TWT
Digital Transformer Winding Temperature Controller

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Application

- Oil immersed transformer

Options

Transformer digital top-oil temperature controller has multiple parameters to choose from, which can meet the needs of various oil immersed transformers at home and abroad, including output signal, range, switch contacts, installation size, installation thread, instrument rain cover and temperature bulb rain cover, etc.

Description:

The Transformer digital winding temperature controller mainly consists of a mechanical part and a digital sensing unit. The sealed system composed of elastic elements, sensing conduits, and temperature sensing components is filled with a temperature sensing medium. When the measured temperature changes, the volume of the temperature sensing medium inside the temperature sensing component changes accordingly. This volume increment is transmitted to the elastic element inside the instrument through the sensing conduit, causing a corresponding displacement. This displacement is further realized through the secondary rated current (TC) heating actuator, achieving a secondary temperature rise displacement. The superposition of this displacement, after being amplified by the mechanism, can indicate the measured winding temperature. Transformer digital winding temperature controller adopts composite sensing technology, which converts the Pt100 platinum resistance signal installed in the temperature pack into RS485 digital signal and transmits it to the control room terminal. It can store 10000 monitoring data and operating status information and can be exported. It has data remote transmission function, output alarm or control signal, and local indication functions such as communication abnormality and self checking fault. It can synchronously display and control the top oil temperature or winding temperature of the transformer. It has the advantages of communication electrical isolation, easy installation, strong anti-interference ability, and remote configuration, realizing the remote online monitoring function of power transformer winding temperature.

Features

- The product utilizes dual diaphragm box compensation technology, achieving all-weather 1.5% FS, meeting the standard of State Grid DL/T1400.3-2023;
- The product meets the standards of State Grid Digital Meter Q/GDW 12355.4-2023;
- The product process adopts high-frequency welding and self flowing filling technology, and the temperature pack is reliable and does not leak liquid;
- Multiple output signal modes are available for the product (Pt100, 4-20mA, RS485);
- The product is equipped with six sets of temperature control switches, with graded cooling capacity. The switch points can be set freely within the full range;
- The product shell is designed with an integrated structure of alloy die-casting, which is easy to disassemble and has higher strength;
- Convenient winding selection and debugging interface, which allows direct CT corresponding parameter selection and adjustment on the dial;
- Protection level IP67.

Technical parameters

Technical Index

Product Features	Describe
Ambient temperature	-40℃~+70℃
Measurement range	0℃~+150℃（Customizable according to user needs.）
Relative humidity	⩽ 95%（No dew formation）
Number of switches	Up to 6 adjustable switches.
Switching capacity	AC 220V/5A、DC110V/3A
Output signal	Pt100、4-20mA、RS485
Accuracy level	1.5%FS
Motion error	±2.0℃
Capillary tube length	Standard with 6 meters (other lengths can be customized)
All-weather temperature error	±2.0℃
Protection class	IP67

Electromagnetic Compatibility Performance

Standard of Detection	Level
GB/T 17626.2 Electrostatic Discharge (ESD)	Level 4
GB/T 17626.3 Radio frequency electromagnetic field radiation	Level 3
GB/T 17626.8 Power frequency magnetic field	Level 5
GB/T 17626.9 Pulsed magnetic field	Level 5
GB/T 17626.10 Damped oscillating magnetic field	Level 5
GB/T 17626.11 Voltage sag	Level 3
GB/T 17626.4 Electrical Fast Transient/Bursts	Level 4
GB/T 17626.5 Surge (spike)	Level 4
GB/T 17626.6 Conducted disturbances induced by radio frequency fields	Level 3

Dimensions