

TIK-WSV wireless vibration meter



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.

Specifications

Metrological parameters

RMS measurement ranges:

vibration velocity – 0.5-100 mm/s;
vibration acceleration – 0.5-100 m/s²;
vibration displacement – 5-300 μm

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 protocol)

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 – 50 000

Performance

Operating temperature range, °C:

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

Reliability and manufacturer's warranties

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 options

TIK-WSV vibration meter

Type of shell cylindrical body

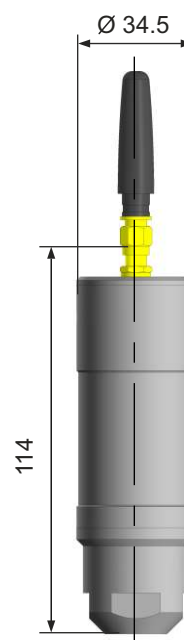
Mount type M6 / M8 / M10 / M12 (M8x1 / M10x1.25 / M12x1) stud

Overall dimensions $\varnothing 34.5 \times 114$ mm

Weight 240 g (without antenna and stud)

Protection class IP65/IP68

Explosion protection 0Ex ia IIC T4 Ga



TIK-WSV RB vibration meter

Type of shell reduced cylindrical body

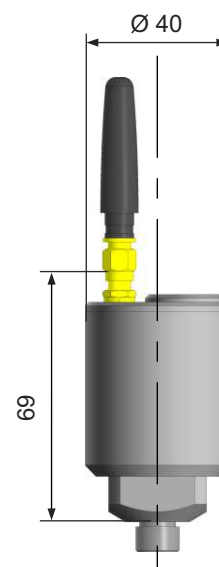
Mount type M6 / M8 / M10 / M12 (M8x1 / M10x1.25 / M12x1) stud

Overall dimensions $\varnothing 40 \times 69$ mm

Weight 220 g (without antenna and stud)

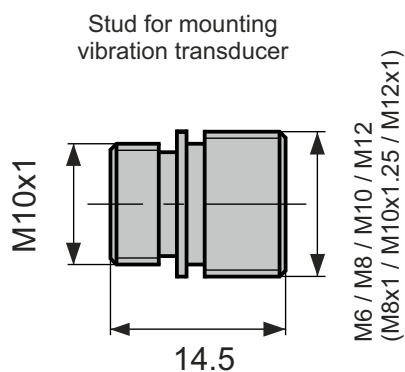
Protection class IP65/IP68

Explosion protection none

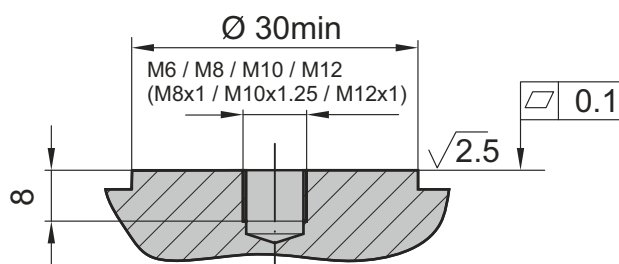


Installation

Mount on the stud



Prepared place for sensor installation



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