

## YA-100、150 系列氨压力表

YA-100,150 series ammonia pressure gauge

### 用途说明 Application Description

氨压力表用于测量对普通碳系钢、合金结构钢、奥氏体类不锈钢及锡铅合金钎焊料无腐蚀作用，非结晶和凝固的各种介质的压力。主要适用于化肥生产过程中和制冷设备中用来测量氨的液体、气体或其混合物等的压力。

Ammonia pressure gauge can be applied for liquid or gaseous ammonia or its mixture that will not crystallise, freeze or corrode carbon steel, steel alloy or tin-lead alloysolder. It can be mainly used in fertilizer production and refrigeration equipment.



YA-100



YZA-150

### 结构原理 Structure

仪表由导压系统(包括接头、弹簧管等)、传动机构、指示装置和外壳组成。

当被测介质作用于弹簧管时，其管端产生相应的弹性变形—位移，经传动机构放大后，由指示装置在度盘上把被测压力指示出来。

The gauge is made up of measuring pressure system ( including connector and bourdon tube ), gear setting,pointer setting and outer case.

When the service medium act on the flexibility parts and make it move,with the help of the stick, magnified by the gear setting, and the pointer point it out on the dial.

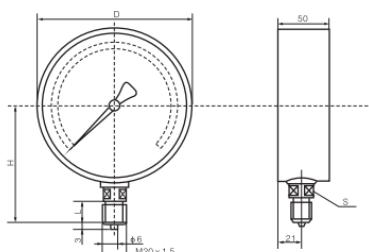
### 主要技术指标 Main Technical Data

#### ◇ 标度范围 Scale Range

型号 Model	标度范围 (MPa) Scale range
YA-100	0~0.1;0~0.16;0~0.25;0~0.4;0~0.6;0~1; 0~1.6;0~2.5;0~4.0;0~6.0;0~10;0~16;0~25;
YA-150	0~40;0~60;0~100;0~150; -0.1~0.15;0~0.1;0~0.3;0~0.5; -0.1~0.9;0~1.5;0~0.1~2.4

- ◇ 精确度等级：2.5%，1.6%
- ◇ 使用环境条件：-40~70℃，相对湿度不大于90%
- ◇ 温度影响：不大于0.4%/10℃ (使用温度偏离 $20 \pm 5$ ℃)
- ◇ 重量：0.6kg(YA-100)  
0.9kg(YA-150)
- ◇ Accuracy class:2.5%,1.6%
- ◇ Environmental condition:-40℃~70℃,relative humidity is no more than 90%.
- ◇ Temperature effect:when environmental temperature deviates from  $20 \pm 5$ ℃,additional error is no more than 0.4%/10℃.
- ◇ Weight:0.6kg(YA-100)  
0.9kg(YA-150)

### 外形尺寸 Dimensions



单位(Unit): mm

型号 Model	D	H	L	S
YA-100	100	87		
YA-150	150	117	20	17

**YTZ-150 电阻远传压力表****YTZ-150 electric resistance transmissible pressure gauge****用途说明 Application Description**

电阻远传压力表适用于测量对铜及铜合金不起腐蚀作用的液体、蒸汽和气体等介质的压力。因为在仪表内部设置一滑线电阻式发送器，故可把被测值以电量值传至远离测量点的二次仪表上，以实现集中检测和远距离控制。此外，本仪表并能就地指示压力，以便于现场工艺检查。

The gauge can be used in measuring the pressure of the service medium of liquid, vapor and gas which will not corrode copper or copper-alloys. Because a slip electric resistance transmitter is fixed in the gauge, it can change the measuring value into the electrical value and send it to the second instrument, then it can realize the concentrated check and remote control. Besides, this gauge can point the pressure on the spot, so it can be used as examine the technics on the spot.

**YTZ-150****主要技术指标 Main Technical Data**

精确度等级：1.6

发送器起始电阻值：3~20Ω

发送器满度电阻值：340~400Ω

发送器接线端①②外加电压不大于6V

滑线电阻式发送器接线图

使用环境条件：-40~60℃，相对湿度不大于85%，且震动和被测（控）介质的急剧脉动应对仪表正常工作无明显影响。

温度影响：使用温度偏离 $20 \pm 5^\circ\text{C}$ 时，其温度附加误差不大于 $0.4\% / 10^\circ\text{C}$ 。

重量：1.2kg

Accuracy class: 1.6

The beginning of electric resistance of transmitter: 3~20Ω.

The full scale of the electric resistance of the transmitter: 340~400Ω.

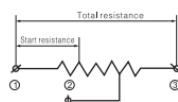
The additional voltage between connector 1 and connector 2 of the transmitter is no more than 6V.

Weight: 1.2kg

Environmental condition: -40℃~60℃, relative humidity is no more than 85%. And the working vibration and sharp pulsation of the medium must have no influence to reliable operation.

Temperature effect: when the environment temperature deviate from  $20 \pm 5^\circ\text{C}$ , the additional error is no more than  $0.4\% / 10^\circ\text{C}$ .

Slip electric resistance transmitter chart.

**Measuring Range**

Model	Scale range(MPa)
YTZ-150	0~0.1; 0~0.16; 0~0.25; 0~0.4; 0~0.6; 0~1; 0~1.6; 0~2.5; 0~4; 0~6; 0~10; 0~16; 0~25; 0~40; 0~60
YTZN-150	-0.1~0; -0.1~0.15; -0.1~0.3; -0.1~0.5; -0.1~0.9; -0.1~1.5; -0.1~2.4

### 结构原理 Structure

本仪表由一个弹簧管压力表和一个滑线电阻式发送器等组成。

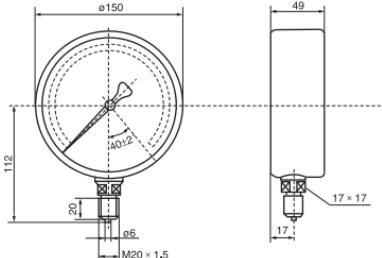
仪表机械部分的作用原理与一般弹簧管压力表相同。由于电阻发送器系设置在齿轮传动机构上，因此当齿轮传动机构中的扇形齿轮轴产生偏转时，电阻发送器的转臂(电刷)也相应地得以偏转，由于电刷在电阻器上滑行，使得被测压力值的变化变换为电阻值的变化，而传至二次仪表上，指示出一相应的读数值。同时，一次仪表也指示相应的压力值。

This gauge was made up of a bourdon tube pressure gauge and a slip electric resistance ant transmitter.

The principle of the mechanical part of the gauge is the same as the bourdon tube pressure gauge, the arm of the electric resistance(brush) is deflected too. Because the brush is slipping on the electric resistance transmitter, the pressure measurement will be changed into the electric resistance value. when sended to the second instrument, there will be a corresponding data. Meanwhile, the once instrument also indicate the corresponding pressure value.

### 外形尺寸 Dimensions

单位(Unit): mm



**YTT-150型差动远传压力表****YTT-150 differentially transmissible pressure gauge****用途说明 Application Description**

YTT-150型差动远传压力表是二线制本质安全型防爆仪表，用于测量对铜及其合金不起腐蚀作用的液体、气体和蒸汽的压力。仪表带上阻尼器后，可测量脉动、冲击、突然卸荷介质的压力。带上隔膜部分后，可测量大粘度、有腐蚀性介质的压力。本仪表除就地进行压力指示外，还连续输出与被测压力信号成线性的4~20mA直流信号。可以与DDZ-II电动单元组合仪表中的显示、记录、调节仪表联用，组成自动记录、调节、控制等系统。适合于石油化工、冶金、电站、轻工业等部门使用。

本仪表符合GB3836.4-83《爆炸性环境用防爆电气设备本质安全型电路和电气设备“！”》有关要求，并经防爆检验单位鉴定取得防爆合格证书。

**YTT-150**

YTT-150 differentially transmissible pressure gauge is safe antiexplosive gauge which is mainly used in measuring the pressure of the gases and liquids which have no corrosion function to copper and steel. When attached the damper, it can measure the pressure of the service medium which has sharp pulsation and concussion character. When attached the diaphragm, it can measure the pressure of the service medium which has high viscosity, strong corrosion character. This gauge can not only indicate the pressure measurement, but also continuously output the 4~20mA direct current signal which is linear to the pressure measurement. It also can be connected with the showing, recording, adjusting gauge and become a auto-recording, adjusting, controlling system. This gauge is suited for the oil and chemical industry, metallurgical industry, power station and so on.

This gauge accord with the request of the GB3836.4-83 and have procured the anti-explosion qualified certification through the anti-ex-plosion examine DPT.

**主要技术指标 Main Technical Data**

- 1、测量范围：见型号规格表
- 2、输出信号：4~20mA DC, 二线制
- 3、精度等级：1.6级
- 4、负载电阻：250Ω~350Ω
- 5、防爆标志：ib II CT5
- 6、供电电源：直流 $24V^{+10\%}_{-15\%}$  (本质安全型经ISB 5362-1006型安全供电)。
- 7、工作环境：
  - ◇ 温 度：-10~+55℃
  - ◇ 相对湿度：≤85%
  - ◇ 外 磁 场：≤5奥斯特

- 1、Scale range: see the specification sheet
- 2、Output signal: 4~20mA DC,two line.
- 3、Accuracy class: 1.6.
- 4、The electric resistance load: 250~350Ω.
- 5、Anti-explosive sign: ib II CT5.
- 6、Power supply: AD 24V $^{+10\%}_{-15\%}$ .
- 7、Environmental condition:
  - ◇ temperature: -10~+55°C.
  - ◇ relative humidity: no more than 85%.
  - ◇ Outer magnetic field: ≤5 oersted.

注：

1、产品分为基型，带阻尼器型“Z”，带隔膜型“G”（与介质接触部分材料为 $\text{IGr}18\text{Ni}9\text{Ti}$ 和 $\text{P}2611$ 混炼）、带隔膜阻尼型“F”。

2、仪表供电电源为直流24V，作本质安全型使用时由CI系列ISB安全栅供电，作普通型使用时由配电器供电。

Remark.

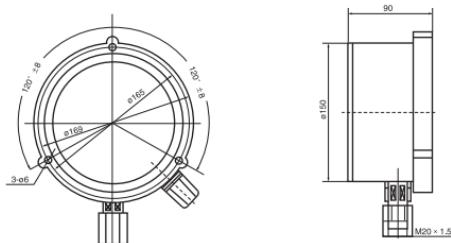
1. Product is fundamental type, with the damper "Z", with diaphragm "G" (the contacting material: 1Cr18NiTi and P2611) with diaphragm admper "F"
2. The power is the DC 24V, for nature safety use with CI series ISB safety power supply, for common type with the distribution power.

## 型号规格表 Specification Sheet

YTT	代号 Code	型 式 Model	测量范围 Scale range(MPa)
		基 型 Fundamental type	
	Z	带阻尼器 Attached damper type	-0.1~0,-0.1~0.06,-0.1~0.15, -0.1~0.3,-0.1~0.5,-0.1~0.9, -0.1~1.5,-0.1~2.4~0~0.1, 0.16,0.25,0.4,0.6,1,16,2.5 4,6,10,16,25,40,60,100
	G	带隔膜 Attached diaphragm	
	F	带隔膜阻尼器 Attached diaphragm damper type	0~0.10~0.16,0~0.25,0~0.4, 0~0.6~0~1.0~1.6~0~2.5~0~4, 0~6.0~10~0~16~0~25~0~40, 0~60~0~100
		代 号 Code	输出 Output
		-150	4~20mADC
YTT	Z	-150	0~6MPa 完整型号：测量范围 Full type measure range

## 外形尺寸 Dimensions

单位(Unit): mm



**YSG-2、3 系列电感压力变送器****YSG-2,3 series induction pressure transmitter****用途说明 Application Description**

YSG系列电感压力变送器能在生产工艺流程中直接指示现场的被测介质的压力值，并将压力值转换成标准直流电信号，传送至二次仪表。具有直观、稳定可靠等优点。广泛应用于各工业部门生产过程中对液体、气体或蒸气等介质压力测量及信号传输，实现生产过程的检测与自动控制调节。

**YSG-2**

YSG series induction pressure transmitter can change the pressure measurement of the service medium into the direct current signal in the technological processing, and send it to the second instrument. It has the character of convenience and reliable operation. This gauge is widely used in measuring the pressure of the service of medium and signal outputting in industry, and realize to measure, auto-control, and adjust in the manufacture.

**结构原理 Structure**

仪表由机械式指示压力表和转换器及电子放大器组成。外壳为防溅型结构具有较好的密封性，能防护内部机件免受污秽侵入。

当被测介质的压力导入弹性管内，即产生弹性变形—位移，管端位移时，一方面经传动机构放大，由指示装置在度盘上指示压力值，同时通过位移杆，带动电感线圈内的铁芯改变其位置，从而使电感线圈的电感量发生变化，经电子线路转换成直流电压信号，并由电压—电流转换器转换成直流电流信号，通过电子放大器放大后输出。

This gauge is made up of mechanical pressure gauge, transform and electric magnifier. The outer case have the excellent airproof character, so it can protect the accessory inside the case from being dirtied.

When the service medium pressure act on the flexibility parts and make it move, when magnified by the gear, then the pointer point it out on the dial. With the help of the stick, make the steel core in the winding move, so make the induction change. Through the electrocircuit it can be changed into the direct voltage signal, through the voltage—current transform it is changed into the direct current signal, output after being magnified.

**主要技术指标 Main Technical Data**

◇ 精确度等级：1.6

◇ 测量范围

测量范围 Scale range (MPa)

0~0.06;0~0.1;0~0.16;0~0.25;0~0.4;0~0.6;0~1.0~1.6;0~2.5;0~4.0~6;
0~10;0~16;0~25;0~40;0~60;~0.1~0;~0.1~0.06;~0.1~0.15;
~0.1~0.3;~0.1~0.5;~0.1~0.9;~0.1~1.5;~0.1~2.4

◇ 使用环境条件：-10~55℃，相对湿度不大于85%

◇ 温度影响：使用温度偏离20±5℃时，其温度附加误差不大于0.75%/10℃。

◇ Accuracy class: 1.6

◇ Environmental condition: -10℃~55℃, relative humidity is no more than 85%.

◇ Temperature effect: when environmental temperature deviates from 20±5℃, additional error is no more than 0.75%/10℃.

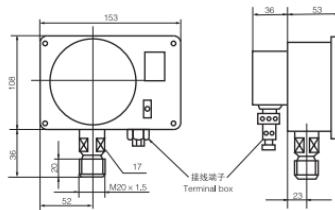
### 电气性能 Electrical Capability

型号及名称 Model & name	YSG-3电感压力变送器 YSG-3 induction pressure transmitter	YSG-2电感压力变送器 YSG-2 induction pressure transmitter
工作电源 Working power	DC-24V	AC-220V
输出信号 Out put signal	DC 4~20mA	DC 0~10mA
负载电阻 Loading resistance	$\leq 250\Omega$	$\leq 1K\Omega$
接线端子 Terminals	① ②二线制 Two line + 输出 Output -	① ② ③ ④ ⑤ + 输出 Output - 220V -
重量 Weight(Kg)	1.0	1.3
配套二次仪表 Attached meter	XMY-30压力数字显示仪 Digital display pressure controller	XMY-20压力数字显示控制仪 Digital display pressure controller
	XMY-32压力数字显示控制仪 Digital display pressure controller	XMY-22压力数字显示控制仪 Digital display pressure controller

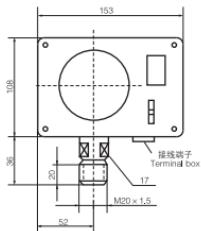
### 外形尺寸 Dimensions

YSG-2

单位(Unit): mm



YSG-3



## 电感压力(微压)变送器

### Induction [low pressure] pressure transmitter

#### 用途 Application

电感压力(微压)变送器主要用于工业生产过程和测量系统中用以测量各种非结晶和非凝固性的对铜或铁及其合金不起腐蚀作用的流体介质的压力或负压。本仪表既能将被测介质的压力值转换成标准直流电流信号,以便于较长距离传送测量值,而最终能在中央控制室中与二次仪表进行配套,以实现生产过程的自动检测与控制,又具有机械式指针直接指示压力值的特点,以便于现场工艺检查与调校。

Induction low pressure pressure transmitter is mainly apply in measuring the pressure of those gases or liquids which neither corrode copper or steel, nor crystallize in the industry processing and measuring system. This instrument can change the pressure value of the service medium into direct current. It has the character of mech anicel pointer indicating the pressure value, and realize to measure, auto-control, and adjusting in the manu fature.

#### 主要技术数据 Main Technical Data

型号及名称 Model and name	工作电源 Working power	输出信号 Output signal	负载电阻 Loading resistance	接线端子 terminal	重量 Weight (kg)	配套二次仪表(本厂生产) Attached instrument
YSG-02电感微压变送器 YSG-02 Induction low pressure transmitter	AC220V	DC 0~10mA	$\leq 1k\Omega$	① ② ③ ④ ⑤ +输出 Output- 220V-↓	1.3	XMY-20压力数字显示仪 XMY-22压力数字显示控制仪 XMY-20 Pressure digital display instrument XMY-22 Pressure digital display controller
YSG-03电感微压变送器 YSG-03 Induction low pressure transmitter	DC24V	DC 4~20mA	$\leq 250\Omega$	① ② 二线制 +输出- Two line Output	1.0	XMY-30压力数字显示仪 XMY-32压力数字显示控制仪 XMY-30 Pressure digital display instrument XMY-32 Pressure digital display controller

- ◇ 使用环境条件:  $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$ , 相对湿度不大于85%
- ◇ 温度影响: 使用温度偏离 $20 \pm 5^{\circ}\text{C}$ 时, 其温度附加误差不大于 $0.75 \sim 10^{\circ}\text{C}$ 。
- ◇ Environmental condition:  $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$ , relative humidity is no more than 85%.
- ◇ Temperature effect: when enviromental temperature deviates from  $20 \pm 5^{\circ}\text{C}$ , additional error is no more than  $0.75 \sim 10^{\circ}\text{C}$ .

