

## Shaft (Shell) Vibration Transmitter



**Model: YD220**

### Brief Introduction

YD220 Integrated shaft vibration transmitter is used with eddy current sensor, can be widely used for the measurement and protection for electric power, metallurgy, petrochemical, steel, paper industries and some other large rotating machinery shaft vibration (vibration of the rotor relative to the bearing cover). Mainly monitor the radial vibration of rotor in rotating machines, monitor because of rotor unbalance, misalignment, parts loosening or other reasons that cause vibration increases.

### Main Technical Parameters

External Power Supply: 220AC

Direct-current Power Supply: +24VDC±10%

Power Dissipation: <2W

Input: eddy current sensor probe, input point is 1 point

Record output mode: 4~20mA (load≤500Ω) or 1~5VDC (load≥1KΩ)

**Notice:** record output and input power use the same ground, if it needs to insulate, have to match outside isolation power.

### Type of alarm

Alarm fixed-point: 4 points (+alert, - alert, +danger, -danger)

Relay condition: Often lose electric

Alarm relay output: 2 sets relays (alert, danger) have normal open and normal close

Contact capacity: 250VAC/7A or 30VDC/5A

Alarm delay: choose in 1-9 seconds.

## Precision

Index error: 1%  
Standard output error: 1%  
Frequency response: DC~200Hz (3db)  
Working temperature: -20~70℃  
Storage Temperature: -30℃~85℃  
Relative Humidity: 20~95% no condensing

## Main functions

### Measuring range:

optional. Users can order it in instrument selection then set by the manufacturer in advance.

### Status indicator lamp:

Power indicator lamp: Green LED, light last shows power supply system is normal.

OK indicator lamp: Green LED, light last shows working status is normal; if flickers, it means the working status of the sensor and the line that connected is not normal; then cut the alarm loop, it have to check the sensor and line or the instrument. After faults removed, the system will recover to normal monitoring status, the lamp will turn to bright automatically.

Alarm indicator lamp: Yellow LED, indicate state of alert. When the lamp is bright, the alert alarm relay will operate. It is synchronization between the lamp and the relay all the time.

Danger indicate lamp: Red LED, indicate state of dangerous. When the lamp is bright, the danger alarm relay will operate. It is synchronization between the lamp and the relay all the time.

### Alarm function:

Warning alarm value: users order it in instrument selection period, the manufacturer set it in advance or adjust by matched display unit YD200 module.

Dangerous alarm value: users order it in instrument selection period, the manufacturer set it in advance or adjust by matched display unit YD200 module.

### Alarm reset function:

Relay reset to no operation status once short circuit bypass terminal.

When the alarm rings, alarm status is divided into self-lock and self-reset. When it is self-lock, the alarm function is always keeping, after the monitoring recovers, short circuit bypass terminal reset; when it is self-reset, after the monitoring recovers, the alarm function removed automatically. Users can choose one mode in the two (self-lock or self-reset), and set by the manufacturer in advance or adjust by matched display unit YD200 module, the factory default is self-reset mode.

### Self diagnosis function:

Any fault of input system, e.g. probe rupture, line fault etc. all these faults can be detected automatically by the instrument, the display window shows the error code information, "normal" lamp flickers, meanwhile, cut "alert" and "danger" alarm return circuit, the current output is about 2mA, supporting . display element displays 999 to remind the user

**Notice:** when the mounted gap voltage of eddy current sensor's probe is not between 1.6v and 18v, it will appear the above indication as well.

**Display function:**

Matched display unit YD200 module can display measured value of axial vibration, alarm value and gap voltage values of probe. It also can set the alarm value. It is optional accessory. Please check the specification of display unit YD200 module for the details of operation.

Instruction for display unit YD200 module:

When you need to set the functions, please use the dedicated connector RS232 of our company to connect the transmitter and display module unit.

**Installation mechanical figure of the integrated shaft vibration transmitter**

Boundary dimension: height × length × depth = 124mm×90mm×82mm (minimum depth is 132 mm with terminal blocks)

**Instruction for model selection**

Model selection of YD220 integrated shaft vibration transmitter

YD220-A□□-B□□-C□□-D□□-E□□□□-F□□

A Measurement Range		B		C		D		E		F	
		Record Output		Alarm Status		Danger Delayed		Rated Revolution		Display Unit	
10	0~100 μ m	0	4~20 mA	0	self-lock	0	no delayed	600	600r/m	0	have display unit
15	0~150 μ m	1	1~5V	1	self-reset	13	alert 1 sec, danger 3 secs	3500	3500r/m	1	no display unit
20	0~200 μ m					6	6 secs	7500	7500r/m		
AA	special order					9	9 secs	DDDD	special order		