hz [g], 800 lines, range 400 Hz* Displacement RMS: 2 - 100 Hz [µm, mil] Displacement 0-Peak: 2 - 100 Hz [µm, mil] Displacement Peak-Peak: 2 - 100 Hz [µm, mil] Temperature non-contact measurement: -70 - 380°C (-94 - 716°F)
Other functions:	LED stroboscope (0.17-300 Hz, 10 - 18 000 RPM) LED torch Vibration stethoscope
Memory:	4 MB for data 120 960 overall values 900 measurements of 800 line spectra or 2048 sample time signals may be stored
Data storing:	Off-Route Route with DDS software for Vibrio M (free download)
Interface:	USB C - 3.0, 2.0 compatible
Software:	Free version of DDS software (limited database size)
Display:	Colour graphic TFT display 240x320 pixels, diagonal 2.2" (54 mm), sunlight readable
Output:	1 x AC signal 8 Ω / 0,5 W for external headphones (signal listening)
Power:	Rechargeable Li-Ion battery, 16 hours of continuous operation, USB-C charging
Temperature:	Operating: -5°C to 55°C
Dimensions:	170 x 85 x 40 mm
Weight:	380 g (without cable, sensor and magnet) 590 g (including cable, sensor and magnet)
Accessories:	vibration sensor, coiled cable to connect vibration sensor, magnetic base for vibration sensor, headphones with 3.5 mm jack, USB cable, measuring tip for manual pressure on the sensor, transport case, USB flash disc with the manual

*available in DDS software for Vibrio M

Notes

Notes

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