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ZMJ100PR REMOTE-TRANSMISSION DENSITY MONITOR



> Description

These instruments are used to monitor SF₆ gas density in sealed tanks. They are applied to indicate 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 SF₆ gas density remotely and achieve the online remote monitoring. They are designed to monitor High Voltage systems. They can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

> Application

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

> Features

1. The temperature compensation device ensures higher measurement accuracy.
2. Perfect mechanical and electronic combination, local indication and control of instrumentation. The precise mechanical structure enables the real-time remote transmission of electronic signal.
3. RS485 bus interface, facilitating system expansion, realizing telemetering and remote control. High anti-electromagnetic interference capability
4. Suitable for indoor or outdoor installation
5. AISI 304 hermetically sealed stainless steel case
6. Gas connection tubes are made of AISI 316 stainless steel
7. The on-screen display value and output signals are independent of the impact of external environment, such as altitude
8. Up to four switch contacts can achieve overpressure alarm, dual alarm or double locking and many other options, making the monitoring more secure and reliable

> Options

1. Power-frequency withstand voltage: 2.5kV 50/60 Hz 1min
2. Oil-filled
3. Measuring medium: SF₆, Air, N₂, SF₆ + N₂ and other gases

> Technical Data

1. Case diameter: 100mm	10. Insulation properties:
2. Scale range: -0.1 to 0.9 MPa (customizable)	Insulation resistance: >100 MΩ (DC 500V)
3. Accuracy: (related to the measuring span; SF ₆ in gas phase)	Withstand voltage: 2kV, 50/60 Hz 1 min
a) At 20°C: Class 1.0 or 1.5	11. Contact type: Magnetic snap-action contact
b) -40°C to +60°C: Class 2.5	80%Ag, 20%Ni, 10μm Au plated
4. Degree of protection: IP65	12. Impact rating: 50g (oil-filled), 30g (non-oil-filled)
5. Ambient conditions: -40°C to +60°C, relative humidity ≤95%RH	13. Contact electrical parameters:
6. Leakage rate: ≤ 1 × 10 ⁻⁹ Pa·m ³ /s (Helium leakage inspection)	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: Plug-in connection M20 × 1.5 sealing head	15. Weight: 1.2kg
Cable size: 1.5mm ² recommended, 2.5mm ² maximum	16. Pressure element: Bourdon tubes

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

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|------------------------------|---------------------------------------|
| 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

