上海测振自动化仪器有限公司
SHANG HAI CE ZHEN AUTOMATION INSTRUMENT CO.,LTD

YD9700 Piezoelectric three-axis sensor

(three-way output current)

Product instruction manual

model: YD9700 piezoelectric type integration vibration sensor

Introduction

Such products are my company in many years of practical experience and engineering applications based on research and development, improved vibration velocity sensor. In the piezoelectric acceleration sensor based on the specialized high-precision design, the internal embedded precision integration circuit. Compared with the traditional magnetoelectric type, because of adopting the piezoelectric crystal as the sensitive element, there is no moving parts inside, no degeneration and wear occurs, and the frequency response range is wide, the mechanical moving parts are not easily damaged, the dynamic characteristics are excellent, the anti-interference ability is strong , Long-term reliable work, suitable for measuring absolute (relative to free surface) vibrations of bearing housings, housings or structures in a variety of harsh environments at industrial sites.This type of product has a wide range of applications and measurement prospects in vibration monitoring of rotating machinery, engineering geology, seismic monitoring, vibration and modal analysis of high-rise buildings and large structures, traffic bridges, scientific research, teaching and other fields.

Features:

·Anti-vibration, impact resistance, overload capacity

• Simplifies testing and outputs direct mating display processing instrumentation

•Low frequency characteristics, wide frequency range

•Long-term stability

• Easy to use, no adjustment required

Piezoelectric small size, no moving parts, long life, stiffness

2、 一）The main technical parameters:

1. Measuring range: 0-1000mm / s (optional) ※ 0-50g ※ 0-10mm

2. Output current: 4-20mA

3 response frequency: 4-1000HZ (speed measurement)

2-2000HZ (acceleration measurement)

4 speed direction: sensor (X, Y, Z) three-phase

5. Ambient temperature: -10 ℃ - +70 ℃

6 supply voltage: 9V-36V

7. Housing material: 304 stainless steel

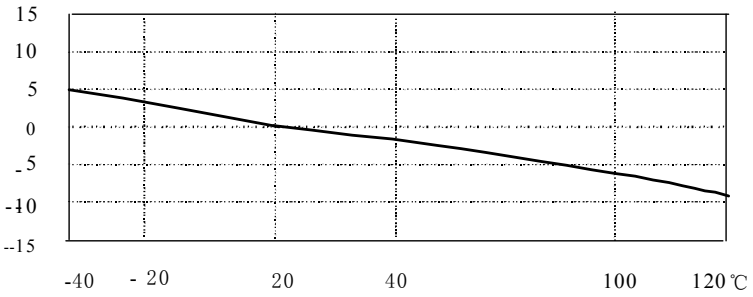
Weight: 110 grams

9. Installation thread: M5, M10 * 1.5 thread or magnetic seat (or special custom) M10 * 1

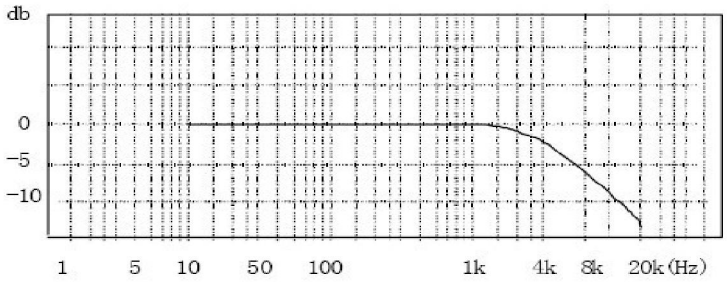
10. Piezoelectric material: PZT-5

11. Output: 5 / 8-24 four-pin socket (a power supply +24 V, the other three root 4-20mA signal output)

二）Temperature curve parameters

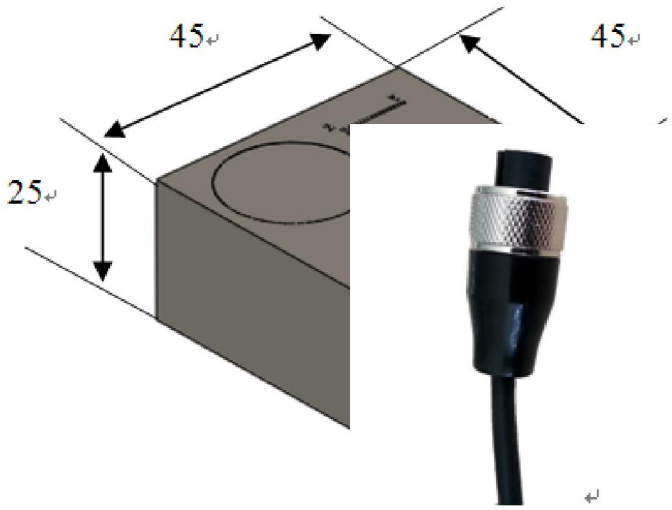


三）Frequency response curve parameters



典型频响曲线

四）Dimensions parameters



连接电缆

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YD9700 Piezoelectric speed sensor **parameters selection**

YD9700-A□□-B□□-C□□-D□□-E□□

A □□measuring type

0 1 vibration velocity (mm/s)　　0 2 acceleration (g)　　0 3 displacement (μm)

B □□ **range**

A measuring type	0 1 Vibration velocity(mm/s)	0 2 acceleration(g)	0 3 displacement (μm)
0 1	0 - 10	0 - 10	0 - 100
0 2	0 - 20	0 - 20	0 - 200
0 3	0 - 30	0 - 30	0 - 300
0 4	0 - 40	0 - 40	0 - 400
……	……	……	……

C □□**mounting thread**

0 1 M5；

0 2 M6；

0 3 magnetic base；

0 4 customized……

D □□ **lead way**

00: directly lead；k:armoured

01:aviation plug ；

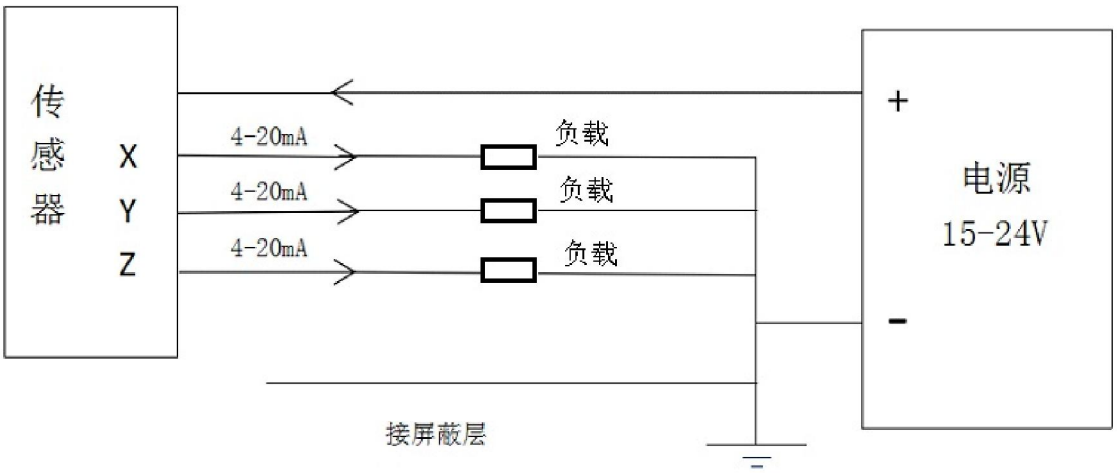
E □□ **armoured**

0 0 with armoured

0 1 without　armoured

example：YD9700-A（01）-B（02）-C（01）-D （A02）-E（01 ）
expression：measurement—velocity，range---0 -20mm/s，mounting way ----M10 × 1，terminal output，2m，without means armoured。

4、System lead way



5、Usage and precautions

Because the sensor has a built-in circuit, it is not allowed to test the insulation resistance between the sensor's core and the housing with a high voltage, which can easily damage the sensor. Please remember, or damage will not be replaced. Easy to determine the method as follows: R test with a multimeter can be positive about tens of K ~ 100KΩ, inverse infinity.

Company sensor test conditions: 160Hz, 4mA, 10ms-2, 20 ± 5 ℃.

Sensor does not need to be adjusted in use, locking, easy to use, but it is recommended to avoid falling when using, resulting in excessive impact damage, please note.

Due to the sensor is a sophisticated transducer, please pay attention to moisture, especially the plugs, sockets at the moisture, pollution.

Product warranty period of one year, it is recommended to test once a year, the user shall not disassemble to prevent man-made damage. Overrun lifetime maintenance, collecting materials and maintenance costs.

6、Match neat

sensor	one
cable conductor	one
mounting bolt	one
product qualification certificate	one