

VPE-085-T-32

Vibration transducer with integrated electronics

1. Assignment

Converting of vibration machine parts and mechanisms in electrical DC signal in the range of 4 to 20 mA, which is proportional to RMS vibration.

2. Applying

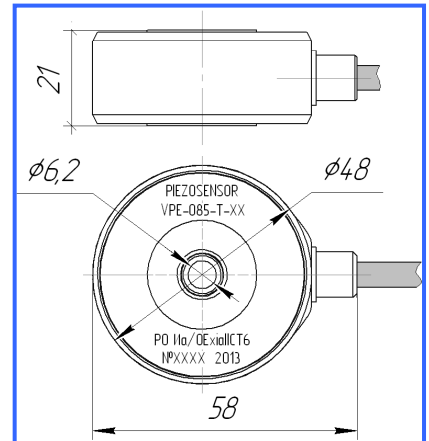
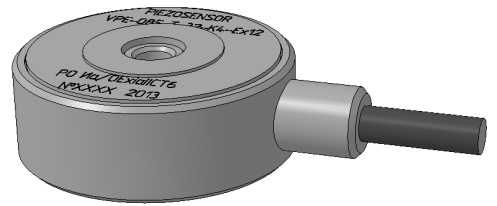
Automated monitoring and control system. Stationary vibration measurement equipment for industrial facilities: steam turbines, generators, motors, pumps, fans. Systems of protection against vibration fracture operated in underground coal mines, including dangerous on gas and/or dust, as well as in potentially explosive areas.

3. Operating principle

The sensing element senses body vibration and generates an electrical signal which is amplified and integrated electronic integrated circuit. Vibration transducer has an output electrical signal DC 4-20 mA proportional to the RMS vibration. The magnitude of the current signal of 20 mA corresponds to the maximum value of the measuring range of the sensor of vibration.

Vibration transducer has a level of protection at $Ia/0ExiaIICT6$.

VPE-085-T-32 is manufactured according to TU U 32.1-14247566-001: 2005 "vibro-HF complexes ..." and included in the State Register of measuring instruments permitted for use in Ukraine, at U1955-15 number. Certificate of Compliance type of measuring technique № UA-MI / 2-5088-2015.



4. Specifications:

Parameter	Unit	Size
Nominal transformation coefficient	МА ММ-1-С	0,5 (1,0; 0,25)
Deviation transformation coefficient of the nominal value	%	≤±10
Range transformation of vibration velocity	ММ/С	32(16, 64)
Operating frequency range	Гц	10 .. 1000
Amplitude linearity	%	± 2
Unevenness frequency response		
in the frequency range from 20 Hz to 630	%	± 10
in the frequency range from 10 Hz to 1000	%	От +10 до - 20
Relative coefficient of cross transformation	%	≤5
The error caused by the temperature change	%/°С	± 0,05
Supply voltage	В	24±6
Maximum current consumption	МА	20
The resistance line at supply voltage 24 V	ОМ	200 .. 400
Insulation	В	500
Operating temperature range	°С	От -30 ... до+80
Type of housing		IP 67
Weight	г	250
Dimensions	ММ	21x48x58
Housing material		12X18H10T
mount		ВИНТ М6
Tightening torque	Нм	2,5 .. 2,7