

# DGPT2<sup>®</sup> : PROTECTION RELAY FOR DETECTION OF GAS, PRESSURE AND TEMPERATURE

FOR OIL FILLED DISTRIBUTION TRANSFORMERS. IEC 60076-22-1: 2019 COMPLIANT MODEL



## FEATURES

- 180° visibility in a fully transparent glass tube protected by a removable and replaceable polycarbonate shield.
- Toughened glass tube is immune to discolouration or cracking due to use of incorrect cleaning solvent
- Highly durable construction with exceptional endurance to harsh environments, UV exposure and site abuse
- Thermometer with direct access for max pointer adjustment with fast and accurate readings.
- High accuracy adjustable pressure switch with Test lever.
- Large opening top cover with 1/8" Ball valve to collect gas for investigation
- Made in collaboration between Automation 2000, France, and Viat Instruments, India
- Fully compliant to IEC 60076-22-1:2019.
- Up to two switches each for gas accumulation, pressure and temperature.
- 4-20 mA output possible for pressure and temperature.



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# VIAT

## INSTRUMENTS

## Function

The DGPT2® provides useful proactive protection for transformers in an integrated single mounting. It monitors the below parameters

**1) Gas accumulation:** Gas generated or present in the transformer will naturally percolate upwards due to buoyancy into a properly installed DGPT2® and will collect in the transparent glass tube. A float at predetermined thresholds triggers a reed contact, indicating the presence of gas that needs to be analysed.

**2) Pressure:** A Pre-set/ Adjustable pressure switch inside the device provides electrical contacts when the set threshold is exceeded. Multiple switches at multiple pressure levels allow transformer tripping before PRD

**3) Temperature:** Oil temperature is displayed on the dial along with a manually resettable maximum temperature pointer. Upto two adjustable temperature switches inside the device allow you to get electrical contacts above set thresholds

## Faults detected by DGPT2®

1) **Internal gas generation/emission:** Gas generated due to faults such as arcing in a transformer trigger the gas accumulation alarm contacts. The gas colour can be observed through the transparent tube and gas can be collected from the device for analysis from a valve

2) **Trapped air or entrance of air:** The gas accumulation alarm will also be triggered by any other source of air in the transformer tank

3) **Overheating of transformer:** Overheating may occur due to

- i) Improper cooling of transformer: For instance due to high ambient temperature or insufficient air flow
- ii) Continuous overload

4) **Excess pressure :** This may occur due to

- i) Overheating
- ii) Internal gas emission
- iii) Transformer is filled at too low an ambient oil temperature

## DIFFERENCE BETWEEN IEC AND EN MODEL DGPT2®



- Legacy model for EN50216-3
- 180 degree visibility
- Oil contained directly in transparent polymer
- Upto two contacts for gas, pressure and temperature
- Maximum temp pointer unavailable
- 4-20mA option not available
- SS body



- Model fully complying with IEC 60076-2-1:2019
- 180 degree visibility
- Oil in glass tube protected by air gapped polycarbonate
- Upto two contacts for gas, pressure and temperature
- Maximum temp pointer
- 4-20mA option available
- Al and SS body



Automation 2000

Relais de protection des transformateurs  
Protection relays for transformers

**VIAT**

**INSTRUMENTS**