

TIK-WSV wireless vibration meter



Specifications

Description

The vibration meter is designed to measure RMS value of vibration velocity, vibration acceleration, vibration displacement along two axes and signal transmission via wireless interface LoRaWAN or wired mode via the Modbus RTU data transfer protocol.

Application area - equipment requiring continuous vibration control.

Vibration meters are available in two modifications – TIK-WSV and TIK-WSV RB, differing in overall dimensions and the presence of a removable battery in the RB version.

The vibration meter is enclosed in a single housing built-in two-component accelerometer and electronic unit, processing the signal coming from built-in accelerometer and signal transmission.

The scope of delivery includes a detachable antenna, also delivery with an external antenna is possible fixed length (optional).

High range radio communications - up to 2 km (in dense buildings) and up to 15 km (subject to direct visibility).

Configurable data transmission interval; out-of-order data transfer mode when exceeding the threshold level of the measured vibration.

For installation on the unit, the standard stud M6 / M8 / M10 / M12 (M8x1 / M10x1.25 / M12x1) is used; for the special order it's possible to supply the studs with any thread, including inch.

Metrological parameters

RMS measurement ranges:

- vibration velocity, mm/s 0.5-100
- vibration acceleration, m/s² 0.5-100
- vibration displacement, μm 5-30

Standard operating frequency ranges, Hz:

- for vibration velocity, vibration acceleration 2-1000
5-1000, 10-1000
- for vibration displacement 10-200

Interface

Output signal type digital (LoRaWAN standard)

Supply battery, life up to 10 years*

**Depending on conditions*

Device class A (according to LoRaWAN classification)

Number of packets sent by the device, not less

- for TIK-WSV 50 000
- for TIK-WSV RB 15 000

Climatic version

Operating temperature range, °C:

- H climatic version -40...+80
- X climatic version -60...+80

Reliability parameters and manufacturer's warranty

MTBF, hours, not less than 40 000

Warranty service life, months 24

Service life, years, not less than 10

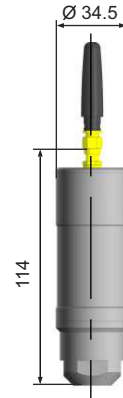
Time between verifications 2 years



Design versions

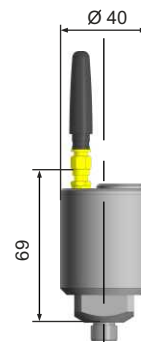
TIK-WSV vibration meter

- Body type** cylindrical body
- Mount type** M6 / M8 / M10 / M12 (M8x1 / M10x1.25 / M12x1) stud 1 pc.
- Enclosure dimensions** Ø 34.5x114 mm
- Weight** 240 g (without antenna and stud)
- Protection class** IP65/IP68
- Explosion protection** 0Ex ia IIC T4 Ga



TIK-WSV RB vibration meter

- Body type** reduced size cylindrical body
- Mount type** M6 / M8 / M10 / M12 (M8x1 / M10x1.25 / M12x1) stud 1 pc.
- Enclosure dimensions** Ø 40x69 mm
- Weight** 220 g (without antenna and stud)
- Protection class** IP65/IP68
- Explosion protection** 0Ex ia IIC T4 Ga



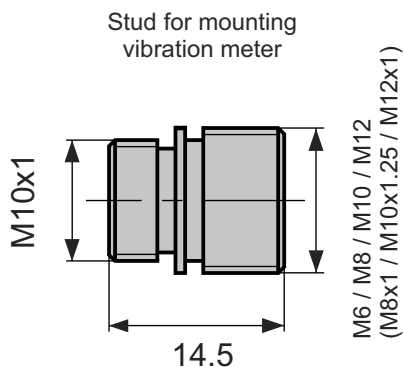
Mounting kit (optional)

Rotating mounting kit designed for mounting multi-axis sensors with stud mounting.

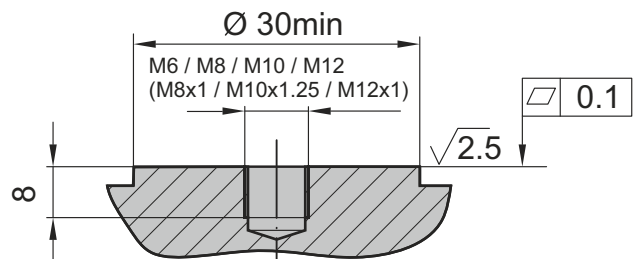


Installation

Mount on the stud



Prepared place for meter installation



For the special order it's possible to supply the studs with any thread, incl. inch



TIK Research & Production Enterprise,
Limited Liability Company
14A, Marii Zagummennykh St., Perm, 614067, Russia
Tel.+7 (342) 214-75-75
E-mail: tik@perm.ru
Web-site: <https://tik.perm.ru/en>

08082023