



XINTE INSTRUMENT

ANHUI XINTE ELECTRIC TECHNOLOGY CO., LTD
TIANCHANG MINGXUAN INSTRUMENT CO., LTD

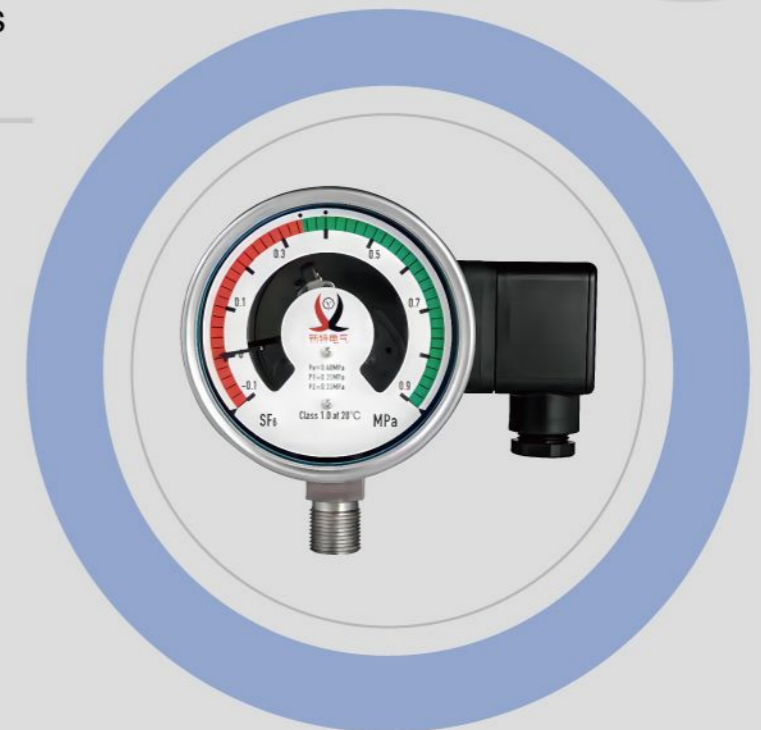
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TIANCHANG MINGXUAN INSTRUMENT CO., LTD

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From science and technology to
create high-quality goods





COMPANY PROFILE

Xinte Instrument was founded in 2002 and is a professional manufacturer specializing in the research, development, and production of various pressure measuring instruments. Since its establishment, we have continuously introduced new technologies, processes, equipment, and improved testing methods, and have now become a dedicated manufacturer of mid to high end pressure gauges.

We have rich practical experience, strong technical strength, and advanced testing equipment. Our products are widely used in industries such as power and electrical, firefighting and rescue, petrochemicals, mining and metallurgy, transportation and machinery, textiles, food, ship rescue, and safety protection.

Our main products include SF6 gas density meters, SF6 gas density relays, remote intelligent digital pressure gauges, magnetic assisted electric contact pressure gauges, fire pressure gauges, all stainless steel pressure gauges, diaphragm pressure gauges, stainless steel bellows pressure gauges, luminous pressure gauges, shock resistant pressure gauges, general pressure gauges, vacuum pressure gauges, oxygen pressure gauges, acetylene pressure gauges, ammonia pressure gauges and other series of products. We can also process special customized pressure gauges according to user requirements.

We rely on technological innovation and stable operation to establish a technology development system with completely independent intellectual property rights. Continuous innovation and pursuit of excellence are the persistent concepts of Xinte Instrument. We have a firm belief in exploring the path of innovation and brand development.

Our company has successfully passed the ISO9001 quality system certification and has also been rated as a metrological qualification confirmation unit by the quality and technical supervision department.

Enterprise purpose: Quality as the foundation, development as the guide, to meet the needs and expectations of customers.

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MJ100 density relay



Overview

Used to monitor the density of SF₆ gas in sealed containers, it can display the gas density on site and alarm when the density value reaches the set value. It is suitable for monitoring high-pressure systems. We can provide various solutions such as supporting new substations and intelligent transformation of existing substations.

Application scope

- ◆ SF₆ insulated switchgear (GIS)
- ◆ SF₆ insulated circuit breaker
- ◆ SF₆ insulated pole switch
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated busbar system

Features

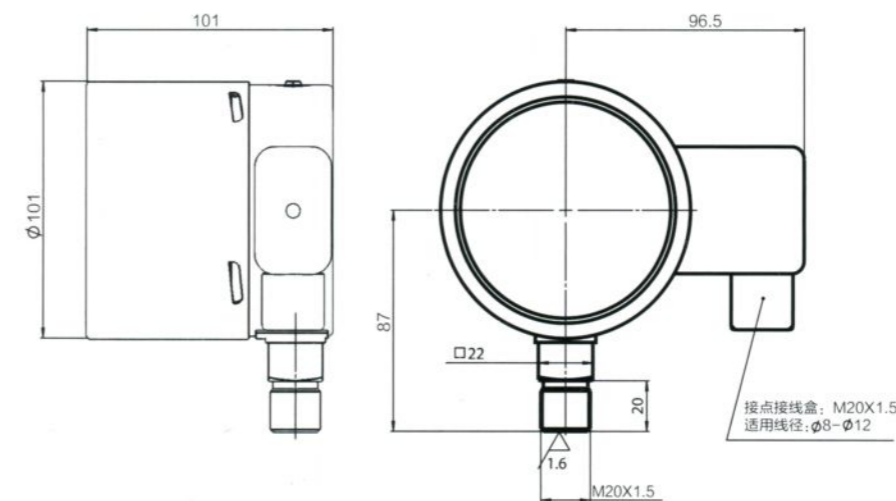
- ◆ Equipped with temperature compensation device for higher measurement accuracy
- ◆ Suitable for different installation needs indoors and outdoors
- ◆ Using AISI304 stainless steel to make a sealed case
- ◆ Using AISI316 stainless steel to make gas path connection components
- ◆ The on-site display values and output signals are not affected by external factors such as altitude
- ◆ Design of electric contact switch to achieve precise and stable SF₆ gas density monitoring function
- ◆ Up to three pairs of contacts can be used to achieve multiple options such as overpressure alarm, dual alarm, or dual locking, making monitoring safer and more reliable

Technical parameter

1. Shell diameter: 100mm
2. Measurement range: -0.1~0.9MPa (customizable)
3. Measurement accuracy: (depends on the measurement range, and SF₆ is in the gaseous state).
a) 20°C: 1.0 level, or 1.5 level. b) -40°C~60°C: Level 2.5
4. Protection level: IP65
5. Working temperature: -40°C~+60°C, relative humidity≤95% RH
6. Leakage rate: $\leq 1 \times 10^{-9} \text{ Pa} \cdot \text{m}^3/\text{s}$ (helium leak detection)
7. Interface size: M20×1.5 (customizable)
8. Installation method: radial or axial
9. Electrical connection: Plug in connection M20×1.5 sealing head. Cable size: Recommended 1.5mm², maximum 2.5mm²
10. Insulation performance: Insulation resistance:>100MΩ (DC500V). Power frequency withstand voltage: 2kV, 50/60Hz, 1min
11. Contact type: Magnetic assisted electric contact switch. 80% silver, 20% nickel, 10μm gold plating
12. Impact grade: 50g (oil filled type), 30g (non oil filled type)
13. Contact electrical parameters: 30W/50VA, 1A (Maximum). 220VDC/380V 50/60Hz (maximum)
14. Table glass: multi-layer safety glass
15. Weight: 1.0kg
16. Pressure sensing component: imported Burton tube

Optional features

- ◆ Power frequency withstand voltage 2.5kV 50/60Hz 1min
- ◆ Can be filled with oil
- ◆ Wide temperature range: -60°C~+60°C
- ◆ SF₆ mixed gas compensation





MJ100L ultra-low temperature density relay



Overview

Used to monitor the density of SF₆ gas in a sealed container, it can display the gas density on site and alarm when the density value reaches the set value. Specially designed for extreme cold weather in the north, suitable for harsh outdoor conditions. We can provide various solutions such as supporting new substations and intelligent transformation of existing substations.

Application scope

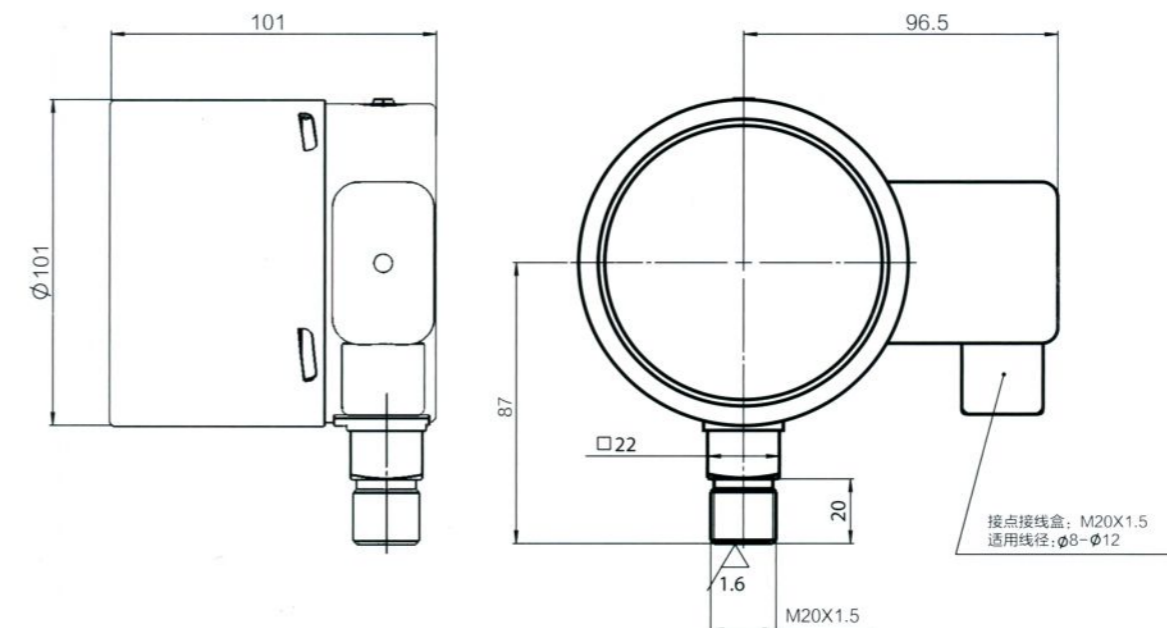
- ◆ SF₆ insulated switchgear (GIS)
- ◆ SF₆ insulated circuit breaker
- ◆ SF₆ insulated pole switch
- ◆ SF₆ Transformer
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated busbar system

Features

- ◆ Wide temperature range for use, reliable operation in low-temperature environments
- ◆ The case can be filled with nitrogen gas to prevent condensation of water vapor inside the case at low temperatures
- ◆ Sealed case, suitable for high-altitude areas
- ◆ The insulation withstand voltage can reach 3000V
- ◆ Up to three pairs of contacts can be used to achieve multiple options such as overpressure alarm, dual alarm, or dual locking, making monitoring safer and more reliable

Technical parameter

1. Shell diameter: 100mm
2. Measurement range: -0.1~0.9MPa (customizable)
3. Measurement accuracy: (depends on the measurement range, and SF₆ is in the gaseous state).
a) 20°C: 1.0 level, or 1.5 level. b) -40°C~60°C: Level 2.5.
c) -60°C ~-30°C ; Level 3.5
4. Protection level: IP65
5. Working temperature: -60°C~+60°C, relative humidity≤95% RH
6. Leakage rate: ≤1×10⁻⁹Pa·m³/s (helium leak detection)
7. Interface size: M20×1.5 (customizable)
8. Installation method: radial or axial
9. Electrical connection: Plug in connection M20×1.5 sealing head. Cable size: Recommended 1.5mm², maximum 2.5mm²
10. Insulation performance: Insulation resistance:>100MΩ (DC500V). Power frequency withstand voltage: 2kV/2.5kV/3.0kV, 50/60Hz, 1min
11. Contact type: Magnetic assisted electric contact switch. 80% silver, 20% nickel, 10μm gold plating
12. Impact grade: 30g (non oil filled type)
13. Contact electrical parameters: 30W/50VA, 1A (Maximum). 220VDC/380V 50/60Hz (maximum)
14. Table glass: multi-layer safety glass
15. Weight: 1.0kg
16. Pressure sensing component: imported Burton tube





MJR100 remote transmission density relay



Overview

Used to monitor the density of SF₆ gas in sealed containers, it can display the gas density on site and alarm when the density value reaches the set value. It has real-time remote transmission of SF₆ gas density change data and realizes online remote monitoring function. Suitable for monitoring high-voltage systems. We can provide various solutions such as supporting new substations and intelligent transformation of existing substations.

Application scope

- ◆ SF₆ insulated switchgear (GIS)
- ◆ SF₆ insulated circuit breaker
- ◆ SF₆ insulated pole switch
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated busbar system

Features

- ◆ Equipped with temperature compensation device for higher measurement accuracy
- ◆ The perfect combination of mechanics and electronics, on-site indication and control of instruments. Adopting precision mechanical structure and possessing real-time remote transmission function of electronic signals
- ◆ RS485 bus interface, easy system expansion, convenient for implementing telemetry and remote control functions. Strong ability to resist electromagnetic interference
- ◆ Suitable for different installation needs indoors and outdoors
- ◆ Using AISI304 stainless steel to make a sealed case
- ◆ Using AISI316 stainless steel to make gas path connection components
- ◆ The on-site display values and output signals are not affected by external factors such as altitude
- ◆ Up to three pairs of contacts can be used to achieve multiple options such as overpressure alarm, dual alarm, or dual locking, making monitoring safer and more reliable

Technical parameter

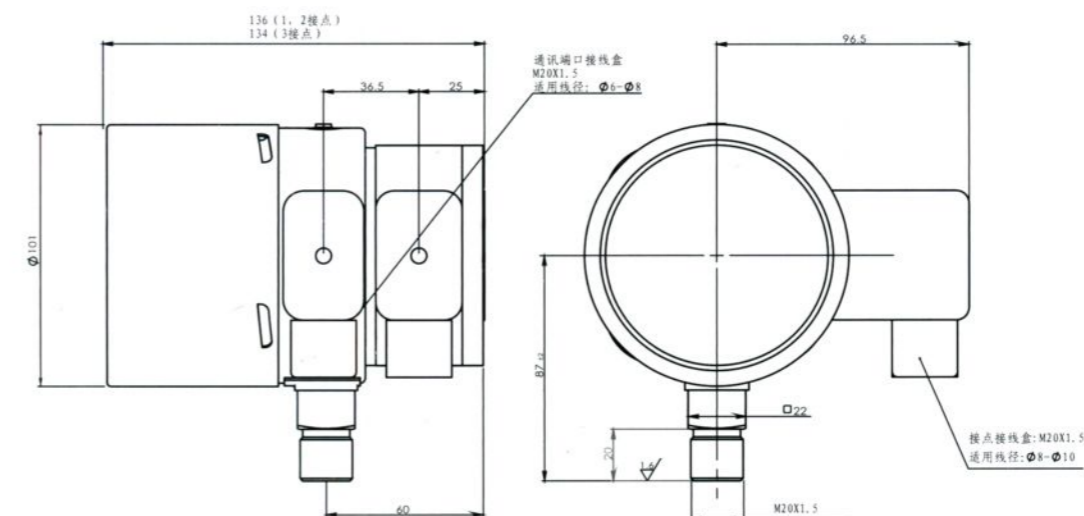
1. Shell diameter: 100mm
2. Measurement range: -0.1~0.9MPa (customizable)
3. Measurement accuracy: (depends on the measurement range, and SF₆ is in the gaseous state).
a) 20°C: Grade 1.0 or 1.5. b) -40°C~60°C: Level 2.5
4. Protection level: IP65
5. Working temperature: -40°C~+60°C, relative humidity≤95% RH
6. Leakage rate: 1×10^{-9}Pa · m³/s (helium leak detection)
7. Interface size: M20×1.5 (customizable)
8. Installation method: radial or axial
9. Electrical connection: Plug in connection M20×1.5 sealing head. Cable size: Recommended 1.5mm², maximum 2.5mm²
10. Insulation performance: Insulation resistance:>100MΩ (DC500V). Power frequency withstand voltage: 2kV, 50/60Hz, 1min
11. Contact type: Magnetic assisted electric contact switch. 80% silver, 20% nickel, 10μm gold plating
12. Impact grade: 50g (oil filled type), 30g (non oil filled type)
13. Contact electrical parameters: 30W/50VA, 1A (Maximum). 220VDC/380V 50/60Hz (maximum)
14. Table glass: multi-layer safety glass
15. Weight: 1.2kg
16. Pressure sensing component: imported Burton tube

Main electrical performance indicators and specifications for remote transmission

- ◆ Working voltage: DC 24V
- ◆ Power consumption:<2W
- ◆ Communication method: RS485
- ◆ Communication protocol: ModBus RTU
- ◆ Transmission speed: 9600bps
- ◆ Anti electromagnetic interference
IEC61000-4-2: Level 4 (15kV)
IEC61000-4-3: Level 3 (10V/m)
IEC61000-4-4: Level 4 (4kv)
IEC61000-4-5: Level 3 (+/-2kV)
IEC61000-4-6: Level 3 (10V)
IEC61000-4-8: Level 5 (100A/m)

Optional features

- ◆ Power frequency withstand voltage 2.5kV 50/60Hz 1min
- ◆ Can be filled with oil
- ◆ Fiber optic remote communication or wireless remote communication





MJR100W remote transmission density relay (micro water, density)



Overview

Used for controlling and monitoring the density (P20 pressure) of SF₆ gas in sealed containers, with alarm and locking contacts, applied to SF₆ high-voltage circuit breakers, medium voltage switches, gas insulated equipment (GIS), high-voltage cables, transformers, and transformers. It can output the PPM20 micro water content, P20 pressure, temperature, dew point, atmospheric dew point, pressure, density in SF₆ electrical equipment, and has a communication interface. Through RS485 communication, the data of SF₆ gas PPM20 micro water content, P20 pressure, temperature, dew point, atmospheric dew point, pressure, density can be transmitted to the monitoring room backend, and the SF₆ density relay reading can be observed in real-time through the backend.

Application scope

- ◆ SF₆ High Voltage Circuit Breaker
- ◆ SF₆ medium voltage switch
- ◆ SF₆ gas insulated equipment (GIS)
- ◆ SF₆ high-voltage cable
- ◆ SF₆ transformers and mutual inductors

Features

- ◆ Self verification: Sensor data collection, using 2 sets of collection systems, capable of self verification and outputting alarms;
- ◆ Implementing remote transmission function: In addition to the alarm locking output of traditional SF₆ gas density relays, it also has the function of transmitting data on PPM20 micro water content, P20 pressure, temperature, dew point, atmospheric dew point, and pressure density to the backend, while maintaining the same appearance as traditional SF₆ gas density relays

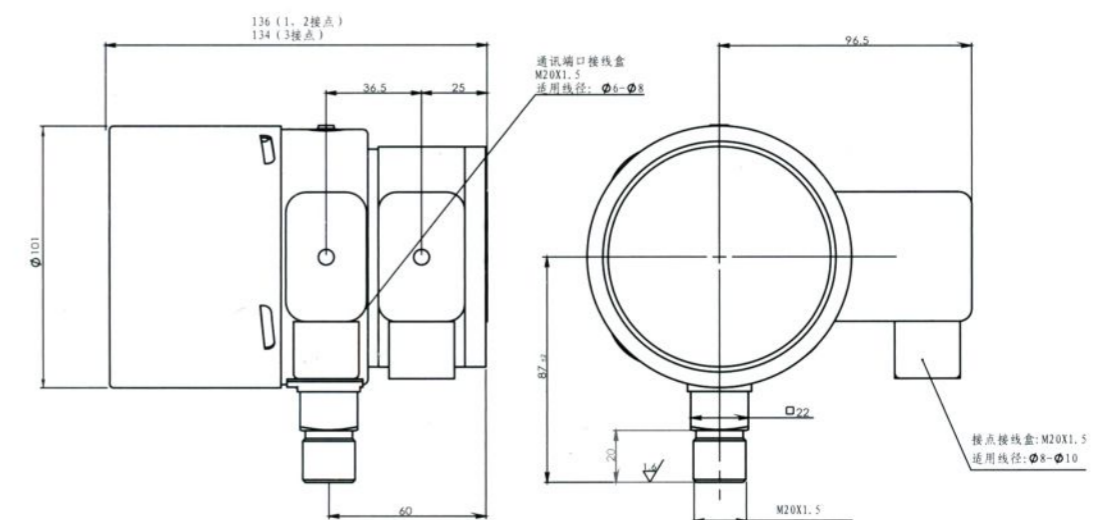
Technical parameter

1. Output: Communication method: RS485
Communication protocol: ModBus
Transmission speed: 9600bps
2. General parameters: Operating voltage: 24VDC
Power: <3W
Weight: 1000g
Protection level: IP65 shell material
Stainless steel joint material: stainless steel
Mechanical interface: M20×1.5
Absolute leakage rate: ≤10⁻⁹Pa·m³/s (helium gas detection)

3. Measurement parameters:
Dew point range: -50...+20°C Td/f
Pressure range: 0...+10 bar
Temperature range: -40...+80°C (expandable range)
4. Calculation parameters: Convert to parameters under standard conditions of 20°C
Micro water content: 1... 9999ppm
Pressure value (density): 0.10 bar

Main electrical performance indicators and specifications

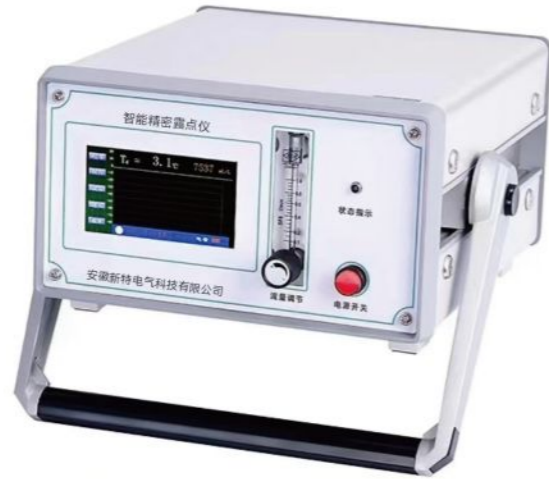
- ◆ Performance:
Dew point accuracy: ± 3°C Td
Pressure value (density) accuracy: ± 1% FS
Temperature accuracy: ± 1°C
Sensor response time: Dew point sensor: 2S (20°C)
Pressure sensor: <0.5S (20°C)
- ◆ Working environment:
Transmitter working temperature: -40...+80°C
Overload safety pressure: 12 bar
Relative humidity: 0... 100RH%
Tested gases: SF₆, SF₆/N₂ mixture
- ◆ Anti electromagnetic interference:
Surge Level 4 (GB/T 17626.5-2008)
Electrostatic discharge level 4 (GB/T 14598.14-2010)
Fast transient interference level 4 (GB/T 14598.10-2007)
Damping oscillation magnetic field level 5 (GB/T 17626.10-1998)
Radio frequency conducted interference level 3 (GB/T 17626.6-2008)
Pulse group interference level 3 (GB/T 17626-12-1998)



The output parameters include: PPM20 (micro water at 20°C), P20 (pressure and density at 20°C), T (°C), Td (dew point), P (pressure), Tdatm (atmospheric dew point), density (kg/m³)



DPM type intelligent precision dew point meter



Overview

Used to monitor the micro water content, density, pressure, temperature and other data of SF₆ gas in closed containers, with real-time remote monitoring function. By using intelligent compensation technology, the nonlinearity of SF₆ gas pressure changes and changes in micro water content can be tracked in real time, with accurate measurement and wide application. Suitable for monitoring high-voltage systems. We can provide various solutions such as supporting new substations and intelligent transformation of existing substations.

Application scope

- ◆ SF₆ insulated switchgear (GIS)
- ◆ SF₆ insulated circuit breaker
- ◆ SF₆ insulated pole switch
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated transformer

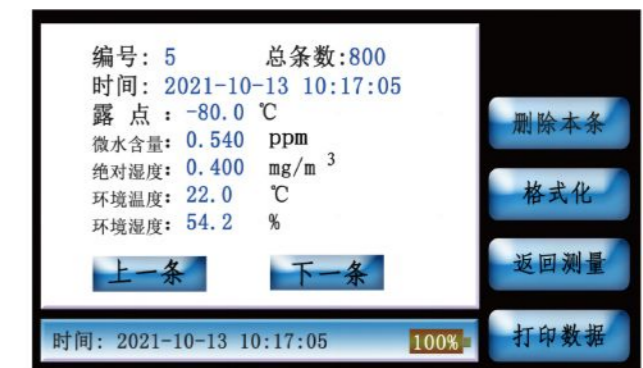
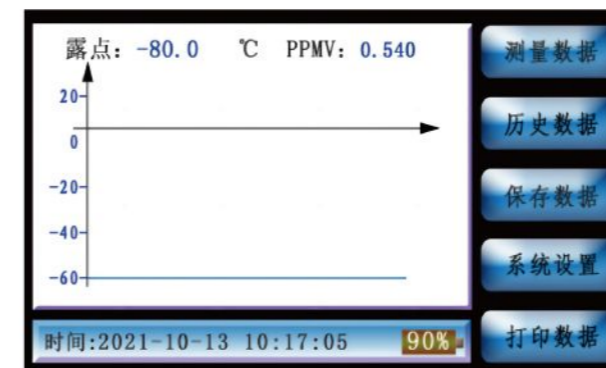
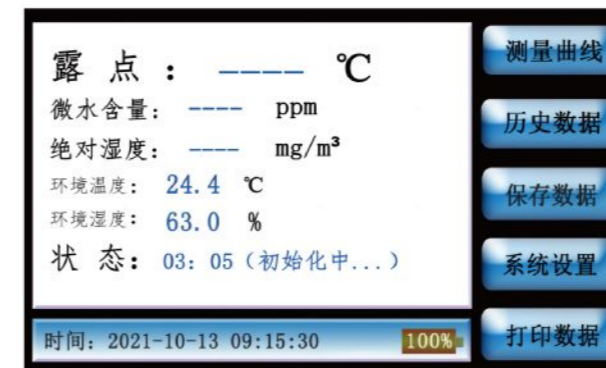
Features

- ◆ 5.0-inch TFT touch screen design
- ◆ 32-bit ARM microcontroller
- ◆ Large capacity storage function
- ◆ Digital display of battery level
- ◆ Good repeatability and fast response speed
- ◆ Slope automatic calibration
- ◆ Color LCD display
- ◆ Advanced probe protection function
- ◆ Anti pollution and anti-interference
- ◆ High sensitivity and good stability
- ◆ Compact and beautiful in size, easy to carry

Technical parameter

1. Measurement range: Dew point -60°C to +60°C/
-80°C~+20°C (supports ppmv, etc.)
2. Dew point accuracy: ± 2°C
(When the dew point temperature is below 0°C, the sensor output is frost point)
Response time 63% [90%]
+20→-20°C Td 5s[45s]; -20→-60°C Td 10s[240s]
3. Resolution: Dew point 0.1°C or 0.1ppm
4. Repeatability: ± 0.2°C
5. Gas flow rate: SF₆ is adjusted at 0.7-0.9L/min
6. Probe protection: Stainless steel sintered filter screen
7. Working voltage: 110-220VAC, AC/DC dual-use

8. Storage temperature level: -40 to +70°C
9. Output interface: USB specification
10. Operating environment: Temperature: -25 to +60°C
Pressure: 0-10 bar
Sample gas flow rate: No impact
11. Lithium battery, dual-use for AC and DC, automatic switching, overcharge and over discharge protection function
12. Volume weight: 300×260×180 (mm), 2.5kg





MJ60 density relay



Overview

Used to monitor the density of SF₆ gas in sealed containers, it can display the gas density on site and alarm when the density value reaches the set value. Suitable for monitoring medium voltage systems, it can provide various solutions such as supporting new substations and intelligent transformation of existing substations.

Application scope

- ◆ SF₆ gas insulated ring main unit
- ◆ SF₆ gas insulated switchgear

Features

- ◆ Equipped with temperature compensation device for higher measurement accuracy
- ◆ Suitable for different installation needs indoors and outdoors
- ◆ Using AISI304 stainless steel to make a sealed case
- ◆ Using AISI316 stainless steel to make gas path connection components
- ◆ The on-site display values and output signals are not affected by external factors such as altitude

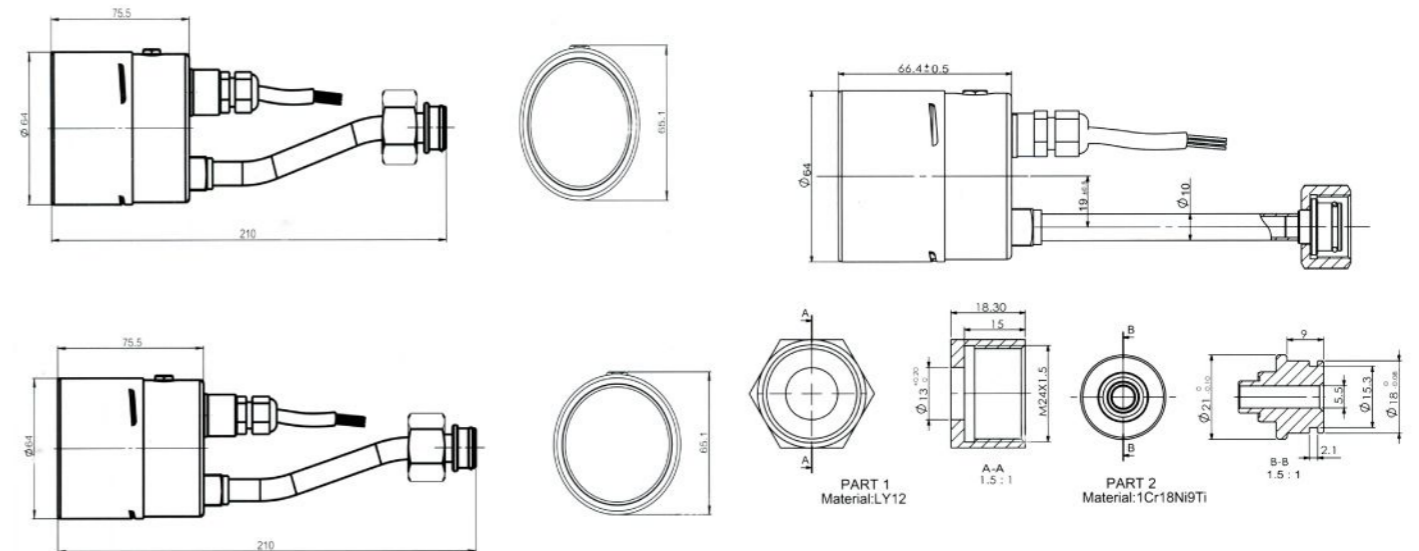
Technical parameter

1. Shell diameter: 64mm
2. Measurement range: 0~0.2MPa, -0.1~0.6MPa (customizable)
3. Measurement accuracy: (depends on the measurement range, and SF₆ is in the gaseous state).
a) 20 °C: 1.0 level, or 1.5 level. b) -30°C~+60°C: Level 2.5
c) -40°C~-30°C: Level 3.0
4. Protection level: IP65
5. Working temperature: -40°C~+60°C, relative humidity≤95% RH
6. Leakage rate: $\leq 1 \times 10^{-9}$ Pa·m³/s (helium leak detection)
7. Interface size: M20×1.5 (customizable)
8. Installation method: radial or axial
9. Electrical connection: multi-core cable; 1 meter long (customizable)

10. Insulation performance: Insulation resistance: >100MΩ (DC 500V). Power frequency withstand voltage: 2kV, 50/60Hz, 1min
11. Contact type: Magnetic assisted electric contact switch. 80% silver, 20% nickel, 10μm gold plating
12. Contact electrical parameters: 30W/50VA, 1A (Maximum). 220VDC/380V 50/60Hz (maximum)
13. Weight: 0.3kg

Optional features

- ◆ Up to 3 pairs of contacts
- ◆ Wide temperature range: -40°C~+60°C





M60 density gauge/pressure gauge



Technical parameter

1. Shell diameter: 64mm
2. Measurement range: 1-2 bar abs
3. Measurement accuracy: (depends on the measurement range, and SF6 is in the gaseous state).
a) 20°C: 1.0 level, or 1.6 level. b) -30°C~60°C: Level 2.5.
c) -40°C~-30°C: Level 3.0
4. Protection level: IP65
5. Working temperature: -40°C~+60°C
6. Leakage rate: $\leq 1 \times 10^{-9}$ Pa · m³/s (helium leak detection)
7. Interface size: M20×1.5 (customizable)
8. Installation method: radial or axial
9. Table glass: multi-layer safety glass
10. Weight: 0.3kg

Overview

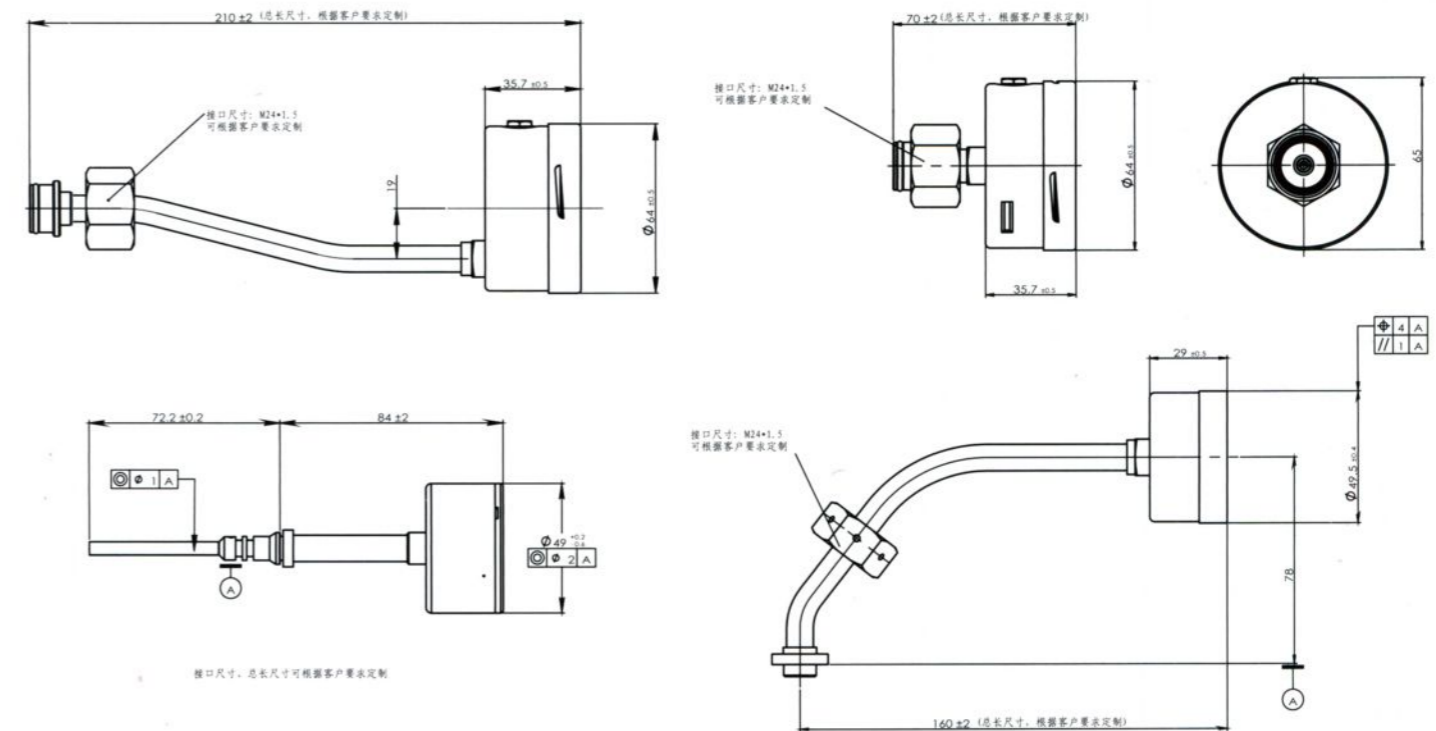
Used to monitor the density of SF₆ gas in sealed containers, capable of displaying gas density on site, suitable for monitoring medium pressure systems.

Application scope

- ◆ SF₆ gas insulated ring main unit
- ◆ SF₆ gas insulated switchgear

Features

- ◆ Equipped with temperature compensation device for higher measurement accuracy
- ◆ Suitable for different installation needs indoors and outdoors
- ◆ Using AISI304 stainless steel to make a sealed case
- ◆ Using AISI316 stainless steel to make gas path connection components
- ◆ The on-site display value is not affected by external factors such as altitude





XY type connecting valve



Overview

This product is a connection device between SF₆ density relay and SF₆ gas chamber. After assembly, it allows power maintenance personnel to calibrate or replace SF₆ gas density relay without disassembling the device. It completely solves the problem of disassembly in relay calibration, replacement, and gas replenishment, avoids damage to the switch sealing surface and sealing ring caused by disassembling the joint during regular calibration, greatly reduces the probability of leakage, improves work efficiency, and ensures the safe operation of SF₆ electrical switches.

Application scope

- ◆ SF₆ insulated switchgear (GIS)
- ◆ SF₆ insulated circuit breaker
- ◆ SF₆ insulated pole switch
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated transformer
- ◆ SF₆ insulated busbar system

Features

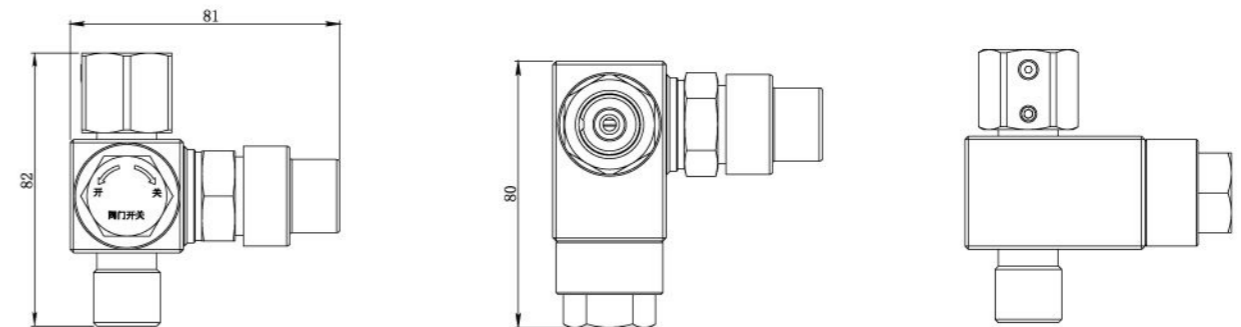
- ◆ The SF₆ gas density relay can be verified or replaced without disassembling it
- ◆ No need to disassemble screws, one person can operate independently, which is convenient, labor-saving, and time-saving
- ◆ Convenient for on-site personnel to perform micro water and air replenishment operations on the switch
- ◆ Avoiding damage to the sealing surface and sealing ring caused by disassembly

Technical parameter

1. Valve seat material: aluminum alloy/copper alloy/stainless steel
2. nominal diameter: 6, 8, 12 mm (medium voltage equipment)
20mm (high voltage equipment)
3. Surface treatment: Aluminum alloy: Oxidation treatment
Copper alloy, stainless steel: not treated
4. Working temperature: -40°C~+60°C
5. Leakage rate: $\leq 1 \times 10^{-8}$ Pa · m³/s

Optional features

- ◆ Interface size: customizable
- ◆ Nominal diameter: customizable



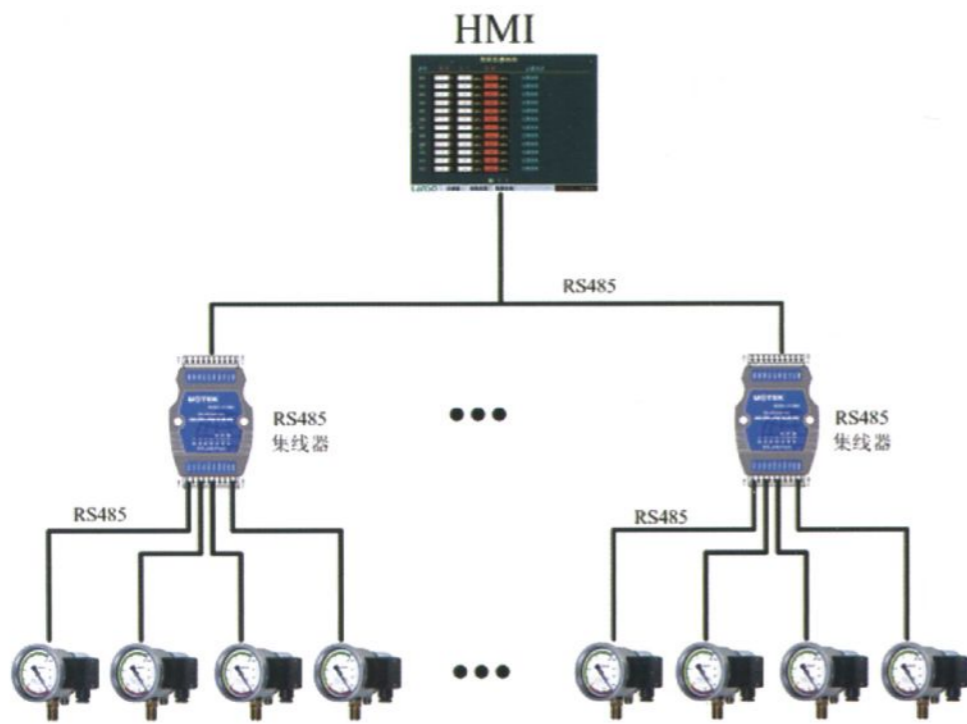


SF6 gas density online monitoring system

WELCAP-1.0D

System functions and features

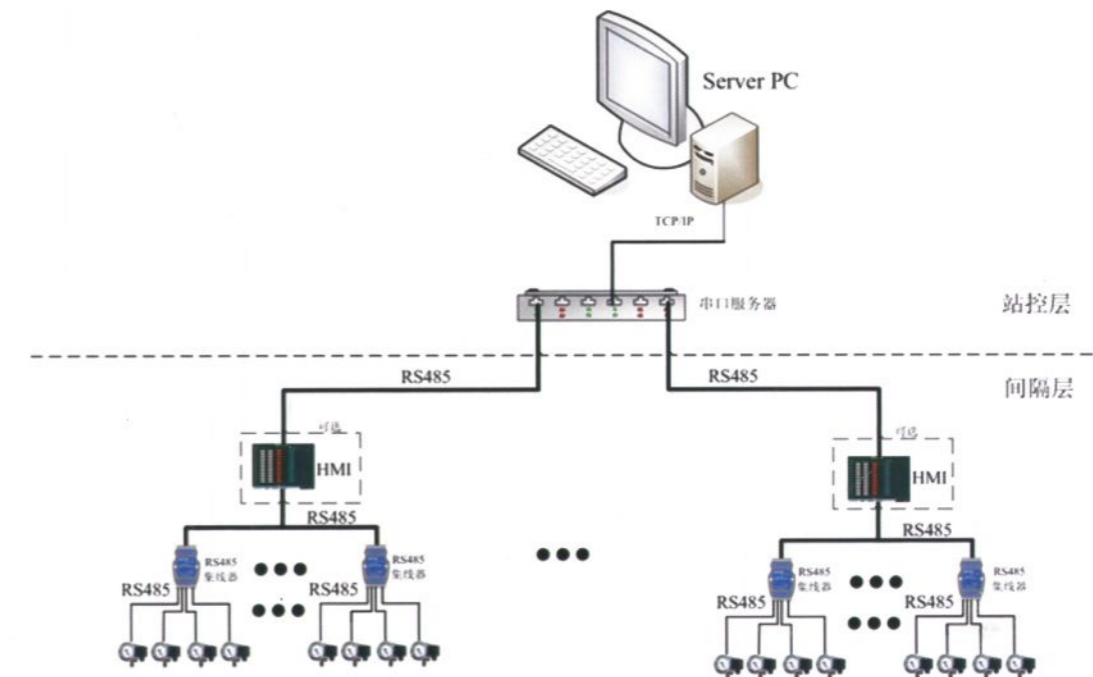
1. A small monitoring system based on intervals or the entire station, which compactly and economically displays the SF₆ gas temperature, pressure, and density values of each gas chamber in the system in real-time and intuitively.
2. HMI embedded configuration software, running stably and reliably; Touchscreen design, intuitive and easy to operate.
3. RS485 communication interface, the data acquisition terminal can use our company's ordinary remote transmission SF₆ gas density relay, wireless remote transmission SF₆ gas density relay, and fiber optic remote transmission SF₆ gas density relay, making on-site networking convenient and fast.
4. Remote transmission SF₆ gas density relay with integrated electromechanical design. The output of contact signals and real-time monitoring are relatively independent and do not affect each other.



WELCAP-2.0D

System functions and features

1. Implement online monitoring of the entire station on a substation basis, and real-time monitoring data can be seen in the control room within the station.
2. Use highly reliable industrial control computers as backend servers to enhance system stability.
3. RS485 communication interface, the data acquisition terminal can use our company's ordinary remote transmission SF₆ gas density relay, wireless remote transmission SF₆ gas density relay meter, and fiber optic remote transmission SF₆ gas density relay, making on-site networking convenient and fast.
4. Large capacity historical data query and storage function, which can draw temperature, pressure, and density curves based on historical data, directly generate reports, and provide report printing function.
5. Remote transmission SF₆ gas density relay with integrated electromechanical design. The output of contact signals and real-time monitoring are relatively independent and do not affect each other.



参数设置			
类别名称	参数	类别名称	参数
SF ₆ 报警阈值	200 ppm	声音状态	关闭
O ₂ 报警阈值	18 %	通道采集时间	0 分
零点校准时间	0 : 0	通道巡检时间	0 : 0
风机运行时间	0 分	采集通道数量	16
风机启动时间1	0 : 0	风机控制	关闭
风机启动时间2	0 : 0	风机控制	关闭
风机启动时间3	0 : 0	风机控制	关闭
风机启动时间4	0 : 0	风机控制	关闭

菜单 保存参数



YB type all stainless steel pressure gauge

All parts of the stainless steel pressure gauge are made of stainless steel material, suitable for measuring the pressure of various corrosive fluid media. It is widely used in industries such as petroleum, chemical, chemical fiber, metallurgy, and power stations.



Structural principle

The instrument consists of a pressure guiding system (including joints, spring tubes, etc.), a gear transmission mechanism, an indicator device (pointer and dial), and a housing (including case, cover, glass, etc.). When the spring tube is forced to undergo elastic deformation and displacement at its end under the pressure of the measured medium, it is gradually indicated on the dial by the pointer fixed on the gear shaft through the transmission and amplification of the rod through the gear transmission mechanism. The outer shell of this instrument is an airtight structure, which can effectively protect the internal components from environmental influences and pollution invasion. For instruments filled with liquid in the case, it can withstand severe working environment vibrations and reduce the impact of medium pressure pulsation.

Main technical indicators and reference dimensions

- Operating environment temperature:
-40~70°C (no liquid filling inside the case)
-25~70°C (case filled with liquid)
- Temperature influence: not more than 0.4%/10°C (deviation of operating temperature from 20 ± 5°C)
- Shell protection level: IP64
- Materials such as pressure guiding system and shell

Component name	Material grade	
	YB-60	YB-100, YB-150
Connector	0Cr18Ni9(304)	0Cr17Ni12Mo2(316)
Spring tube	0Cr18Ni9Ti(321)	0Cr17Ni12Mo2(316)
Shell	1Cr18Ni9	

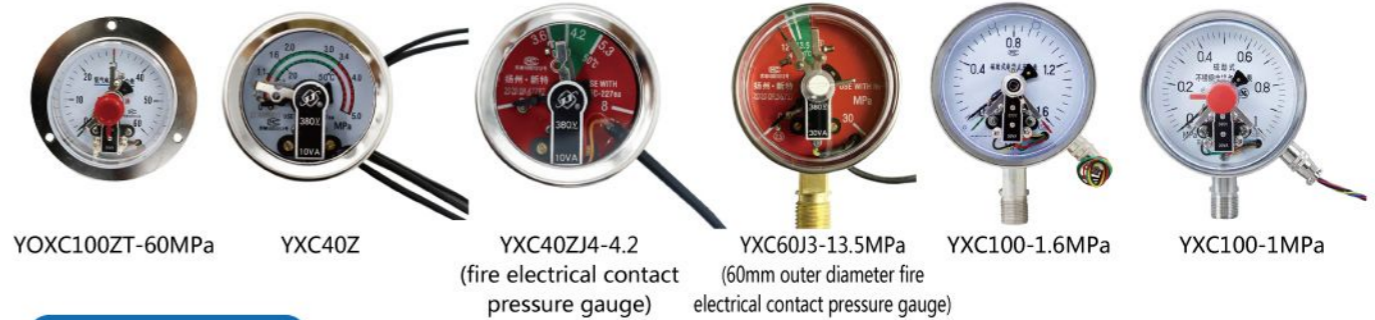
Scale range and reference dimensions

Model	Installation type	Scale range (MPa)	Anti working environment vibration	Installation size (mm)	External dimensions (mm)	Joint connection thread
YB-60	Radial	0~0.1; 0~0.16	V. Level H.3 (no liquid filling inside the case)	/	89×68×35	M14×1.5
YB-60Z	Axial	0~0.25; 0~0.4		/	Φ68×66	M14×1.5
YB-60ZT	Axial band edge	0~0.6; 0~1		Φ76×120°3~Φ5	Φ84×66	M14×1.5
YB-100	Radial	0~1.6; 0~2.5		/	155×112×49	M20×1.5
YB-100ZT	Axial band edge	0~4; 0~6	V. H.4 level (case filled with liquid)	Φ118×120°3~Φ6	Φ126×92	M20×1.5
YB-150	Radial	0~10; 0~16		/	200×160×51	M20×1.5
YB-150ZT	Axial band edge	0~25; 0~40		Φ165×120°3~Φ6	Φ175×97	M20×1.5
YB-150ZT	Axial band edge	0~60; 0~100				

Note: Our factory can process special joint connection threads according to user requirements.

YXC type magnetic assisted electric contact pressure gauge

Magnetic assisted pressure gauges are widely used in industries such as petroleum, chemical, and metallurgical power plants to measure the pressure of fluid media that are non explosive and do not corrode instrument components. The instrument, when used in conjunction with corresponding electrical components, can achieve automatic control and signaling (alarm) of the measured pressure system. For the shock resistant magnetic assisted contact pressure gauge filled with liquid in the case, it not only improves the resistance to medium pulsation and environmental vibration, but also extends the product's service life.



Structural principle

The instrument consists of a measuring system, an indicating device, a magnetic assisted contact device housing, a regulating device, and a junction box (i.e. socket head). When the spring tube is subjected to the pressure of the measured medium, it is forced to undergo corresponding elastic deformation displacement at its end. With the help of a pull rod and gear transmission, it is amplified and gradually indicated on the dial by a pointer fixed on the gear shaft. At the same time, the pointer drives the movable contact to make contact with the contact (upper or lower limit) on the set pointer, causing the circuit in the control system to be disconnected or connected, in order to achieve automatic control and send alarm signals.

Electrical parameters and control forms of contact devices

Contact power	Maximum operating voltage	Maximum operating current	Control type
30VA (resistive load)	220VD. C or 380VA C	1A	Upper and lower limits, dual upper limits, dual lower limits

Note: When the current is 1A, the operating voltage should be lower than 40V.

Main technical indicators and external dimensions

Name	Model	Installation type	Scale range (MPa)	Accuracy class			Environmental temperature for use	Relative humidity	Anti working vibration	Joint connection thread
				Instruct	Set value	Break				
Ordinary magnetic assisted electric contact pressure gauge	YXC-100	Radial	0~0.1 to 0~60MPa	1.5	1.5	4	-40~70°C	Not exceeding 85%	V.H.Level 3	M20×1.5
	YXC-100ZT	Axial band edge								
	YXC-150	Radial								
	YXC-150ZT	Axial band edge								
Seismic resistant magnetic assisted contact pressure gauge	YXCN-100	Radial	0~0.1 to 0~60MPa	1.5	1.5	5	-25~55°C	Not exceeding 90%	V.H.Level 4	M20×1.5
	YXCN-100ZT	Axial band edge								
	YXCN-150	Radial								
	YXCN-150ZT	Axial band edge								

Note: Our factory can process special joint connection threads according to user requirements.



YBX40 digital pressure gauge

Overview

The YB-X digital pressure gauge combines intelligent microprocessor technology and high-precision A/D conversion technology, using * * interpolation theory and approximation algorithm to ensure instrument accuracy; Using reliable and mature LED digital display, high brightness and clear visibility; The shell is made of stainless steel, which is corrosion-resistant and resistant to mechanical pressure. The core adopts sealing technology and can be applied in various complex environments.



Communication protocol

Adopting MODBUS (RTU) protocol, using read "read hold register: function code 03" and write "write hold register: function code 06"

Slave ID address: The default slave ID address is 0x01, which can be modified by changing the register value within the range of 0x01~0xFF, where 0x00 is the broadcast receiving address.

Read and hold register (function 0x03): The host can use this function to read data from the slave registers, and can read one or more registers simultaneously. The slave response returns the function code, indicating a normal response. The byte count "Byte count" indicates how many 8-bit bytes were returned. It indicates the number of 8-bit bytes attached to the data area. When organizing response information in the buffer, the value in the "byte count" area should be equal to the number of bytes in the data area of that information. When using RTU mode, 63H is sent with one byte (01100011). Calculating the 'number of bytes' in units of 8 bits ignores the method of composing information frames.

Explanation: The host reads the three register values starting from the address 0x01 of the host register;

Return data of 3 registers and 6 bytes from the slave.

For example, if the local ID address is 01 and you want to read the values from register 01 to register 03 of the digital table, the commands to send and receive are as follows;

01 (ID) 03 (Function Code) 00 01 (Register Start Number) 00 03 (Register End Number) 54 0B (CRC)

01 (ID) 03 (function code) 06 (number of data bytes) 03 E8 (pressure value) 01 F4 (low alarm setting) 00 04 (filtering degree setting) 00 9C (CRC)

Note: After calculating the CRC *, the next step is to swap the low byte and high byte to obtain the final CRC-16 code.

Write a single register (function code 0x06): The host can write data to the slave register through this function, but can only operate on a single register. The format is as follows:

Query: The example is a request to set the value of register 0002H of slave machine 01H to 01F4H.

Response: The normal response to a preset single register request is to transfer the received data back after the register value changes.

For example, to set the ID number and rewrite the 05 register, the command is as follows (assuming the original ID is 01):

01 (ID) 06 (function code) 00 05 (register number) 00 03 (new ID number) D9 CA (CRC)

01 (ID) 06 (function code) 00 05 (register number) 00 03 (new ID number) D9 CA (CRC)

If correct, send and receive data consistently.

Register address reference value:

0x0001: Pressure value data, read-only range according to specifications, unit: 0.01MPa

0x0002: Low alarm setting, read-write 1000=10MPa, unit 0.01MPa

0x0003: Filter level setting, read/write 1, 2, 3, 4, default 4

0x0004: Baud rate setting, read/write 1=9600bps, 2=19200bps, 3=600, 4=1200, 5=2400, 6=4800, default 1

0x0005: Slave ID setting, read/write 0x01~0xFF, 0x00 broadcast, default 0x01

0x0006: Reset, Backup

0x0007: High alarm setting, read/write, write new alarm value, read current alarm value

Product parameters

Usage environment	Environmental temperature: -40°C~85°C; Environmental humidity: -10% RH~95% RH; Atmospheric pressure: (86~106)kPa
Display	LED digital display with 4-digit digits
Power supply mode	DC11~26V
Pressure unit	MPa
External dimensions	Φ50mm×45mm
Cable length	1 meter (can be reserved according to user needs)
Pressure interface	M10 * 1 (customizable according to user needs)
Overload pressure	120% FS overload, with YB-30 pressure temporarily set within the range of 0-20Mpa to ensure accuracy, and all other models ensuring accuracy across the entire range
signal communication	Communication method: RS485; Communication protocol: Prepare upper and lower limit alarms according to the user backend protocol (any point alarm can be set according to user needs)

Note

1.It is strongly recommended that users not only connect RS485 A and B when communicating with the instrument, but also connect all ground wires together (i.e. they must share the same ground). To avoid excessive voltage deviation, which may lead to communication abnormalities and even device burnout.

2.When using MODBUS to modify parameter commands, it should not be done too quickly or too frequently. Because when modifying parameters, the instrument needs to write the parameters into the FLASH of the microcontroller, which takes a long time. At the same time, the number of FLASH erasures is limited, so it is best not to modify them frequently.

3.Although a single RS485 transceiver can achieve a speed of 50ms, when multiple units are networked, due to the influence of line capacitance, the interval period between each unit should be greater than 500ms.

4.When the communication line is long or there are many communication lines, a 120 ohm resistor needs to be connected in parallel to the RS485 ports A and B of the host. Please refer to the following diagram for the network connection:

5.When the electromagnetic environment is complex or the line is long, other necessary measures need to be taken, such as selecting good bus cables, anti-static filtering, correct grounding, etc. The recommended method is to convert it into an optical signal for long-distance transmission. It is also possible to create a signal concentrator that can communicate all signals locally on one end and convert them into fiber optic signals for long-distance communication on the other end.

6.The RS485 industrial bus standard requires that each device be connected in a daisy chain manner, with 120 Ω terminal resistors at both ends. Simplified connection can be made using Figure 2 (as shown in Figure 1), but the distance between the "D" segment must not exceed 7 meters

7.RS485 theory can carry up to 32 maximum values, but in actual use, there are only about 12, which is related to the control chip of the computer side bus! If there are a large number of digital tables, a hub can be used for grouping, and then a hub can be used to merge and communicate with the host (computer). The specific usage situation must be confirmed with the hub manufacturer.

When plugging or unplugging cables, the power must be turned off first. It is strictly prohibited to plug or unplug cables with power on to prevent damage to the communication chip. Before powering on, be sure to repeatedly confirm that the power lines (+, -) and communication lines (A, B) are not short circuited.



YH type fire pressure gauge

The fire pressure gauge is developed according to the national public safety industry standard GA400-2002. The shell adopts a fully sealed stainless steel structure, which has good waterproof effect. The internal core component - the spring tube - is made of special atmospheric pressure resistant materials, with stable and reliable performance. It is generally used to measure the pressure of various fire extinguishing gases in automatic fire extinguishing systems.



YH40ZJ3-6

YH40ZJ3-13.5(radial)

YH40ZJ4-1.6

YH40ZJ4-2.5

YH40ZJ4-4.2

YH40ZJ4-5.6

YH40ZJ5-15(IG541)

YH40ZT-1.5

Main technical indicators and external dimensions

Model	Installation type	Accuracy class	Range of work pressure (MPa)	Rated working pressure (MPa)	Tested medium	External dimensions	Joint connection thread
YH-40ZJ1-2.5	Axial	2.5	2.2-3	2.5	1211	Φ46×45	M10×1
YH-40ZJ1-4	Axial	2.5	3.6-4.7	4	1211	Φ46×45	M10×1
YH-40ZJ2-2.5	Axial	2.5	1.5-4	2.5	1301	Φ46×45	M10×1
YH-40ZJ2-4.2	Axial	2.5	2.8-5.8	4.2	1301	Φ46×45	M10×1
YH-40ZJ3-6	Axial	2.5	5.6-6.6	6	N2	Φ46×45	M10×1
YH-40ZJ3-7.5	Axial	2.5	6.8-8.2	7.5	N2	Φ46×45	M10×1
YH-40ZJ3-10	Axial	2.5	0-10	-	N2	Φ46×45	M10×1
YH-40ZJ4-2.5	Axial	2.5	2-2.5-4.2	2.5	227ea	Φ46×45	M10×1
YH-40ZJ4-4.2	Axial	2.5	3.6-4.2-6.7	4.2	227ea	Φ46×45	M10×1
YH-40ZT4-4.2	Axial	2.5	3.6-4.2-5.3	4.2	227ea	Φ46×45	M10×1
YH-40ZJ4-5.6	Axial	2.5	5-5.6-8	5.6	227ea	Φ46×45	M10×1
YH40ZJ4-15	Axial	2.5	13.6-17.2	15	1G541	Φ46×45	M10×1

YE type luminous pressure gauge

The luminous pressure gauge adopts a fully sealed structure, which not only has good waterproof and anti pollution effects, but also the instrument surface is made of luminescent materials. After a few minutes of lighting, it will produce a good luminous effect, and the reading of the pressure gauge can be clearly read even at night. Widely applicable to industries such as firefighting, ship rescue, and safety protection.



YE50-40MPa
(Equipped with protective sheath)

YE50-40MPa
(Dual scale)

YE50-40MPa
(English with protective sheath)

YE50-400bar
(Insert card connector)

YOE40-25MPa
(Oxygen meter with protective sheath)

YOE40ZT-30MPa
(With flange edge)

Main technical indicators and external dimensions

Model	Installation type	Scale range (MPa)	Accuracy class	Installation size	External dimensions	Joint connection thread
YE-40	Radial	0~0.6	2.5	/	61×46×26	M10×1
YE-40Z	Axial			/	Φ46×45	M10×1
YEO-50	Radial	0~1.6	2.5	/	77×58×30	M10×1
YE-50	Radial			/	77×58×30	M10×1
YE-50A	Radial	0~25	2.5	/	82×58×30	G1/8
YE-50B	Radial			/	72×58×30	Pin type
YE-50C	Radial	0~40	2.5	/	73×58×30	Pin type



YN type shock resistant pressure gauge

Seismic pressure gauges are widely used in industries such as machinery, petroleum, chemical, metallurgical, and water treatment. Instruments rely on measures such as internal filling with damping oil and equipped with buffering devices to have good shock resistance, and are generally used in places where the measured medium fluctuates frequently and environmental vibrations are large.



YN60-10kg



YN60Z-400bar



YN60ZT-1MPa



YN60ZT-40MPa



YN100-1.6MPa



YN100-40MPa

Main technical indicators and external dimensions

Model	Installation type	Scale range (MPa)	Accuracy class	Environmental temperature for use	Anti working environment vibration	Installation size (mm)	External dimensions (mm)	Joint connection thread
YN-40	Radial	0~0.1; 0~0.16	2.5	Case filled with glycerin at 5~55°C	V.H.Level 4	/	61×46×26	M10×1
YN-40Z	Axial	0~0.1; 0~0.16				/	Φ46×45	M10×1
YN-50	Radial	0~0.25; 0~0.4				/	77×58×30	M14×1.5
YN-60	Radial	0~0.6; 0~1				/	94×68×30	M14×1.5
YN-60Z	Axial	0~1.6; 0~2.5				/	Φ68×60	M14×1.5
YN-60ZT	Axial band edge	0~4; 0~6				Φ74×120°3-Φ4	Φ85×58	M14×1.5
YN-100	Radial	0~10; 0~16	1.5	Silicone oil filled in the case -25~55°C	/	145×107×38	M20×1.5	
YN-100ZT	Axial band edge	0~25; 0~40			Φ118×120°3-Φ6	Φ132×78	M20×1.5	
YN-150	Radial	0~60; 0~100			/	200×160×51	M20×1.5	
YN-150ZT	Axial band edge				Φ165×120°3-Φ6	Φ175×97	M20×1.5	

Customized spiral tube pressure gauge



YE36Z-300bar(English with protective cover)



YH23ZJ3-1.4(Fire detection tube table)



YH23ZJ4-2.5



YH40Z48bar-700psi



YOE36Z-30MPa



YOE40Z-30MPa