

# ZMJ100PRW WIRELESS REMOTE TRANSMISSION DENSITY MONITOR



## > Description

These instruments are used to monitor SF<sub>6</sub> gas density in sealed tanks. They are applied to indicate the gas density and to provide a signal outputs when the density reaches the set value. They are able to transmit the real-time data of SF<sub>6</sub> gas density remotely and realize the online remote monitoring. They are suitable for monitoring high-pressure system. The SF<sub>6</sub> gas density data can be remotely monitored and transmitted by low-power, high anti-interference wireless communication methods. They can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

## > Application

SF <sub>6</sub> Gas Insulated Switchgear (GIS)	SF <sub>6</sub> Insulated Transformers
SF <sub>6</sub> Insulated Circuit Breakers	SF <sub>6</sub> Insulated Mutual Inductor
SF <sub>6</sub> Insulated Pole-Mounted Switch	SF <sub>6</sub> Insulated Busbar Systems

## > Features

1. The temperature compensation device ensures higher measurement accuracy.
2. Suitable for indoor or outdoor installation
3. AISI 304 hermetically sealed stainless steel case
4. Gas connection tubes are made of AISI 316 stainless steel
5. Wireless communication and convenient for site networking
6. Strong Anti-interference ability and far transmission distance
7. Using concentrator as the center, these instruments can achieve autonomous wireless networking and the concentrator outputs all monitoring data through the RS485.
8. Up to four pairs of contacts can achieve overpressure alarm, dual alarm or double locking and many other options, ensuring the monitoring more secure and reliable

## > Options

1. Power-frequency withstand voltage: 2.5kV 50/60 Hz 1min
2. Oil-filled
3. Measuring medium: SF<sub>6</sub>, Air, N<sub>2</sub>, SF<sub>6</sub> + N<sub>2</sub> and other gases

## > Technical Data

1. Nominal Size:100mm	10. Insulation properties:
2. Scale range: -0.1 to 0.9 MPa (customizable)	Insulation resistance: >100 MΩ (500 V DC)
3. Accuracy: (related to the measuring span SF <sub>6</sub> in gas phase)	Withstand voltage: 2kV, 50/60 Hz 1 min
a) At 20°C: Class 1.0 or 1.5	11. Contact type:
b) -40°C to +60°C: Class2.5	Pointer driven magnetic snap action signal contacts;
4. Degree of protection: IP65	80%Ag, 20% Ni, 10μm Au plated
5. Ambient conditions: -40°C to +60°C, relative humidity ≤ 95%RH	12. Impact rating: 50g (oil-filled), 30g (non-oil-filled)
6. Leakage rate: ≤1 ×10 <sup>-9</sup> Pa·m <sup>3</sup> /s (Helium leakage inspection)	13. Contact electrical parameters: 30W/50VA, 1A (maximum)
7. Process connection: M20×1.5 (customizable)	220VDC/380V 50/60Hz (maximum)
8. Installation method: radial or axial	14. Window glass: Laminated safety glass
9. Electrical connection:	15. Weight: 1.2kg
Compact pluggable box with M20 x 1.5 cable gland	16. Pressure element: Bourdon tubes
Cable size: 1.5mm <sup>2</sup> recommended, 2.5mm <sup>2</sup> maximum	17. Bending Antenna Type for indoor, Sucker Antenna Type for outdoor

## > Main electrical performance indicators and specifications of the remote transmission part

- |                              |                                       |
|------------------------------|---------------------------------------|
| 1. Power supply: DC 24V      | 6. Anti-electromagnetic interference: |
| 2. Power consumption: < 2W   | IEC61000-4-2: level 4 (15kV)          |
| 3. Communication mode: RS485 | IEC61000-4-3: level 3 (10V / m)       |
| 4. Protocol: ModBus RTU      | IEC61000-4-4: level 4 (4kV)           |
| 5. Baud rate: 9600bps        | IEC61000-4-5: level 3 (+/- 2kV)       |
|                              | IEC61000-4-6: level 3 (10V)           |
|                              | IEC61000-4-8: level 5 (100A / m)      |

## > Dimensions

