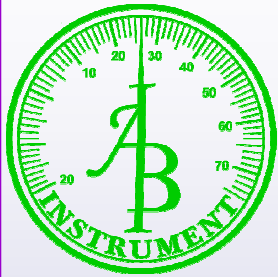


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OLWTM-10



GSM-MODEM



PT-100

REPEATER

MESSAGE OF OIL TEMP.,
WINDING TEMP. AND
LOAD CURRENT

ONLINE WINDING TEMPERATURE MONITORING SYSTEM (MODEL:OLWTM-10)

OLWTM-10 is a compact system, specifically designed for ONLINE MONITORING AND CONTROLLING OF OIL & WINDING TEMPERATURE OF POWER TRANSFORMERS. It comprises user friendly interfaces of 4x4 matrix keys, 20x4 Alpha Numeric LCD display, seven segments LED Display, RS 232 Serial port communication output for Modem / Pc, portable memory unit and RS485 two wire communication output for repeater.

It Records Winding or Oil temperature for every one hour, Daily maximum and minimum temperature and Relay status. By request it will send SMS to all mobile phone about the instant oil temperature, winding temperature and Load current along with relay status. We can retrieve stored data to Your Laptop or scroll and view it in the instrument itself, also it can be directly connected to PC for instantaneous data logging. It comes with repeater for control room display. It is suitable for any make, capacity, voltage class, transformers.

The salient features ‘OLWTM-10’

DISPLAY

- ◆ Displaying of Oil, Winding Temperature & Load current.
- ◆ Seven segment LED display for better vision in addition to LCD Display.

RECORDS

- ◆ Maximum of 720 periodic records in the time interval from 1 minute to 180 minute set by the user.
- ◆ Day Maximum and Minimum Temperature records for up to 30 days.
- ◆ Month Max-Min Temperature records in memory up to 12 months.
- ◆ Year Max-Min Temperature records up to 3 years.
- ◆ Relay activation records with Date ,Time & Temperature.
- ◆ Provision to clear all the previous records and starts anew.
- ◆ Reset the max. temperature records alone.

SETTINGS & CONFIGURATION

- ◆ Password protection for settings.
- ◆ There are four set points. (set temperatures), for four relays.
- ◆ Delay & Differential settings for Relays.
- ◆ Provision to set the Temp. gradient ($dT^{\circ}C$) of winding temperature.
- ◆ Options for setting Load current up to 9999 Amps, and CT secondary current from 1 to 5 Amps.
- ◆ User can set their time and date.
- ◆ User can load the default settings.
- ◆ Provision for Buzzer time setting.
- ◆ User can configure each relay either for OTI or WTI .

INPUT & OUTPUT INTERFACE

- ◆ RS485 communication output for repeater with relay activation status.
- ◆ RS232 serial communication output for MODEM or computer or memory Unit.
- ◆ Parameters like Oil temp, winding temp, load current and relay status can be accessed remotely through mobile phone / Lap top / PC.
- ◆ 4sets of 5Amps relay contact outputs
- ◆ Wide auxiliary input supply in the range of 90-260V AC/DC.

USER FRIENDLY & SPECIAL FEATURES

- ◆ The user can configure the system as either WTI or OTI.
- ◆ The relay activation is indicated by RELAY ON LED along with audible buzzer sound.
- ◆ RTD open indication.
- ◆ No drift and no recalibration required for ever.
- ◆ Calibration cross check can be done easily.
- ◆ Flexible to interchange the system to any transformer.

SENSOR

- ◆ RTD PT-100: The most linear response to the Temperature raise.





REPEATER



PT-100



WTI-10

(MODEL: WTI-10)

TRANSFORMER OIL & WINDING TEMPERATURE CONTROLLER /RECORDER IN A SINGLE INSTRUMENT

It is a compact device, specifically designed for measuring Winding Temperature of power transformers in line to measure & display Oil Temperature and Load Current and records maximum temperature. It comprises user friendly interfaces of 4 Input keys, 16x2 Alpha Numeric LCD display, and RS485 Serial port communication output for Repeater.

PRINCIPLE:

Generally in Power Transformers, windings with higher Voltage and insulation criteria, direct access to the windings for installation of a temperature sensor is NOT possible. Therefore to measure the winding temperature, we have to measure the oil temperature and add temp proportionate to load current, since winding temperature is proportionate to load current.

Under load conditions the proportionate current of CT secondary is measured and correlated with the temperature gradient given by the transformer manufacturer depending upon the design features. This derived temperature is added to the top oil temperature of the transformer measured using a RTD sensor. Thus the exact winding temperature is obtained.

WINDING TEMPERATURE INDICATOR / CONTROLLER (MODEL: WTI-10)

This model WTI-10 is designed for protection of oil cooled power transformers. WTI-10 (96x96MM) is a digital temperature indicator/controller; This controller can be installed in control room as well as in marshalling box of the transformer. It has two inputs, one for RTD sensor and one for CT input and two outputs for relay contacts such as Alarm & Trip signal. Optional one RS 485 serial communication output for repeater. This instrument is suitable for any make, capacity, voltage class transformers.

REMOTE WINDING TEMPERATURE INDICATOR (MODEL: RWTI – 20)

For Remote indication of oil, winding temperature and load current, RS485 serial communication outputs are available with the WTI-10. These signal outputs are to be connected to repeater (model RWTI-20) for remote indication of these parameters. RWTI-20 (96X96mm) is a Digital indicator suitable for panel mounting in control room. This is to be connected to WTI-10 using standard two core 2.5 sq. mm copper cable. The distance between WTI-10 and RWTI-20 can be Maximum of 1000 meters. RWTI-20 can be supplied as an option on demand.

RTD PT-100

Temperature sensor (RTD PT-100) is housed in SS-304 tube with weatherproof terminal head for making electrical connections. It is provided with ½” bsp connection for fixing it on top plate of the transformer.

The salient features 'WTI-10'

- ⇒ An instrument evolving in new concept with high caliber of stability & reliability.
- ⇒ OTI, WTI, MAX. TEMPERATURE & LOAD CURRENT readings are displayed in one instrument.
- ⇒ Max. Temperature record.
- ⇒ Delay & differential settings for each relay.
- ⇒ The user can set the temperature gradient (dT °C) of winding at site.
- ⇒ Options for setting Load current up to 999 Amps, and CT secondary current from 1 to 5 Amps.
- ⇒ 2 sets of 5 Amps @ 230 V AC relay contact outputs.
- ⇒ Wide auxiliary input supply in the range of 90-260V AC/DC.
- ⇒ The user can configure the system as either WTI or OTI.
- ⇒ The relay activation is indicated by RELAY ON LED.
- ⇒ RTD open indication.
- ⇒ No drift and no recalibration required for ever.
- ⇒ Calibration cross check can be done easily.
- ⇒ RS485 communication output for Repeater with relay activation status.

GENERAL

Temperature Sensor	RTD (PT- 100)
No. of Sensor Inputs	One
No. of CT Inputs	One
No. of Set- Points	Two
No. of Output Relays	Two
Indication range	0 - 250 °C
Set point range	0 - 250 °C
Resolution	1°C
Accuracy	± 1°C
Display Scan speed	1 second
Display	16x2 LCD display
LED	RLY1 for Alarm RLY2 for Trip
Key interface	4 Tactile keys
Output for Repeater	RS485 serial o/p

ELECTRICAL

Supply voltage	90V-264V AC/DC
Relay Outputs	2 pairs of COM , NO
Contact rating	5A at 240V AC/DC
Contact terminals	Screwed caged suitable for one 2.5 Sq.mm. wire
Power consumption	Max 15VA

MECHANICAL

Overall dimensions	96(H) 96(W) 65(D)mm
Mounting	panel or wall mounting
Weight	1.5 kg. Approximately
Enclosure	ABS plastic

ENVIRONMENTAL

Operating conditions	Temp. 0– 50 °C, 95%RH
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