TOT/TWT
Digital Transformer Oil/Winding Temperature Controller

TOL-250R Transformer Digital Oil Level Gauge

Description

The Digital Transformer Oil/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 controller changes accordingly. This volume increment creates a displacement through the elastic element inside the instrument. This displacement is translated to temperature measurement on the dial, and through microswitch signal outputs to drive the cooling system, achieving the control the transformer temperature.
Transformer digital oil temperature controller adopts composite sensing technology, which converts the Pt100 resistance signal into RS485 digital signal and transmits it to the control terminal. It can store up to 10000 data entries and can be exported to external devices. Features include emote data transmission, alarm or control signal and local display of communication faults self-checking. The controller can simultaneously display and control the top oil temperature (TOT) or transformer winding temperature (TWT), and has the advantages of easy installation, strong anti-interference ability, and remote configuration.

Features

- The product utilizes dual diaphragm box compensation technology, achieving all-weather 1.5% FS, meeting the standard of China State Grid DL/T1400.3-2023.
- The product meets the standards of China 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.
- Protection class: IP67.

Application

- Oil-filled transformer

Options

- 24V power supply
- Additional rainproof cover shell
- C5 or above corrosion resistance grade

Technical parameters

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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