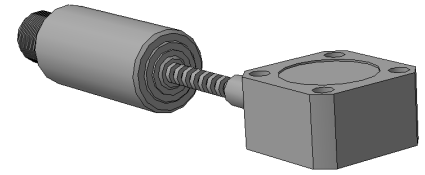


VPE-080-T

Vibration transducer with integrated electronics



1. Assignment

Converting machine parts and tools vibrations into an electrical signal proportional to the vibration acceleration .

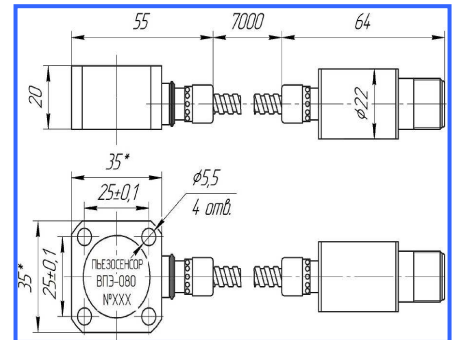
2. Applying

Automated control systems and regulation HPP, TPP, NPP, gas pumping stations. Stationary vibration measurement equipment for industrial facilities: steam turbines, generators, motors, pumps, fans. Systems protection against vibration destruction.

3. Operating principle

Sensor element with a fixed type bending seismic mass body perceives vibration and generates an electrical signal proportional to the acceleration. The electrical signal is amplified by an electronic circuit.

The sensing element is made by diffusion welding. Includes a piezoceramic element, electrical characteristics of which are thermostable. Vibration transducer VPE-080-T is manufactured according to TU U 32.1-14247566-001: 2005. Included in the State Register of measuring instruments permitted for use in Ukraine, the number U1955-15. Certificate of Compliance type of measuring technique № UA-MI / 2-5088-2015.



4. Specifications:

| Parameter | Unit | Size |
|---------------------------------------|--|-------------------|
| Sensitivity | мкА · м ⁻¹ · с ² | 10 |
| Deviation of sensitivity | % | ≤±5 |
| Measurement range | м/с ² | 0,1 .. 100 |
| Frequency response | Hz | 10 .. 1000 |
| Mounted base resonance | Hz | ≥6000 |
| Amplitude linearity | % | ≤ ± 2 |
| Unevenness frequency response | % | ≤ ± 6 |
| Coefficient of cross sensitivity | % | ≤5 |
| Operating temperature range | | |
| Sensor | °C | 0 .. 250 |
| Electronic block | | 0 .. 120 |
| Error caused by the temperature range | %/°C | ≤ ± 0,05 |
| Bias voltage | B | 7,5±0,5 |
| Current range | мА | от 3 до 4 |
| Electrical noise | мкА | ≤0,08 |
| Case isolation | Ом | ≥ 10 ⁸ |
| Sealing | | IP 67 |
| Weight | gms | ≤200 |
| Dimensions | мм | 26x35x53 |
| Case material | | Stainless Steel |
| Mating connector | type | 2PMГ14 |
| Sensing element/construction | | PZT/bending |
| Attachment sensor | | 2 bolt M5 |
| Mounting torque | Нм | 1,9 .. 2,1 |