Beijing Economic and Technological Development Zone
Cultural Park West Road No.8 Yard No.4 Building
Room 2116, 18th floor

Integrated vibration Transmitter instructions

★Product model: CYT9200

★Product overview:

CYT9200 integrated vibration transmitter integrates magnetoelectric vibration sensor and precision measuring circuit to form a high-precision vibration measuring system, which affects the low-frequency vibration measurement.

CYT9200 integrated vibration transmitter produced by our company is a local transmitter used for online real-time monitoring of bearing vibration of rotating machinery, also known as integrated vibration sensor. It is an absolute vibration measurement of the machine, which can be installed on the bearing seat or casing of the machine to monitor the machine in real time. At the same time, the two-wire system outputs a current signal of 4-20mA, which can be directly supplied to P LC or DCS monitors, collectors, recorders or other monitoring equipment in the control room. If there is a machine fault caused by bearing wear, bearing cracking, poor dynamic balance and improper factors, the integrated vibration transmitter can monitor the fault in advance and give an alarm to prevent the machine from continuing to work in bad conditions and causing damage, thus bringing economic losses.

★Application occasion:

It can be widely used for bearing vibration measurement and real-time monitoring of submersible pumps, fans, steam turbines, coal mills, oxygen generators, generators, centrifuges, compressors, water pumps, motors and other rotating machinery. At the same time, it can also be used to summarize the equipment that needs to be monitored in underground pipelines, automobile industry and so on.

★Technical parameter:

Measuring range	Vibration speed: 0～ 10mm/s, 0～ 20mm/s, 0～ 50mm/s, 0～ 100mm/s (optional).
	Vibration displacement: 0 ～ 1000μ m (optional)
Maximum measurement error	≤±1mm/s
Measuring frequency band range	10 ～1000 Hz (default) or 5～ 1000 Hz (special instructions)
Output signal	The default output is 4 ～ 20ma (1～5v and 2～10v are customized).
Operating voltage	DC12-24V±10%
Protection voltage	DC/30V is internally provided with voltage polarity reverse connection protection.
The protection grades	IP65 (customizable dustproof and waterproof)
Operational environment	Temperature-40℃～100℃ and relative humidity ≤90%
Connecting thread	M10X1.5mm or magnetic mount installation
Sensitivity	50mv/mm/s±5%
Measuring direction	Horizontal or vertical

Product installation

Installation position: Install the sensor vertically or horizontally on the vibration point to be measured, fix the M10×1.5×10 screw at the bottom of the sensor on the measured shell, and then screw the sensor on it and tighten it.

Installation dimensions and specifications: refer to the following figure. If the installation position of the transmitter is washed by high-temperature steam, protective measures need to be taken to reduce the ambient temperature of the transmitter, and generally no protection is needed.

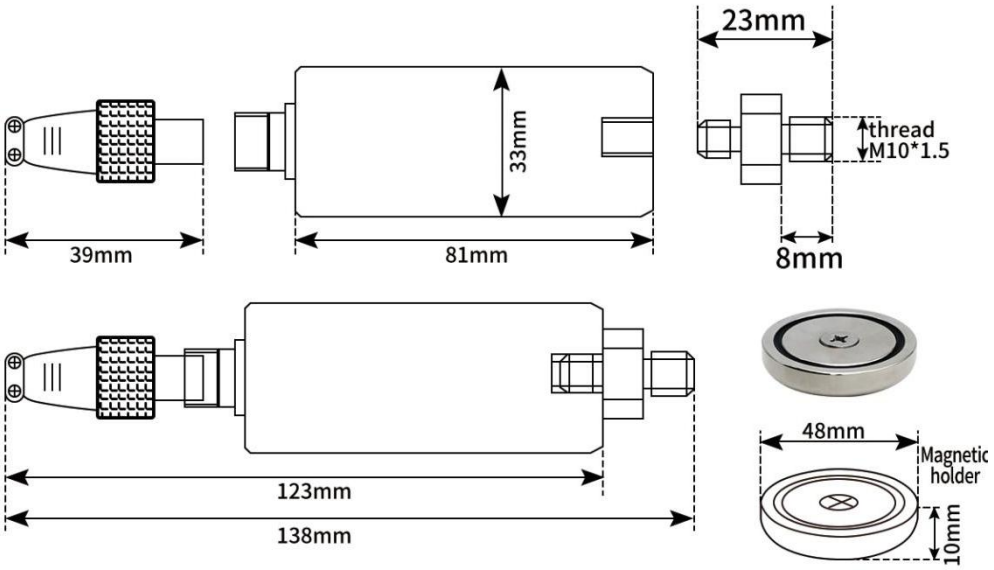
Wiring description: red wire is connected to the positive terminal of DC24V power supply, brown wire is connected to signal A, blue wire is connected to signal B, and black wire is connected to COM connecting wire, which requires good insulation performance, and four-core shielded cable is adopted.

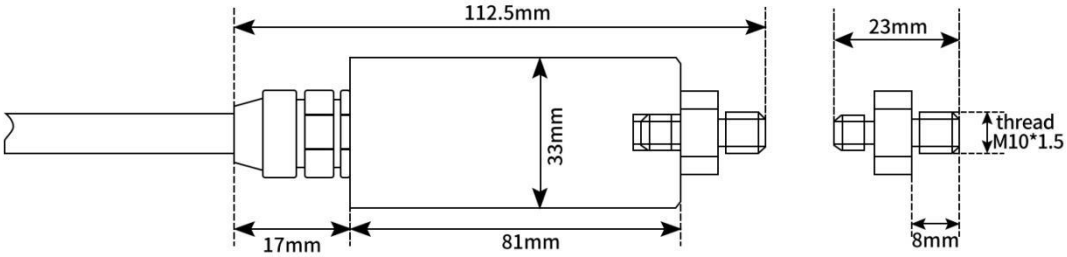
★Modeling guide:

CYT9200	Integrated vibration sensor	
	code	Range selection

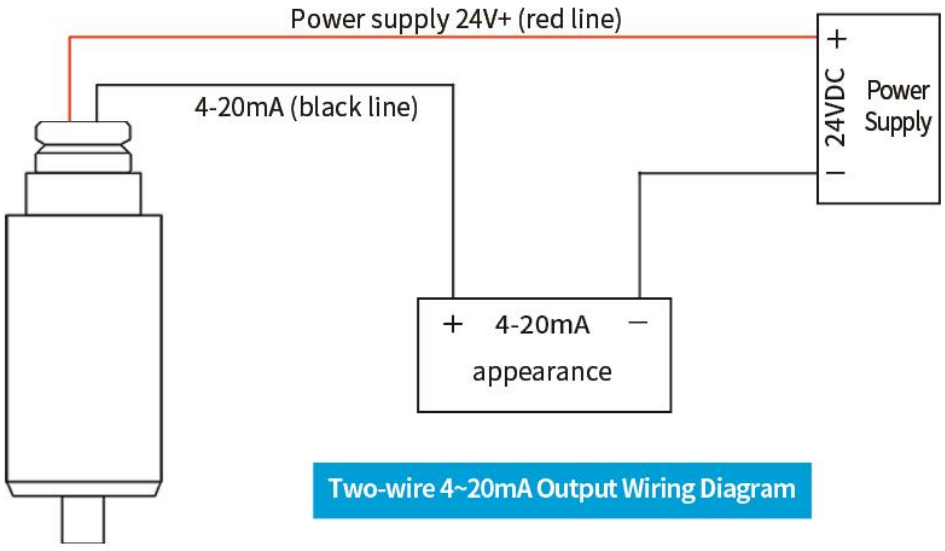
		Vibration velocity	0～10mm/s	0～20mm/s	0～50mm/s	0～100mm/s
			A	B	C	D1
		Vibration displacement	0～100μm	0～200μm	0～500μm	0～1000μm
			E	F	G	D2
		code	Signal output mode			
		S1	4～20ma two-wire system			
		S2	1～5v two-wire system			
		S3	2～10V two-wire system			
		S5	RS485 four-wire system			
			code	Installation mode		
			T	Thread installation M10*1.5mm		
			H	Installation of Plane Magnetic Seat (Add)		
			H2	Installation of globoidal magnetic seat (add)		
				code	Product customization	
				F0	None (standard CYT-9200)	
				F1	Dust-proof and waterproof (CYT-9200A)	
				F2	Explosion-proof (with explosion-proof certificate)	
					code	Measuring direction
					C1	Vertical measurement
					C2	levelling
					C3	Universal direction measurement
CYT9200	A	S1	T	F0	C3	Type selection example

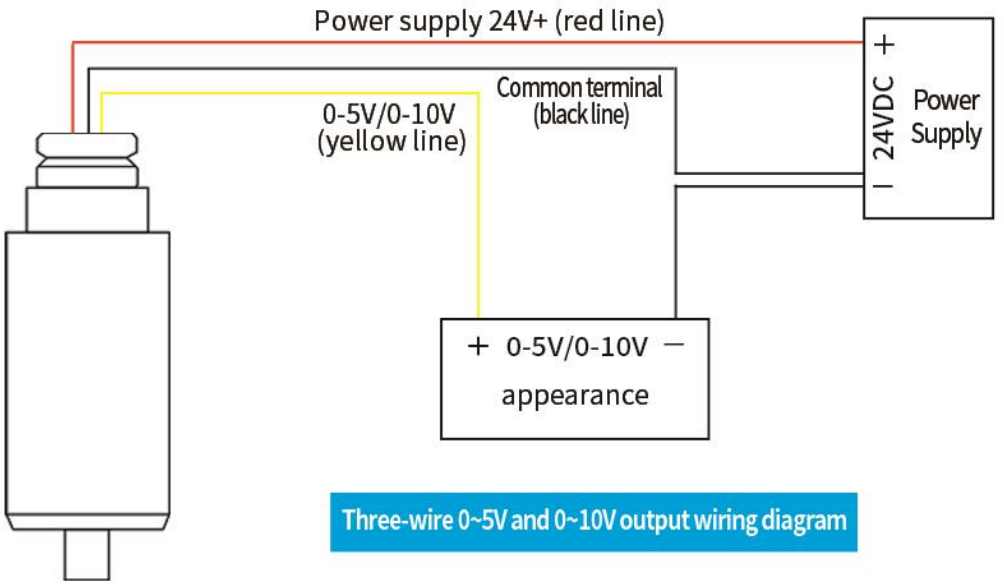
★Overall dimension drawing (Unit: mm) :



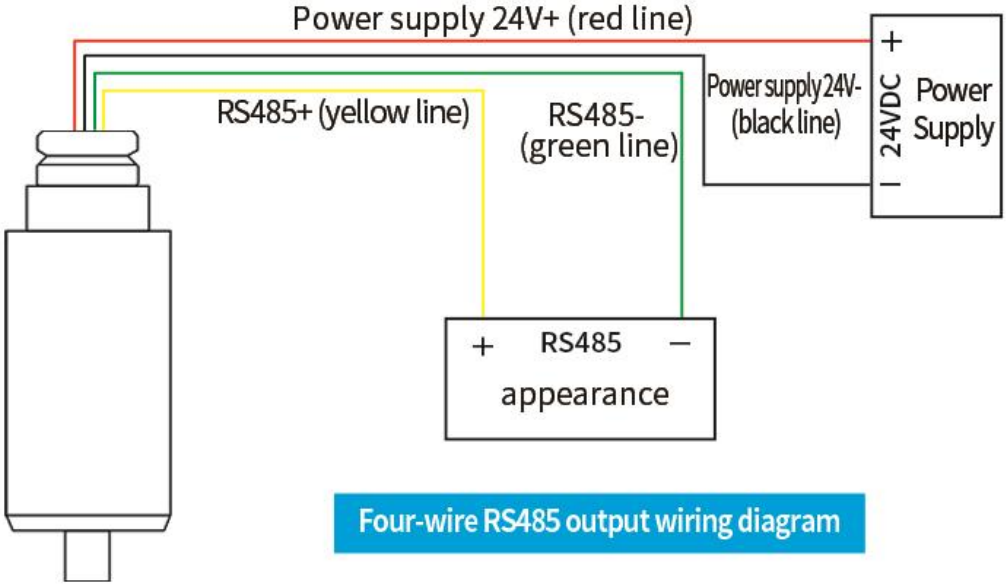


★接线示意图/Wiring diagram:





Three-wire 0~5V and 0~10V output wiring diagram



Four-wire RS485 output wiring diagram

★Instrument collocation and wiring instructions:

With XSW display meter

1, real-time display of sensor data
2, with two alarm signal output
3, can be equipped with converter output analog signal function
4, can add communication RS485/RS232 function
5, a variety of sizes available
6, can be used together with the company's data acquisition software
7. Wall-mounted or placed instrument box can be added
8, the measurement and control speed is 10 times per second, the accuracy is 0.2%

Displacement sensor with XSW digital meter (two-wire)

Connection definition of vibration sensor to XSW instrument (4-20mA):
The red line is connected to terminal 17.
The blue wire is connected to terminal 13.
Terminals 15 and 16 are short-circuited.

★ Reference standard for vibration sensor selection:

ISO2372 equipment vibration standard is applicable to all kinds of motors, fans, pumps, machine tools and other equipment.

This product can measure the vibration speed in the range of 0.1 ~ 199.9 mm/s, and is suitable for vibration testing and fault emission reduction.

Vibration range	ISO2372 Vibration standard for equipment			
	device type			
Unit	Class Ⅰ	Class Ⅱ	Class Ⅲ	Class Ⅳ
0.71	A	A	A	A
1.12	B	A	A	A
1.8	B	B	A	A
2.8	C	B	B	A
4.5	C	C	B	B

7.1	D	C	C	B
11.2	D	D	C	C
18	D	D	D	C
28	D	D	D	D

Class Ⅰ	Small equipment up to 15KW	A:	良好
Class Ⅱ	Medium-sized equipment of 15 ~ 75KW	B:	可接受
ClassⅢ	Large equipment mounted on a hard foundation	C:	注意
ClassⅣ	High-speed equipment that rotates faster than the natural frequency	D:	不允许