7 ZMJ100PRDH DENSITY MINIM-MOISTURE INTEGRATED COLLECTION DEVICE





Description

Remote density monitor and dew point sensor are integrated to achieve in situ collection and processing, and report the density, pressure, temperature and micro-water content information simultaneously. These instruments are used to monitor the density, pressure, temperature and micro-water content of SF6 gas in sealed tanks and able to display the gas density on the site display and to provide a signal outputs when the density value reaches the set value; they can transmit the real-time remote data of SF6 gas density, pressure, temperature and micro-water 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 Circuit Breakers
SF_6 Insulated Pole-Mounted Switch
SF_6 Insulated Transformer
SF_6 Insulated Transformer
SF_6 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. The on-site display value and the output signals are not affected by the external environment (altitude factor, etc.)
6. Integrated design for collection device, which can effectively ensure air tightness
7. The collection device occupies only one vent, reducing the risk of leaks
8. Remote-style density monitor and dew point sensor are integrated to achieve in situ collection and processing, and report the density, pressure, temperature and micro-water content information simultaneously
9. Collection devices applies RS485 communication mode, facilitating on-site networking and commissioning
10. All monitoring points within the interval can be interconnected with smart IED or back-end server easily through a dedicated RS485 hub, reducing the number of connecting communication ports, and saving resources

Options

1. Withstand voltage: 2.5kV 50/60 Hz 1min
2. Oil-filled
3. Measuring medium: SF_6, Air, N_2, $SF_6 + N_2$ and other gases

Technical Data

1. Case diameter: 100mm	9. Electrical connection: Plug-in connection M20 × 1.5 sealing head
2. Scale range: Density: -0.1 to 0.9MPa (customizable)	Cable size: 1.5mm² recommended, 2.5mm² maximum
Dew point: -50°CDP to 30°CDP (working condition)	10. Insulation properties: 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
Dew point: ±3°CDP	12. Impact rating: 50g (oil-filled), 30g (non-oil-filled)
4. Degree of protection: IP65	13. Contact electrical parameters: 30W/50VA, 1A (maximum)
5. Ambient conditions: -40℃ to +60℃, relative humidity ≤ 95%RH	220VDC/380V 50/60Hz (maximum)
6. Leakage rate: ≤ 1×10^{-9} Pa·m³/s (Helium leakage inspection)	14. Window glass: Laminated safety glass
7. Process connection: M20 × 1.5, (customizable)	15. Weight: 5.5kg
8. Installation method: radial or axial	16. Pressure element: Bourdon tubes

Main electrical performance indicators and specifications of the remote transmission part

1. Power supply: DC 24V
2. Power consumption: < 2W
3. Communication mode: RS485
4. Protocol: ModBus RTU
5. Baud rate: 9600bps
6. 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)

Dimensions

