

Temperature monitoring unit Comem DTI/Comem eDTI

Monitor and protect your dry-type transformer



The newest temperature monitoring unit Comem DTI/Comem eDTI is a measurement and safety device for use in dry-type transformers, which enables you to control alarms, control fans and continuously monitor temperature in your transformer fleet.

The temperature monitoring unit **Comem DTI** acquires, stores and signals each anomalous variation in the temperature in your dry-type transformer through PT100 temperature sensors.

The control unit can detect up to a maximum of 4 temperatures simultaneously. Each temperature channel has two programmable signaling levels (Alarm - Trip). The integrated diagnostics allows monitoring the status of the PT100 probes (Short circuit - Open circuit) and it is possible to signal sudden/abnormal temperature changes (if the FDC mode is active). The control unit is able to control the start and stop of the ventilation/cooling system. Generally the temperatures of the 3 column windings and that of the magnetic core in the dry transformers are analyzed.

ABB offers also a digital version of the temperature monitoring unit, the **Comem eDTI**. The eDevice enables you continuously monitoring the transformer temperature and programing the alarm set-up of the unit in use remotely from your computer through Modbus RTU protocol. Furthermore, the dedicated software allows you to collect information from up to 247 monitoring units at the same time.

Advantages:

- Continuous monitoring of transformer temperature
- Fast variation of temperature diagnostic function available, signalling fast changing temperature in a defined time (FDC)
- Two programmable signaling levels (Alarm - Trip)
- Control of cooling fan system
- Temperature monitoring unit with digital output available enabling remote control
- 4-20 mA and Modbus RTU protocol (eDevice)
- Dedicated software for Comem eDTI (eDevice)

Features:

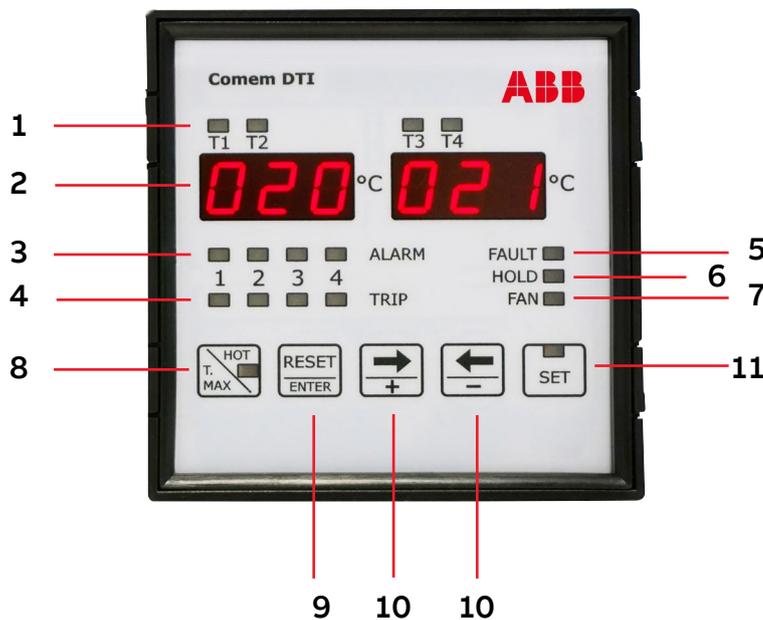
- Full compliant with security and EMC standards
- Power supply: 24/230 V dc/ac $\pm 15\%$ 50-60Hz

Application:

- Dry-type transformers
- Electric motors

TECHNICAL DATA

Auxiliary power supply	24/230 V dc/ac ±15% 50-60 Hz
Maximum absorption	4 VA
Measure inputs	3 - 4 inputs by RTD PT100 (max wire resistance 20 Ohm)
Interval of measure	-30 °C / +200 °C / precision ± 2 °C
Interval of visualization	-30 °C / +220 °C
Tripped delay-hysteresis	5 seconds and - 2 °C
Measure visualization	2 displays with led 7 segments, 3-digit
Outputs	Comem DTI: 4 relay NO-C-NC (250 V 5 A resistive load) Comem eDTI: 4 relay NO-C-NC (250 V 5 A resistive load), 0-20 mA or 4-20 mA (Default); Modbus RTU
Output functions	alarm, trip, fan, auto-diagnostic
Programmable functions	ALARM, TRIP, HOLD, FAN, T.MAX, HOT, FDC
Connection	Extractible terminal with screws, section wires max 2.5 mm ²
Insulation	2500 Vrms 50 Hz per 60 s :U aux - input PT100 / U aux - relay outputs / inputs PT100 - relay outputs
Protection degree	IP52 front panel, IP20 rear panel, as CEI-EN 60529
Dimensions - enclosure	Flash mounting DIN 96x96 mm, depth 120 mm / Enclosure thermoplastic self-extinguishing as UL94 V0
Working environment	-10 °C / +60 °C, humidity max 95%
Storing temperature	-25 °C / +70 °C
Standards	Security: EN 61010-1 EMC: EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-11; EN 61000-6-4
Management software for Comem eDTI	Available in our Download section at www.abb.com/transformercomponents



- 1 T1-T2-T3-T4 channel display
- 2 Temperature display
- 3 ALARM: First level of alarm
- 4 TRIP: Second level of alarm
- 5 FAULT: Indicates failure of PT100 sensors or activation of FDC function (if this function was set up previously)
- 6 HOLD: Allows to store the alarm condition that can be reset only manually with the reset button
- 7 FAN: Indicates activation of ventilation
- 8 T.MAX: Indicates the highest temperature reached by the sensors (memory storage) / HOT: display of the hottest channel between T1 and T2 or T3 and T4
- 9 RESET/ ENTER values key
- 10 Selection key
- 11 SET: Programming key