# ZMJ100XDR Density Monitor



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#### Description

ZMJ100XDR Density Monitors are used to monitor  $SF_6$  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  $SF_6$  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".

# **Application**

- SF<sub>6</sub> Gas Insulated Switchgear (GIS)
- SF<sub>6</sub> Insulated Circuit Breaker
- SF<sub>6</sub> Insulated Pole-Mounted Switch
- SF<sub>6</sub> Insulated Transformer
- SF<sub>6</sub> Insulated Current Transformers or Voltage Transformers
- SF<sub>6</sub> Insulated Bus System

## **Options**

■ Measuring Medium: SF<sub>6</sub>, Air, N<sub>2</sub>, SF<sub>6</sub>+N<sub>2</sub> and other gases

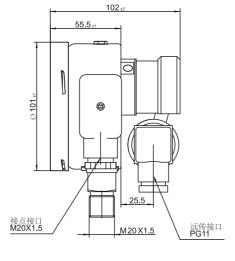
### **Features**

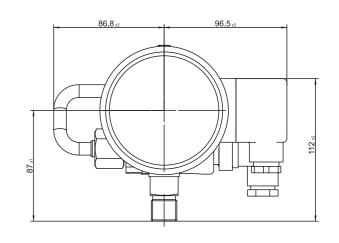
- Higher accuracy from reference chamber temperature compensation technology.
- $\blacksquare$  Suitable for indoor or outdoor installation.
- Micro-switch that can switch freely between normally open and normally closed points.
- Up to 4 set of contacts, can achieve a variety of options such as double 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 fo	or Remote Module		
Operating voltage	10~30VDC		IEC61000-4-2: Level 4 IEC61000-4-3: Level 3
Power consumption	<0.5W		IEC61000-4-4: Level 4
Communication mode	RS485	EMC tests  IEC61000-4-5: Level 4  IEC61000-4-6: Level 3  IEC61000-4-8: Level 5  IEC61000-4-9: Level 5	IEC61000-4-5: Level 4 IEC61000-4-6: Level 3
Communication protocol	Modbus RTU		
Baud Rate	9600bps		IEC61000-4-9: Level 5

Scale range $ -0.1 \sim 0.9 \text{MPa} $
Accuracy of set point
Accuracy of Indication
Pressure at 20°C: $\pm 1.0\%FS$ Data Consistency
Data Consistency
Ambient Condition -40°C ~ +70°C , relative humidity: ≤ 95%RH
Leakage rate $\leq 1 \times 10^{-9} \text{Pa} \cdot \text{m}^3/\text{s}$ (Helium leakage detection)
Process connection M20 x 1.5 (customizable)
Installation method Radial or Axial
Electrical connection Pluggable connector
$\label{eq:localization} Insulation\ property (contact\ part) \\ Insulation\ resistance: > 100 M\Omega\ (DC500V) \\ Power\ frequency\ with stand\ voltage: 2kV, 50/60 Hz, 1 min$
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**





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