

# TIK-PION vibrometer

Designed to measure, display and record vibration parameters (velocity, acceleration, displacement) of operating equipment

## Ergonomic design

Easy one-hand operation



## Wide frequency range

Option to record vibration acceleration read-out in a frequency range of 10-5000 Hz with a readout rate of 25 kHz



## LED display

High information display speed at below zero temperatures

## Fully equipped

Measuring device, vibration transducer, magnet, probe, screw M6x12, connection cable, USB cable, diagnostic software, bag, datasheet

## Specifications

### Metrological parameters

Measurement ranges:

- vibration acceleration RMS, m/s<sup>2</sup> ..... 0.5-50
- vibration velocity RMS, mm/s ..... 0.1-100
- vibration displacement range, μm ..... 50-3000

Selectable measurement range (during measurement):

- vibration acceleration, Hz .. 5-1000; 10-1000; 10-2000; 10-5000
- vibration velocity, Hz ..... 5-1000; 10-1000; 10-2000; 10-5000
- vibration displacement, Hz ..... 10-300

Main relative measurement error of vibration

- acceleration, velocity and displacement, % ..... ±5
- Amplitude-frequency response unevenness, % ..... ±10

### Interface

- Connection to PC through ..... USB
- Device power supply ..... rechargeable battery
- Battery charging through ..... USB
- OLED graphic display resolution, pixel ..... 128x64

### Explosion protection

- Kind ..... intrinsically safe circuit
- Marking ..... 1Ex ib IIB T4

### Design features

Metering devices:

- magnet
- probe

Overall dimensions, mm ..... 119x85x25

Vibration transducer dimensions, mm ..... Ø27x49

Weight of instrument with vibration transducer, kg, not more than ..... 0.5

Protection class ..... IP54

### Performance

Operating temperature range, °C ..... -20...+50

Battery running time, hours:

- standby ..... 20
  - measuring mode ..... 12
- Battery charging time, hours, not more than ..... 3

### Reliability and manufacturer's warranties

MTBF, hours, not more than ..... 80 000

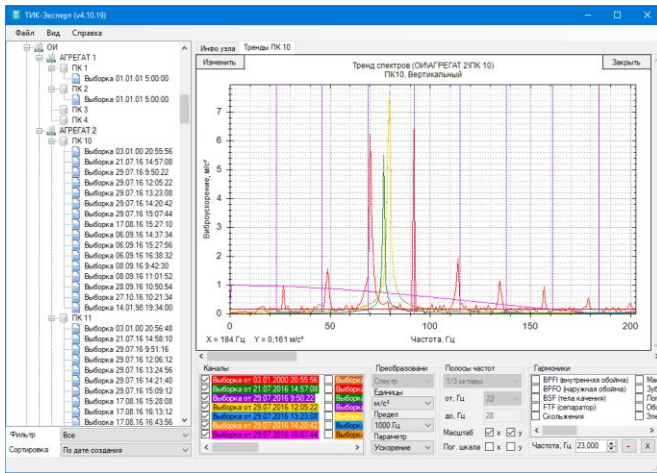
Service life (excl. power supply life), years ..... 20

Warranty period, months ..... 24

Verification interval, years ..... 1



## “TIK-Expert PION” software

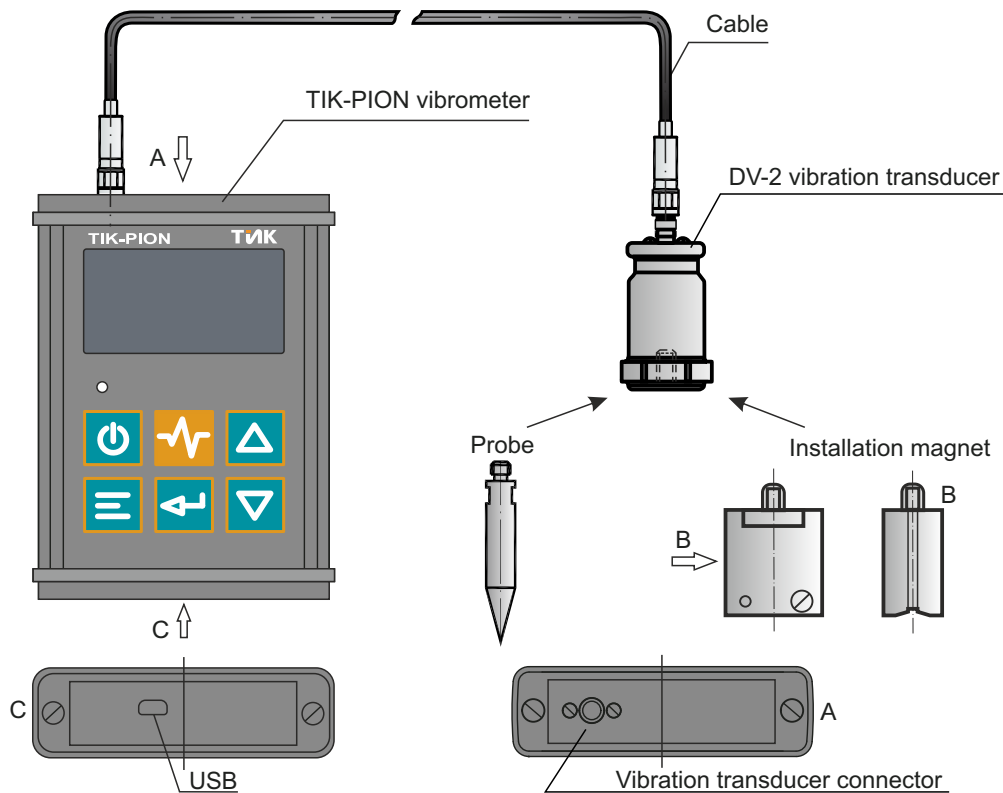


### Features:

- Creation of a vibration measurement route and its recording on TIK-PION;
- Import of collected samples from the TIK-PION device and their storage in the database;
- Visual representation of the sample data in the form of graphs with the possibility of processing and diagnosing them by various parameters;
- Display of trends and histograms that allow you to track the dynamics of the defect development;
- Assistance in identifying defects based on the sampling spectrum - showing harmonics; display of characteristic frequencies; calculation of parameters (RMS, turnover frequency); octave, half-octave and one-third octave analysis; the ability to compare different samples of the aggregate and different sample channels;
- Convenient report form as a file with the \*.xlsx extension;
- Quick view of samples recorded by the TIK-PION device.

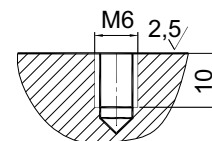
Software is available for download from the web-site:  
[https://tik.perm.ru/en/product/software/tik\\_expert\\_pion/](https://tik.perm.ru/en/product/software/tik_expert_pion/)

## Wiring diagram



## Workpiece preparation to place M6-6Gx16 stud

For permanent mounting of the DV-2 vibration transducer on the workpiece it is necessary to use M6x16 stud



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