HM100PR
Density Monitors

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Description

HM100PR Density Monitors are used to monitor SF_6 gas density in sealed tanks. They are applied to provide alarm signal outputs when the density reaches preset values. Furthermore, it can transmit the real-time SF_6 gas density data remotely, to achieve online remote monitoring function.. They are specifically designed for over 500kV EHV grade application field, adapting multi-level protection and full range of shielding measures to ensure the reliable operation of the products.

Features

- Suitable for indoor or outdoor installation.
- Up to 4(four) sets of switch contacts toachieve over-pressure alarm, dual alarm or double locking and many other solutions, ensuring the monitoring more secure and reliable.
- They adopt highly reliable protection circuit design, multi-level isolation and filtering technology, thus effectively inhibiting the intrusion of conductive interference.
- They adopt the full-body shield design, stainless steel shielding shell, shielding junction box and shielding window glass, thus ensuring the ability of anti-electromagnetic radiation interference.
- They are able to adopt the optic fiber communication backstage, thus avoiding data transmission losses from electromagnetic interference.
- The use of high-precision SF_6 density algorithm ensures that the background monitoring data coincides with those field instructions.
- They are compatible with ordinary SF_6 remote products. They do not need other modifications in strong interference occasions.
- The temperature compensation device ensures higher measurement accuracy.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Current Transformers or Voltage Transformers
- SF_6 Insulated Busbar Systems

Technical Parameters for Remote Module					
Power supply	24V DC	Anti-electromagnetic interference	IEC61000-4-2	level 4/A	(8KV/15kV)
Power consumption	< 2W		IEC61000-4-3	level 4/A	(30V/m)
Communication mode	RS485		IEC61000-4-4	level 4/A	(4KV)
Protocol	ModBus RTU		IEC61000-4-5	level 4/A	(+/-2Kv)
Baud rate	9600bps		IEC61000-4-6	level 3/A	(10V)
			IEC61000-4-8	level 5/A	(100A/m)
			IEC61000-4-9	level 5/A	(1000A/m)
			IEC61000-4-10	level 5/A	(100A/m)
			IEC61000-4-12	level 4/A	(4KV)
			IEC61000-4-17	level 3/A	($10\%U_N$)
			IEC61000-4-29	0.1s/A	($40\%U_T$/$70\%U_T$)

Technical Parameters	
Case diameter	100mm
Scale range	-0.1 ～ 0.9MPa (customizable)
Accuracy	±1.0%FS（+20±1℃）, ±1.8%FS（-20℃～ +60℃）（gas phase）
Degree of protection	IP65
Ambient conditions	-20° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process Connection	M20 × 1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Plug-in connection M20 × 1.5 sealing head cable size: 1.5mm^2 recommended, upper limit 2.5mm^2
Contact insulation performance	Insulation resistance: >100MΩ (DC 500V) Withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap-action switch 80%Ag, 20%Ni, 10μm Gold plated
Impact rating	50g (oil-filled), 30g (non-oil-filled)
Contact electrical parameters	30W/50VA, 1A (upper limit) 220VDC/380V 50/60Hz (upper limit)
Watch glass	Laminated safety glass
Weight	≈ 1.2kg
Pressure element	Bourdon tube

Options

- Oil-filled.
- Wide temperature range：Optional-40℃～ +60℃ or -60° C ～ +60° C.
- Measuring medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.
- Optional measurement accuracy：±1.6%FS（+20±1℃），±2.4%FS（-20℃～ +60℃）（gas phase）.

Dimensions