

ZMJ100XDR
Density Monitor



ZMJ100XDR Density Monitor

Description

ZMJ100XDR Density Monitors are used to monitor SF₆ gas density in sealed tanks. They are applied to indicate the gas density and to provide signal outputs when the density reaches the set values. Furthermore, it can transmit the real-time SF₆ gas density data remotely, to achieve online remote monitoring function. They are designed to monitor High Voltage systems. They can provide multiple solutions to support new substations and the renovation and upgrading of existing substations. ZMJ100XDR density monitor meets the requirements of the National grid "QGDW123554-2023 Smart substation technical specification Part 4: Digital remote transmission meter".

Features

Application

- SF₆ Gas Insulated Switchgear (GIS)
- SF₆ Insulated Circuit Breaker
- SF₆ Insulated Pole-Mounted Switch
- SF₆ Insulated Transformer
- SF₆ Insulated Current Transformers or Voltage Transformers
- SF₆ Insulated Bus System

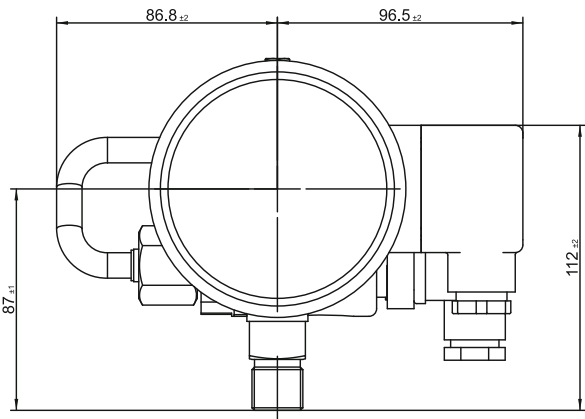
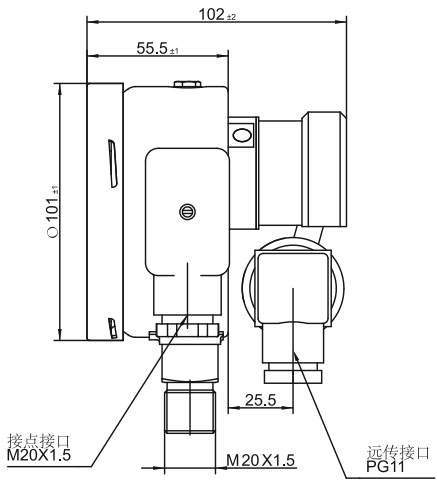
Options

- Measuring Medium: SF₆, Air, N₂, SF₆+N₂ and other gases

- Higher accuracy from reference chamber temperature compensation technology.
- Suitable for indoor or outdoor installation.
- Micro-switch that can switch freely between normally open and normally closed points.
- Up to 4 set of contacts, can achieve a variety of options such as double alarm and double lock, more safe and reliable monitoring.
- High shock resistance. No need to fill oil, no potential oil leakage.
- Normally closed contact will not false alarm due to vibration.
- RS485 bus interface, easy to do the system expansion, and to achieve telemetry, remote control functions.
- Strong EMC capability.
- ±1%FS display in full range, higher remote transmission module accuracy, higher indication and remote data consistency accuracy.
- More accurate gauge indication values and contact switching values throughout the temperature range.

Technical parameters	
Scale range	-0.1 ~ 0.9MPa
Accuracy of set point	@20°C ±1°C, ±1.0%FS @-40°C ~ +70°C, ±1.5%FS (gas)
Accuracy of indication	@20°C ±1°C, ±1.0%FS @-40°C ~ +70°C, ±2.0%FS (gas)
Accuracy of transmitter	Pressure: ±0.5%FS Temperature: ±1°C Pressure at 20°C: ±1.0%FS
Data Consistency	@20°C ±1°C, ±1.0%FS @-40°C ~ +70°C, ±1.6%FS (gas)
Degree of Protection	IP65
Ambient Condition	-40°C ~ +70°C , relative humidity: ≤ 95%RH
Leakage rate	≤ 1×10 ⁻⁹ Pa·m ³ /s (Helium leakage detection)
Process connection	M20 x 1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A, 250V AC 0.1(0.05)A, 250V DC
Window glass	Laminated safety glass
Weight	≈ 1.2kg
Pressure element	Bellows and Bourdon Tube

Dimensions



Technical Parameters for Remote Module			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Baud Rate	9600bps		